

SUPPORTING STATEMENT
U.S. Department of Commerce
National Oceanic & Atmospheric Administration
Alaska Chinook Salmon Economic Data Report (EDR)
OMB Control No. 0648-0633

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.

Annual submission of the American Fisheries Act (AFA) Chinook Salmon Economic Data Report (Chinook Salmon EDR) is required by regulation of all AFA eligible entities with the potential to operate in the fisheries of the Bering Sea and Aleutian Islands Management Area. Thus, submission of each of the three forms in the Chinook Salmon EDR is required for the entire universe of potential respondents (a census of the entire population for each). Therefore, the National Marine Fisheries Service (NMFS) anticipates, and has observed, a response rate of 100 percent. The respondent universe varies for each of the three forms as follows.

NMFS requires only the owners of the AFA-permitted vessels to submit the Vessel Fuel Survey for each vessel used in the fishery. The potential number of annual responses is estimated at or below 110; however, because some AFA entities own multiple vessels, and not all vessels are used annually, the number of respondents will be fewer than 110. In addition, in completing the Vessel Master Survey, owners provide login information for the masters to use to fill out the form online. NMFS used a count of all of the State of Alaska Commercial Fisheries Entry Commission (CFEC) permits that were associated with AFA vessels as a rough proxy of how many masters may be involved. It is possible that each vessel master on each vessel that participated in the pollock fishery could be included for a respondent universe of up to 185 individuals. The number of entities that could supply these data may be substantially reduced if the owners of the vessels that are named in a Chinook Salmon Incentive Plan Agreement (IPA) supply these forms for multiple vessels.

An owner or leaseholder of an AFA-permitted vessel and the representative of any entity that received an allocation of Chinook salmon prohibited species catch (PSC) from NMFS must complete and submit the Certification Page (Part 1) of the Chinook Salmon PSC Allocation In-season Compensated Transfer Report (CTR) each year, for the previous calendar year. Further, any person who transferred Chinook salmon PSC allocation after January 20, and paid or received money for the transfer, must submit a completed CTR (Part 1 and Part 2) for the previous calendar year.

Submission of the CTR may require reporting from vessel owners, the Community Development Quota (CDQ) groups, representatives for cooperatives, IPA) participants, and Chinook salmon PSC receiving entities. The representatives for AFA vessel owners that are subject to an agreement for receiving Chinook salmon PSC may also be part of the respondent universe for the CTR, if these representatives are involved in the buying and selling of Chinook salmon PSC. The universe of these owners will be known by November 1 of each year, but is estimated to be 200 individuals.

The respondent for each AFA vessel that is not covered in an agreement, but that participated in the Bering Sea pollock fishery, is the owner named on a Federal Fisheries Permit. Some of the vessel owners may also provide the name of a representative established by the IPA, AFA cooperative, or CDQ group to submit these forms. Those respondents are either named on a permit application or would be named by November 1 of each year for each vessel.

AFA Chinook Salmon EDR Summary Table

| Submission | Maximum Number of Entities | Sample Size | Expected Response Rate | Maximum Number of Respondents |
|--|-----------------------------------|--------------------|-------------------------------|--------------------------------------|
| Vessel Fuel Survey | 110 | 100% | 100% | 110 |
| Vessel Master Survey | 185 | 100% | 100% | 185 |
| Compensated Transfer Report/Certification Page | 200 | 100% | 100% | 200 |

The Designated Data Collection Agent, the Pacific States Marine Fisheries Commission, ensures compliance via e-mail communication to non-respondents reminding them of the requirement to complete the Chinook Salmon EDR. If necessary, a follow up e-mail is sent (example attached) as a further reminder. The Chinook salmon EDR regulations also allow NMFS to authorize a formal data verification audit, which can be done in cases of gross noncompliance. Finally, a referral to the NOAA Office of Law Enforcement can be used to enforce compliance; however, these actions have not been necessary since the Chinook Salmon EDR program was enacted.

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

- Statistical methodology for stratification and sample selection,
- Estimation procedure,
- Degree of accuracy needed for the purpose described in the justification,
- Unusual problems requiring specialized sampling procedures, and
- Any use of periodic (less frequent than annual) data collection cycles to reduce burden.

All information collected in this Chinook Salmon EDR is collected through a census of the population of vessels and persons authorized to catch pollock in the Bering Sea. Thus, sample selection methods are not applicable to this action and unusual problems requiring specialized sampling procedures do not occur.

This is an ongoing information collection and has not been revised since it was last renewed in 2018. However, the North Pacific Fishery Management Council (Council) has tasked its Social Sciences Planning Team to review all EDR programs and recommend alternatives for changes to the programs. The Council will consider those recommendations in April 2021 with any regulatory amendment analysis to which may follow over the next several years. One of the alternatives under consideration is periodic data collection within the EDR programs.

Regression analysis with a small number of variables or multi-variable statistical analysis may be applied to this data with the intent to assess the variability and explanatory power of two or more variables in a function. This regression analysis will also provide important insight into the distribution of data and potential accuracy of variables or of variables that require further verification.

Chinook salmon PSC transaction data reported in the CTR may be further examined with regression analysis by applying observed transaction prices and quantities traded by vessel. For example, it may be possible to estimate the frequency with which Chinook salmon transactions occur based upon the type or characteristics of vessels, during periods where members of an IPA approach the performance standard based on their proportion of the 47,591 Chinook salmon PSC in no more than two out of seven consecutive years. To conduct this statistical analysis, the variables used from the CTR and other data sources may include the number of transactions, total value of each transaction, vessel characteristics, and membership in a given AFA sector, AFA cooperative, or IPA. These statistical procedures could provide insight as to whether some vessels are either unable to avoid Chinook salmon PSC, or have a higher valued use of Chinook salmon PSC than other vessels and choose to purchase Chinook salmon PSC.

Fuel use and fuel cost from the Vessel Fuel Survey and vessel movement data from revisions to NMFS logbooks and landing reports may be examined with regression analysis to determine if the increase or decrease in selected travel costs can be estimated from data on bycatch incentives imposed by an AFA sector or cooperative and from other existing information. These estimates may also be compared during intervals of time where various types of incentives and combinations of incentives are imposed, and can be compared with various conditions in the fishery (such as weather and sea conditions) that may impact vessel movements. Examples of some of the independent variables that might be tested in a regression analysis of travel costs include general type of incentive; where and when the incentive is imposed; fuel costs; and distance traveled in response to an incentive, pollock catch, and Chinook

salmon PSC.

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.

As discussed in Question 2, this collection is applied annually to a census of vessel owners who participate in the AFA Bering Sea pollock fishery. NMFS explicitly identified in Amendment 91 the entities required to supply the data. The collection is mandatory, so non-response error is anticipated to be extremely small. The fuel data supplied on the Vessel Fuel Survey will not represent primary data (actual fuel used by date and event). The Vessel Fuel Survey data represents masters' estimates based on the type of actions they took to respond to Amendment 91; some response error may occur.

Sources of error or incomplete information may also be present in the Chinook salmon PSC prices reported for each transfer in the CTR. For example, if a transfer of Chinook salmon PSC is accompanied by both monetary and non-monetary compensation (e.g. pollock quota, goods, or services of value), the owner of a vessel may have some control over when prices are reported and whether the reported price can be attributed to Chinook salmon PSC.

Measuring and minimizing non-response bias is an important aspect of ensuring accurate data. The degree of accuracy needed for the Chinook Salmon EDR is not established by statistical theory or legislative mandates. The Council specifically identifies this collection as improving the amount of data available to analyze the effectiveness of Amendment 91 for reducing Chinook salmon PSC to the extent practicable and to assess any changes in the yield of pollock resulting from actions AFA entities take to minimize Chinook salmon PSC.. Data collected through these EDR forms is used for simple deterministic comparisons, analysis of bycatch avoidance by vessel type and cooperative, as well as for estimation of econometric models used for policy-making purposes.

While more accurate data is clearly preferred, standards do not exist regarding the accuracy of data required for estimation of statistical models. The analysis applied to this data may range from simple descriptive statistics, to more sophisticated regression and spatial analysis to assess the effectiveness of Amendment 91.

The major tool for minimizing errors, improving accuracy, and resolving any missing data or non-response of Chinook Salmon EDR data is through verification procedures developed by NMFS economists and analysts. These measures help NMFS verify data submitted in the CTR. The principal means to verify data and resolve questions is through validation of data submitted in these three surveys against supporting records. If errors are identified, NMFS contacts the Chinook Salmon EDR submitter and requests oral or written confirmation of data submissions. The person submitting the Chinook Salmon EDR needs to respond within 20 days of NMFS' information request. Responses after 20 days could be considered untimely and could result in a violation and enforcement action.

In cases of suspected gross non-compliance NMFS may assign an approved auditor to review the CTR data submitted and may request financial documents substantiating the data submitted in the Chinook Salmon EDR. An auditor/accounting specialist is subject to strict confidentiality requirements.

NMFS uses census data from these collections to develop a descriptive (qualitative) analysis and quantitative or tabular comparisons to evaluate the effects of Amendment 91. Where data are available, NMFS may also apply descriptive statistics or other statistical analyses to examine whether—

- ◆ Chinook salmon PSC has been reduced,
- ◆ Incentives have changed fishing behavior during high and low Chinook salmon PSC encounter rates, or
- ◆ If pollock fishing locations and Chinook salmon PSC locations have changed as a result of Amendment 91.

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.

The Council held two industry meetings in 2009 to review and recommend data to be collected in each of the three new reports/surveys. While the meetings were not a formal pretest of the data reports, several fields in the reports/surveys were significantly revised as a result of the meetings. In addition, some members of the AFA trawl sectors have voluntarily submitted individual comments on previous versions of the forms developed for each report/survey.

In each meeting these draft data forms were reviewed by members of the AFA sector, Council staff, Alaska Fisheries Science Center (AFSC) staff, and other NMFS staff. On June 21, 2010, AFSC held an industry workshop in Juneau to review the proposed reports/surveys. That workshop did not include formal pretests of the data forms, but resulted in some additional changes to the data forms.

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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