



PACIFIC STATES MARINE FISHERIES COMMISSION

ALASKA CRAB ECONOMIC DATA REPORT DATA VALIDATION

1998 2001 2004 2005
May 2007



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PACIFIC STATES MARINE FISHERIES COMMISSION

ALASKA CRAB ECONOMIC DATA REPORT DATA VALIDATION

Executive Summary

BACKGROUND

The Bering Sea and Aleutian Islands (BSAI) Crab Rationalization Program was developed to create a quota system that grants exclusive harvesting and processing rights to crab harvesters, processors and coastal communities. Economic data reports (EDRs) were developed to aid the North Pacific Management Council (Council) and National Marine Fisheries Service (NMFS) in assessing the success of the program and developing amendments necessary to mitigate any unintended consequences. In order to ensure that the data submitted by respondents in the EDRs is accurate, Pacific States Marine Fisheries Commission (PSMFC) developed a process to review the data contained within submitted EDRs, including verification audits for those EDRs containing odd or suspicious data values, and conducting random audits for a certain percentage of submitted EDRs.

SCOPE OF WORK

In order to perform the verification audits, the following procedures were requested to be performed:

1. *Critical Review of Economic Data Reports* – This procedure was performed by NMFS. Information from the EDR database was synthesized and analyzed to identify data outside of relevant ranges. The results of this analysis were used as the basis of the outlier audits.
2. *Random audits* – Review and verification of a subset of the data values reported in randomly selected EDRs.
3. *Outlier audits* – Review of records or estimates of EDRs that contained multiple outliers in the analytical analysis outlined in step 1.

CONCLUSION

The quality of the information submitted in the EDRs is important as information is used to analyze the impact of the crab rationalization program and consider similar programs in different fisheries. Overall, the audits found that the information submitted was supported by documentation and records. If an error was identified, there was generally not a directional bias in the submission of the data, i.e. no direct intention to misreport the information. Despite the specific definitions included in the EDRs, there is still variability in how information is reported based upon the ability to break down information in the manner requested and sophistication of accounting systems. In addition, there is significant variability in the quality of supporting documentation to information submitted in the EDRs.

Introduction

BACKGROUND

The Bering Sea and Aleutian Islands (BSAI) Crab Rationalization Program was developed to create a quota system that grants exclusive harvesting and processing rights to crab harvesters, processors, and communities. Beginning in 2005, the rationalization began, granting quota based upon historical data. Because of the expected impact on the industry, an economic data collection program was developed to better understand the economic impacts on the industry.

Economic data reports (EDRs) were developed to obtain information about the crab operations of harvesters and processors to help monitor how costs and economic returns of various stakeholders in BSAI crab fisheries are affected by rationalization. In order to ensure that the data submitted by respondents in the EDRs is accurate, Pacific States Marine Fisheries Commission (PSMFC) was asked to develop and implement an EDR review and verification system, which involves reviewing the data contained within submitted EDRs, conducting verification audits for those EDRs containing odd or suspicious data values, and conducting random audits for a certain percentage of submitted EDRs.

The EDRs were developed to help determine the effects of the rationalization program, including changes to the costs of production and the effect of consolidation. NMFS sought to understand the general trends over the years and the effects of rationalization to translate to other fisheries that are beginning similar programs.

In summary, the purpose of the economic data report and data validation is to:

1. Aid the Council and NMFS in assessing the success of the Program
2. Understand the economic performance of crab fisherman;
3. Understand how the economic performance has changed after rationalization;
4. Isolate the effects attributable to the crab rationalization program;
5. Assess the quality of the EDR data; and
6. Provide guidance to improve future versions of the EDR.

KEY PARTICIPANTS/ROLES

The key participants in the project include:

- ❖ *National Marine Fisheries Service (NMFS)* – driver of the audit and end-user of information contained in the EDR
- ❖ *Pacific States Marine Fisheries Commission (PSMFC)* – collector and manager of data collected through the EDRs
- ❖ *Aldrich Kilbride & Tatone (AKT)* – independent accountants to audit and validate the information
- ❖ Participants in the crab rationalization program

SCOPE OF WORK

The following procedures were requested to be performed in the scope of work:

1. *Critical Review of Economic Data Reports* – This procedure was performed by NMFS. Information from the EDR database was synthesized and analyzed to identify data outside of relevant ranges. The results of this analysis were used as the basis of the outlier audits.
2. *Random audits* – Review and verification of a subset of the data values reported in randomly selected EDRs.
3. *Outlier audits* – Review of records or estimates of EDRs that contained multiple outliers in the analytical analysis outlined in step 1.

The methodology to address the procedures above are outlined later in this report.

Based upon our conversations with NMFS and PSMFC, the key objectives of the audits were outlined as follows:

- ❖ Validate key data
- ❖ Identify problems with the data or EDR instructions and make suggestions for future reporting
- ❖ Develop incentives for submitters to provide accurate information
- ❖ Identify appropriate changes to data when missing or inaccurate
- ❖ Characterize, and in some cases quantify, the level of accuracy associated with particular data elements

These objectives evolved throughout the process as the audit process and objectives were defined. The overriding objective of the audit was to verify the data submitted in the EDR process.

KEY INFORMATION

The BSAI crab rationalization program collected data from participants in the industry for the years 1998, 2001, 2004, and 2005. A statistical sample was determined based upon a total submitted population of 268, which was comprised of all unique submitters of information. The sample was determined based upon achieving a 95% confidence level with a precision level of 15% in terms of assessing the accuracy of the submitted data. (See Appendix A for detailed discussion of the statistical basis of the sample). Once an EDR was selected for validation, data was analyzed across all years in which information was submitted. The following table summarizes the number of EDRs submitted by type and the resulting sample size.

	# EDRs submitted				Sample
	1998	2001	2004	2005	2006
Catcher Vessel	225	220	237	164	33
Catcher Processor	8	7	9	8	3
Stationary Floating & Shoreside Processors	24	23	20	17	5

Methodology

AKT, PSMFC, and NMFS worked together to determine the best process to analyze the data submitted through the EDR process and determine the methodology to sample and audit the data submitted in the EDRs. The process evolved as data was analyzed and outcomes and expectations of the data validation were solidified. The following is a summary of the steps taken throughout the audit process.

1. *Ensure EDR database contains accurate information from EDR.* NMFS and PSMFC worked together to clean up the data and clear outstanding questions (i.e. blank or missing data fields).
2. *Perform analytical review of data to identify outlier data points.* NMFS took responsibility for identifying expected relationships of submitted data to enable identification of outlier information. This step required significant processing of the data into a manageable format. The methodology to identify outliers varied relative to the variable being analyzed.
3. *Compare submitted data against fish tickets and other external data.* In coordination with the outlier analysis, NMFS compared the data collected against the CFEC published fish tickets (which include post-seasonal revenue adjustments) and other available external data. In the analysis, the relationship of EDR data to fish tickets was close to one, indicating limited variations in revenue reporting on the EDR.
4. *Determine appropriate variables to validate.* The significance of the data for further analysis and available audit evidence were considered when determining the appropriate variables to validate.
5. *Define objectives of audit.* The overall objectives of the audits were to validate key data and understand the reliability of the database. The information collected in the EDR process will be used by NMFS to determine the effect of the rationalization program. An additional benefit is to demonstrate to the participants in the BSAI crab rationalization program the importance of submitting accurate information and to ensure accurate information is submitted.
6. *Determine population subject to random audit.* The sample size was determined using a statistical model with 95% confidence level and 15% precision. All EDRs were considered one population and the selection was stratified based upon the number of EDRs for each category to the total number of EDRs. The selection was based upon each unique EDR submitted, and once selected, the vessel was asked to submit information for all years in operation. The sample size and resulting precision level does not change significantly when an individual year is reviewed vs. the total population. Non-replies were considered an important part of the analysis, and did not change the sample population. See Appendix A for discussion on the statistical basis for selection.
7. *Request information subject to audit.* Selected vessels were given 3 weeks to submit information. Due to the timing of the request, which was postponed as data was analyzed and synthesized into a manageable format, most vessels were granted extensions for submitting of data.

8. *Determine outlier audit population and request information subject to audit.* Based upon its analysis, NMFS identified the population that it desired to validate through outlier audit. The initial intention was to complete the outlier audits first followed by the random audits. Due to the amount of time required to analyze the database and ensure information submitted was reliable, the outlier audits were begun after the random audits. The outlier audits focused on EDRs that had a significant number of outliers in the analytical review. Once a vessel was identified as an outlier audit, it was subject to validation of the same variables as the random audits. The outlier audits focused on the catcher vessels as the processors did not have enough data to truly identify outliers within the population.
9. *Validate information by comparing to supporting documentation.* This process involved review of data submitted as supporting data for each vessel selected. Detailed notes as to the basis of information were maintained in order to evaluate the validity of selected data.
10. *Summarize results of audit verification process.* The available audit evidence by EDR variable selected for audit was classified into categories to enable an overall analysis of the validity of data. These results are reported in “Findings” below.

AUDIT METHODOLOGY

AKT selected vessels or processors for audit based upon the statistical sample outlined in Appendix A. For each vessel or processor selected, detailed support was examined for each year in which the selected vessel or processor submitted an EDR. The selection was made based upon information submitted in 2004. AKT worked with NMFS and PSMFC to determine the appropriate variables to validate. From this selection, the variables for audit were further reduced by those that could be validated by outside support, such as fish tickets or COAR data. Because the external validation is a strong form of assurance, AKT did not include these variables in the audit analysis or results.

For each data variable requested, AKT critically evaluated the support provided by the selected vessel or processor. Information was evaluated against third party support, such as invoices or fish tickets; internally-generated information, such as crew settlement sheets, general ledger details, detailed internal reports, or financial statements; and estimates made, including the reasonableness of assumptions. AKT also noted when no support was available to evaluate the information.

Findings

AKT developed the following classifications to describe audit evaluations and summarize the results of the audit:

Data is supported and reasonable:

- ❖ *Data supported* - Data and transactions are supported by third-party documentation and/or internal documentation.
- ❖ *Immaterial difference* - Data is generally supported by documentation, but with differences that were not material to the overall variable.
- ❖ *Reasonable estimate* - Data is based upon an estimate using a clearly articulated method. Based upon our evaluation of the method, the estimate is reasonable.

Unsupported data

- ❖ *Unsupported data* - Data has no supporting documentation and no explanation was given for the way in which the data were derived. Note, that this does not indicate that the information is incorrect.
- ❖ *Estimate – no basis* - Data is based upon an estimate for which there is no method to assess the reasonableness.
- ❖ *Not applicable* - Data element does not appear to be applicable to the vessel. This classification was only used for reporting of IFQ transferred revenue or total cost.

No data reported

- ❖ *No data* - EDR is blank, either because it was purposefully not reported or the actual amount is zero.

SUMMARY OF FINDINGS

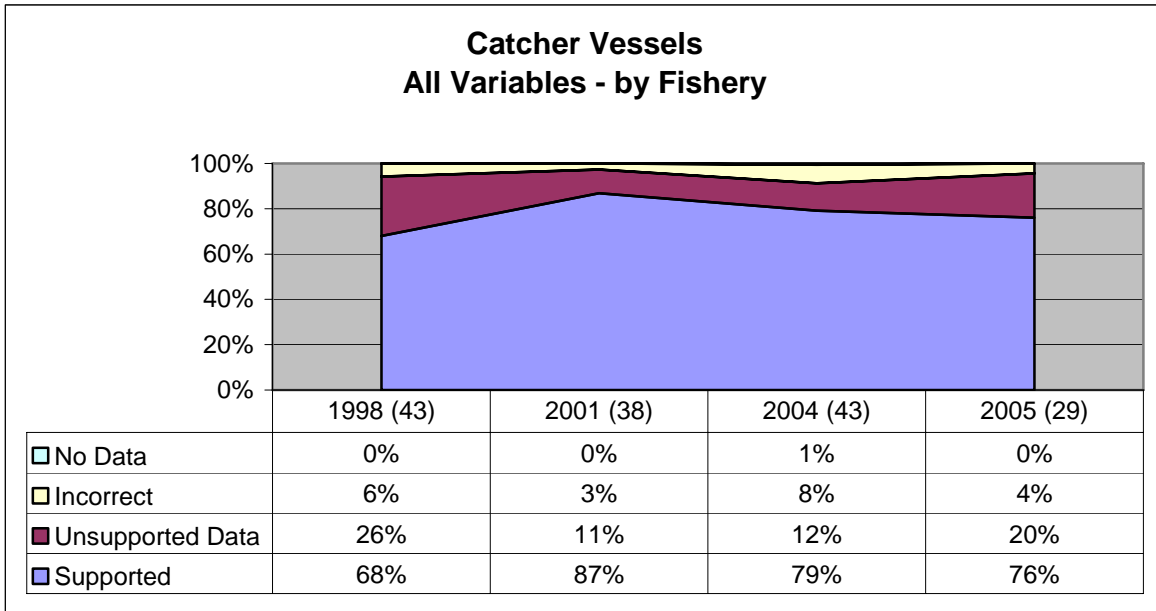
There are four basic populations that we evaluated during the course of the audit:

- ❖ Catcher vessels
- ❖ Catcher processors
- ❖ Processors, both stationary floating and shoreside
- ❖ Catcher vessels selected based upon outliers identified during the analytical review (outlier audits)

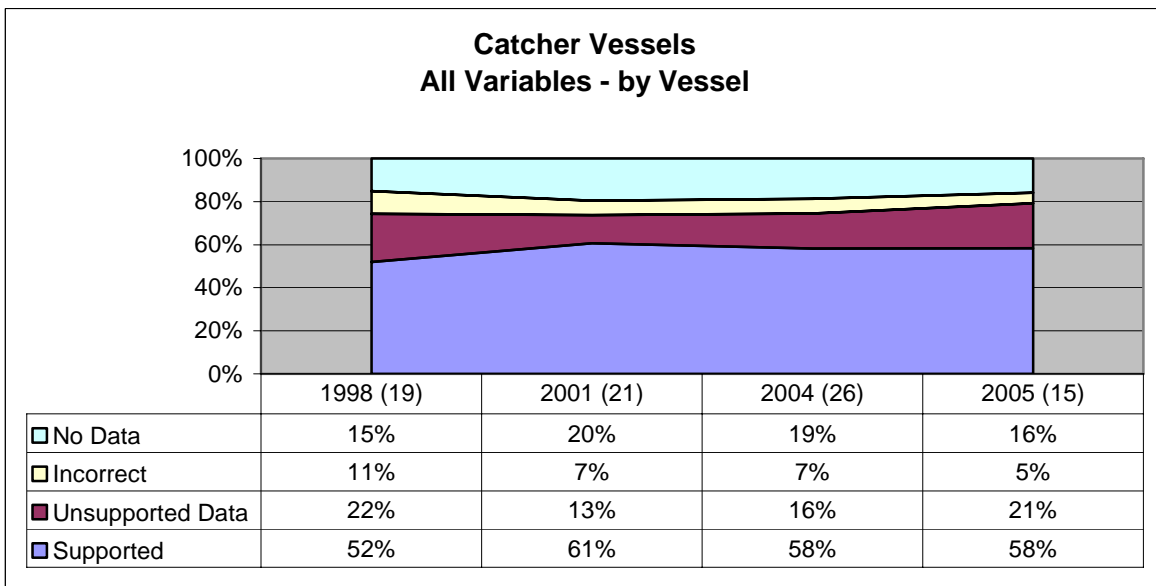
A summary of findings related to each population is further described below.

Catcher Vessels

The Catcher Vessels were the largest participants in the random audit process. The records of 33 vessels were requested, and AKT received 26 responses at the time this report was written. The following graphs highlight the overall summary of the data evaluated. The graphs are separated into two categories: data reported by fishery and data reported by vessel. Additional details are included in Appendix B, summarizing the results by data variable for the catcher vessels.



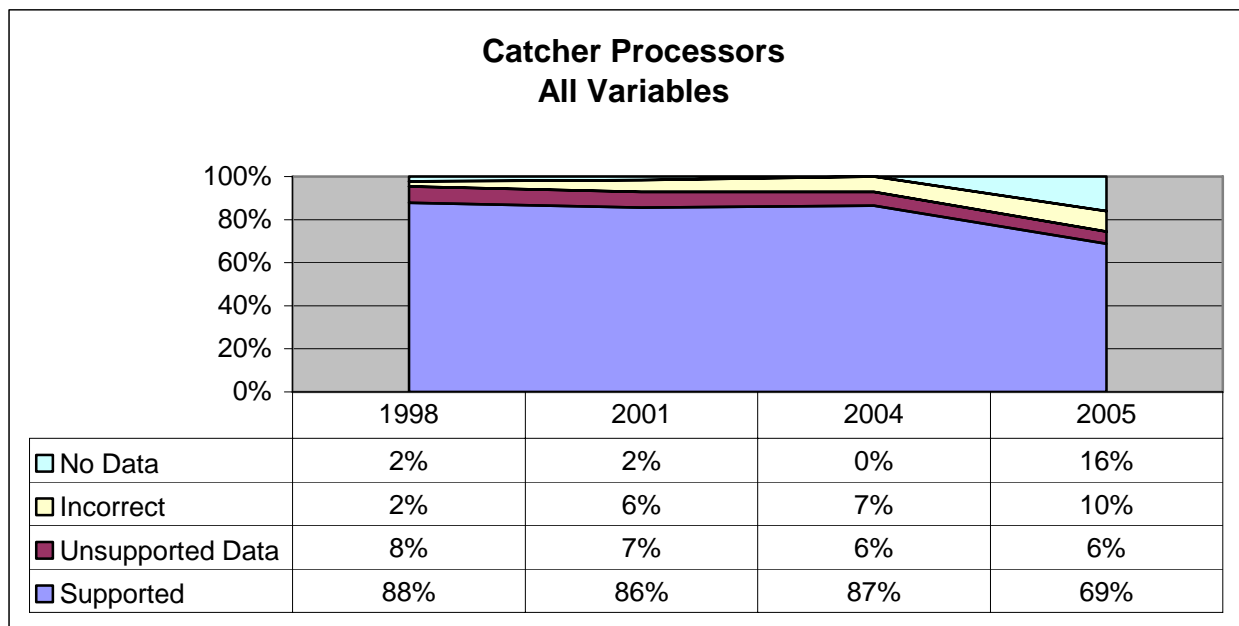
The results indicate that with 95% confidence, the true population of data that is supported and correct lies +/- 15% of 76% (61% - 91%). The incidence of unsupported data frequently lies with one or two variables requested. The results by fishery were also analyzed, however, there was no indication that the data was better or worse by fishery. Please refer to Appendix B for the results by each individual variable and a summary of the subjective findings of the audit.



The results indicate that with 95% confidence, the true population of data that is supported and correct lies +/- 15% of 58% (43% - 73%). The incidence of unsupported data frequently lies with one or two variables requested. For instance, the annual days at sea for the vessel (including all fisheries) were rarely supported with detailed information and would therefore have a significant effect on the overall results. Please refer to Appendix B for the results by each individual variable and a summary of the subjective findings of the audit.

Catcher Processors

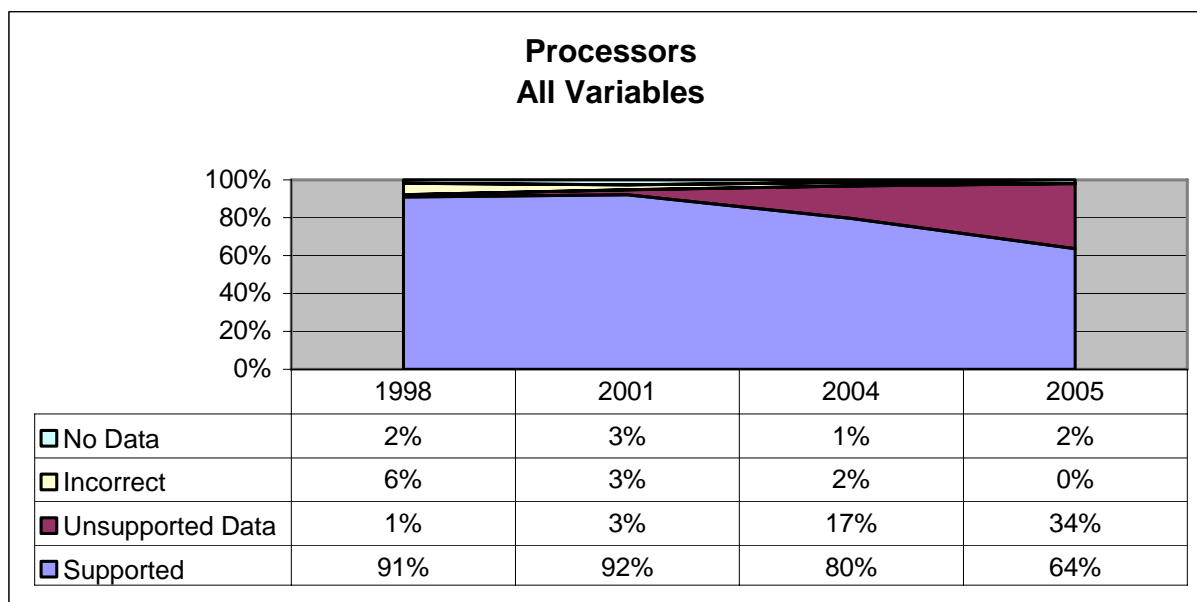
The Catcher Processors were a smaller percentage of the random audit process. The records of 3 catcher processors were requested, and AKT received 3 responses. The following graph highlights the overall summary of the data evaluated for the Catcher Processors. Additional details are included in Appendix C, summarizing the results by data variable for the catcher vessels.



The results indicate that with 95% confidence, the true population of data that is supported and correct lies +/- 15% of 69% (54% - 84%). Less supporting data was received for the 2005 EDR than the previous years, due to late submission of data for audit purposes. Please refer to Appendix C for the results by each individual variable and a summary of the subjective findings of the audit.

Processors (Stationary Floating and Shoreside)

The Processors were also a small percentage of the random audit process. Because of similar data requests, the stationary floating and shoreside processors were combined for analysis purposes. The records of 5 processors were requested, and AKT received 4 responses at the time this report was written. The following graph highlights the overall summary of the data evaluated for the Processors. Additional details are included in Appendix D, summarizing the results by data variable for the catcher vessels.

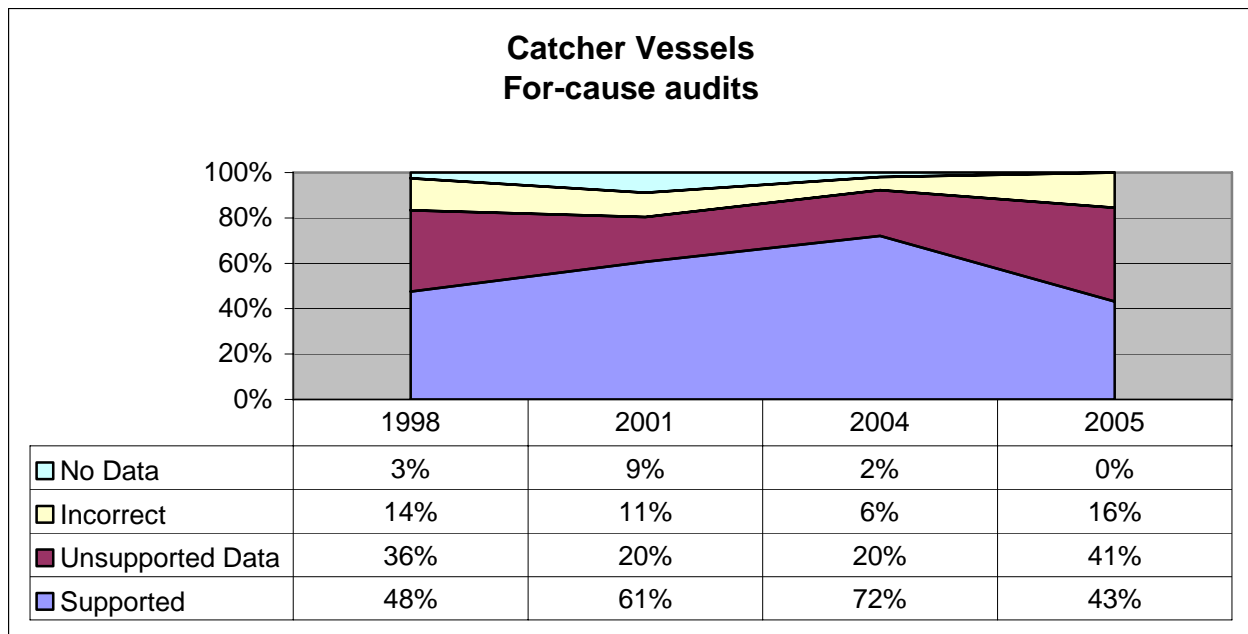


The results indicate that with 95% confidence, the true population of data that is supported and correct lies +/- 15% of 64% (59% - 79%). Less supporting data was received for the 2005 EDR than the previous years due to late submission of data for audit purposes. Please refer to Appendix D for the results by each individual variable and a summary of the subjective findings of the audit.

Outlier Audits (Catcher Vessels)

In addition to the random audits AKT conducted, 11 catcher vessels were selected for audit based upon an outlier analysis performed by NMFS. Out of the 11 catcher vessels contacted, 7 responses were received at the time this report was written. These vessels were chosen due to a higher number of outliers identified in the analytical analysis than other vessels. Because of the nature of selection, we expected to have a higher percentage of unsupported or incorrect data.

The following graph highlights the overall summary of the data evaluated for the outlier audits. Additional details are included in Appendix E, summarizing the results by data variable for the catcher vessels.



The above results show that there is a higher incident of unsupported and/or incorrect data than in the randomly selected population.

Conclusion

The quality of the information submitted in the EDRs is important since the information will be used to analyze the impact of the crab rationalization program. Overall, the audits found that the information submitted was supported by documentation and records. However, despite the specific definitions included in the EDRs, there is still variability in how information is reported based upon the ability to break down information in the manner requested. In addition, there is significant variability in the quality of the documentation supporting information submitted in the EDRs, generally due to sophistication of accounting records. Most vessel owners and processors strive to submit accurate information, however, the quality and detail of records maintained differs significantly among the group.

The findings discussed in Appendix B-E discuss specific variables that were subject to audit. By understanding the implications of the results to the overall population, several observations are worth considering.

1. *The quality of the records differ by vessel.* As anticipated, the quality of the supporting records differs widely by vessel and whether or not an outside (or internal) accountant/consultant is responsible for the submission of the EDR. The processors generally had more sophisticated accounting records and were able to provide supporting documentation for their EDR submissions.
2. *Most vessel owners are doing their best to submit accurate information.* Respondents wanted to comply. The difficulties encountered were due to the timing of the request for historical information and the level of detail maintained. Information requested in the EDR is frequently fishery-specific. Many vessels did not maintain the information at this level of detail in earlier years, resulting in more estimates early and improved data collection in later years.
3. *Errors in submitted information do not indicate a directional bias in the data.* The errors identified as a result of the audit do not indicate a bias in reporting of information. Generally, an equal amount of errors are greater or less than the reported amount. One or two significant errors for a given variable could skew the overall results.
4. *Unsupported data generally appears reasonable relative to other data submitted by the vessel or plant or in relation to the remaining population.* The unsupported data was subjectively analyzed, based upon relationship of variable to other information submitted and quality of supported data for the vessel or plant. The majority of the data appeared reasonable, suggesting that the submitted data was accurate.
5. *Historical data (1998) is not always supportable.* Due to the timing of the request for audit and even for the submission of EDR, information to support 1998 data was not always available.
6. *Current data (2005) was not always supported, either.* Many respondents did not submit supporting documentation for the most recent EDR year, which was due in June of 2006. This was partially due to timing of the request and information received after the initial request.
7. *Industry members are protective of their information.* The data requested on the EDR is very sensitive data for the industry. Many individuals were very protective of the data and wanted to ensure the confidential nature of the information submitted for the audit.

Commendation

AKT worked collaboratively with members of the PSMFC and NMFS staff and would like to thank you for your commitment and time.

<i>Name</i>	<i>Organization</i>
Dave Colpo	Pacific States Marine Fisheries Commission
Geana Tyler	Pacific States Marine Fisheries Commission
Curtis McLain	Pacific States Marine Fisheries Commission
Ron Felthoven	National Marine Fisheries Service
Brian Garber-Yonts	National Marine Fisheries Service
Audit participants	Individual vessels and/or processors

STATISTICAL SAMPLE

In order to determine an appropriate sample size as the basis of selection for the random audits, the main criteria to consider are the level of precision desired, the level of confidence or risk, and the degree of variability in the attributes being measured. These elements are defined as follows:

- ❖ *Level of Precision* – Also referred to as the margin of error, this is the range in which the true point value of the population is estimated to be. This is expressed as a percentage \pm the true value (e.g., $\pm 5\%$). Thus, if it is found from the sample that on average 15% of the fisherman did not submit data then it could be concluded, that for the total population, between 10% and 20% of the fisherman have not submitted data.
- ❖ *Confidence Level* – The degree to which we are certain that a result, or estimate, obtained from the study includes the true population percentage, when the precision is taken into account. In a normal distribution 95% of the sample values are within two standard deviations of the true population value. If 100 vessels were sampled 95 would have the true population values within the range specified.
- ❖ *Degree of Variability* – This measures the variability within the population (e.g. Catcher Vessels, Catcher / Processor Vessels, Shore / Floating Processors, Large Vessels, Small Vessels). The more heterogeneous a population, the larger the sample size required to obtain a given level of precision. The more homogenous a population the smaller the sample size required. A variability of 50% signifies the greatest variability.

Due to the variability within the industry and the variability of the data being analyzed, there is not one specific variable that can be used to create a statistical model that would enable AKT to calculate a standard deviation and regression analysis for the project. This fact places the project in a similar category as a questionnaire, political poll, surveys, and extension program impacts.

While there are no statistical analyses that can be applied directly, there are similar projects that derive statistical sampling methods relating to extension program impact. In these projects the samples are used to evaluate a change made to the extension programs.

The sampling formulas derived for such projects and to ensure a statistical basis for the samples chosen are the following:

$$n_0 = \frac{Z^2(p)(q)}{(e)^2} \qquad n = \frac{n_0}{1 + \frac{(n_0 - 1)}{N}}$$

n_0 = Sample size

n = Sample size with finite population correction for proportions

Z = The number of standard deviations a point x is from the mean. It is a scaled value.

p = population variability

$q = 1 - p$

e = the desired level of precision

N = total population

For this project p (variability) equal .5 to account for maximum variability in the population.

This type of sampling methodology takes into account errors and missing information in the data. The precision level quantifies the tolerable level of error based on the sample size. This error level is then projected to the total population.

The samples were stratified based on the proportion of the group vs the total population. The reasoning behind this is that by sampling each individual population there would be no statistical basis for both the Catcher/Processor and Stationary/Floater Processors. The only way to have a statistical basis for this population would be to census the population. Because this is not a reasonable approach, AKT suggested that the population include all groups and then additional random audits be performed for the Catcher/Processor and Stationary/Floater Processor populations.

The sample population was ultimately chosen based upon a 95% confidence level with 15% precision and variability of 50% (due to the variability of the information requested). This method would ensure the data is correct (outlier audits) and it would also give a good idea for future projects how good the data is (random audits). This sampling method provides a statistical basis for future studies and gives the agencies a basis to measure the accuracy of the population data.

APPENDIX B

CATCHER VESSEL DETAIL - FISHERY SPECIFIC

Year	Supported	Unsupported Data	Incorrect	No Data
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Number of days at sea				
1998	47%	51%	2%	0%
2001	66%	34%	0%	0%
2004	65%	28%	5%	2%
2005	35%	65%	0%	0%

The mean deviation of supported data across all years is 0.914; the standard deviation of the normalized error is 0.266. Support and calculation for this variable varied by vessel. Support included crew settlement sheets, fish tickets, estimates by company. Calculation is often inconsistent across vessels and years. Delivery, offloading and travel time were key variabilities. 2005 data did not include fisheries for which the IFQ was leased.

Number of crew earning shares				
1998	84%	16%	0%	0%
2001	97%	3%	0%	0%
2004	93%	7%	0%	0%
2005	96%	4%	0%	0%

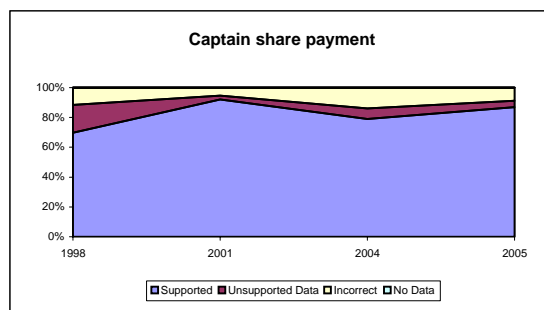
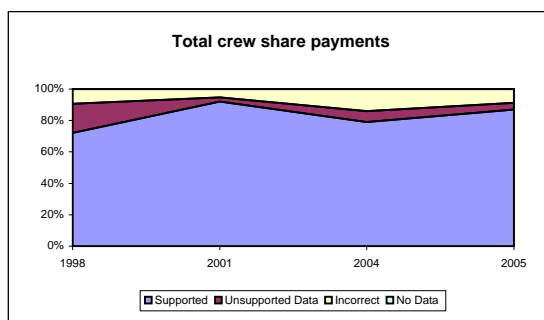
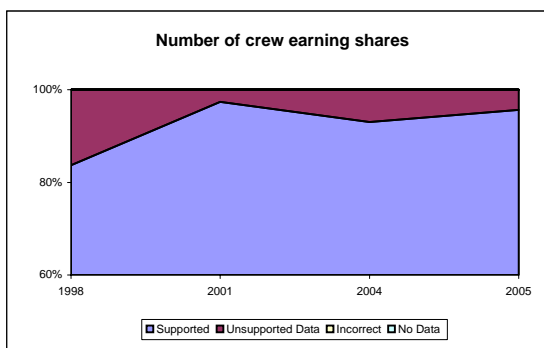
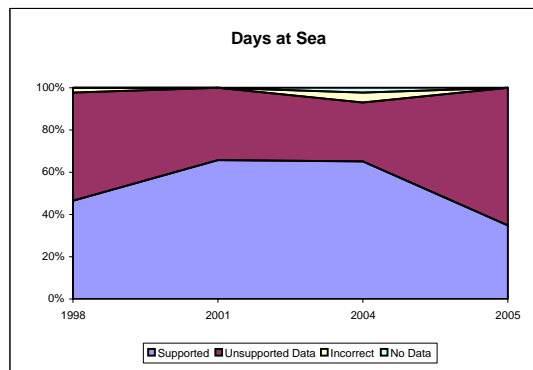
The mean deviation of supported data across all years is 0.047; the standard deviation of the normalized error is 0.026. Support for this variable was generally the number of crew settlement sheets. Variability could result from different crew on different trips. 2005 data did not include fisheries for which the IFQ was leased.

Total crew share payment				
1998	72%	19%	9%	0%
2001	92%	3%	5%	0%
2004	79%	7%	14%	0%
2005	87%	4%	9%	0%

The mean deviation of supported data across all years is \$1,861.05; the standard deviation of the normalized error is 0.209. Support for this variable was almost always the crew settlement sheets. 2005 data did not include fisheries for which the IFQ was leased.

Captain share payment				
1998	70%	19%	12%	0%
2001	92%	3%	5%	0%
2004	79%	7%	14%	0%
2005	87%	4%	9%	0%

The mean deviation of supported data across all years is \$517.19; the standard deviation of the normalized error is 0.116. Support for this variable was almost always the crew settlement sheets. 2005 data did not include fisheries for which the IFQ was leased.



APPENDIX B

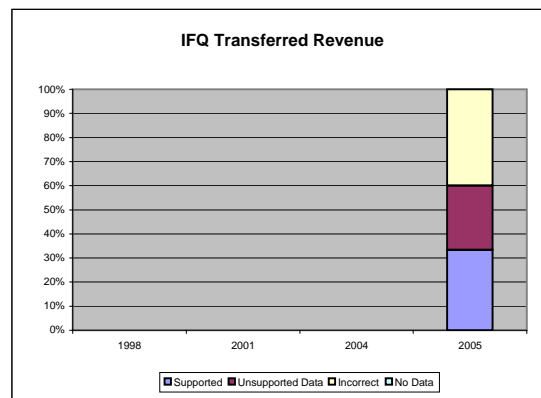
CATCHER VESSEL DETAIL - FISHERY SPECIFIC (Cont.)

Year	Supported	Unsupported Data	Incorrect	No Data
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IFQ Transferred Revenue (combined)				
1998	0%	0%	0%	0%
2001	0%	0%	0%	0%
2004	0%	0%	0%	0%
2005	33%	27%	40%	0%

The mean deviation and standard deviation of normalized error were not calculated for this variable due to the size of the population sampled with IFQ transferred revenue.

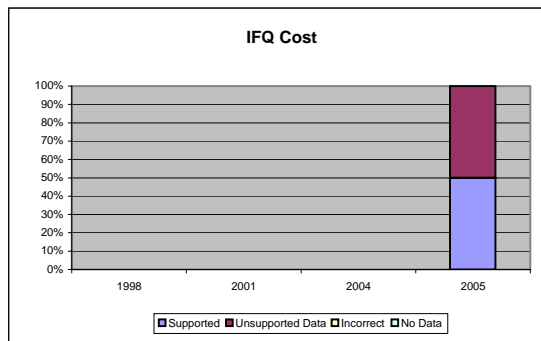
IFQ transferred revenue was not consistently reported, and frequently did not contain supporting documentation or the amount reported did not match the supporting documentation provided. Often, there was no formal agreement supporting the transferred revenue.



IFQ Cost (combined)				
1998	0%	0%	0%	0%
2001	0%	0%	0%	0%
2004	0%	0%	0%	0%
2005	50%	50%	0%	0%

The mean deviation and standard deviation of normalized error were not calculated for this variable due to the size of the population sampled with IFQ transferred revenue.

IFQ cost was not consistently reported, and frequently did not contain supporting documentation. Often there was no formal agreement supporting the cost.



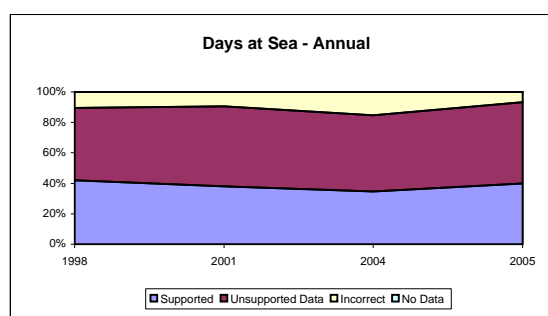
CATCHER VESSEL DETAIL - VESSEL SPECIFIC

Year	Supported	Unsupported Data	Incorrect	No Data
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Days at Sea - Annual				
1998	42%	47%	11%	0%
2001	38%	52%	10%	0%
2004	35%	50%	15%	0%
2005	40%	53%	7%	0%

The mean deviation of supported data across all years is 26.21; the standard deviation of the normalized error is 0.224.

This variable was the most difficult variable to validate as supporting information was frequently not provided. There was also variability in reporting of this number in the definition of days.



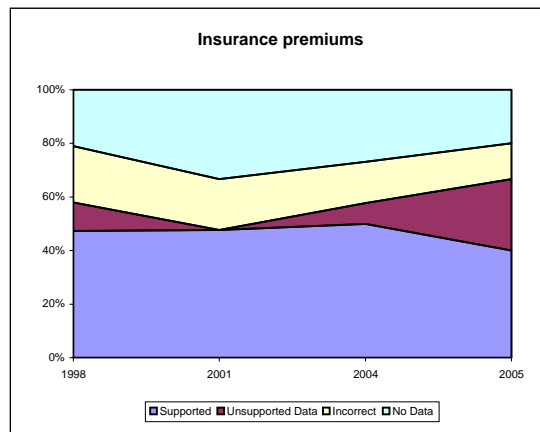
APPENDIX B

CATCHER VESSEL DETAIL - VESSEL SPECIFIC (Cont.)

Year	Supported	Unsupported Data	Incorrect	No Data
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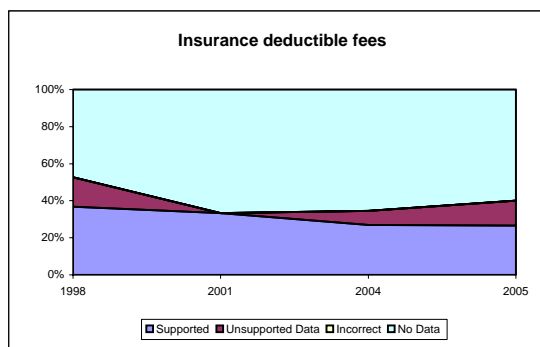
Insurance premiums				
1998	47%	11%	21%	21%
2001	48%	0%	19%	33%
2004	50%	8%	15%	27%
2005	40%	27%	13%	20%

The mean deviation of supported data across all years is \$23,937; the standard deviation of the normalized error is 0.494. Support for this variable was generally vendor invoices and or internal financial statements detail. There is variability whether or not the reported amount is the entire premium or an estimate has been made to allocate to the BSAI crab fishery. Frequently this data element was left blank, either because the proportion to allocate to the crab fisheries would be minimal or they submitter did not know how to fill out the information.



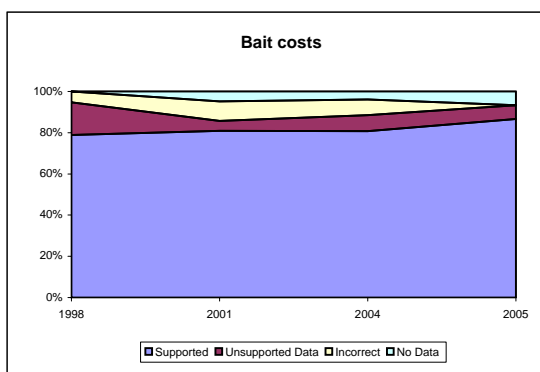
Insurance deductible fees				
1998	37%	16%	0%	47%
2001	33%	0%	0%	67%
2004	27%	8%	0%	65%
2005	27%	13%	0%	60%

The mean deviation of supported data across all years is \$1,108.47; the standard deviation of the normalized error is 0.325. Support for this variable was generally internal support; email documentation that there were no claims in the current year, or was not reported. Uncertain if the non report was due to no expense or to lack of understanding of the request.



Bait costs				
1998	79%	16%	5%	0%
2001	81%	5%	10%	5%
2004	81%	8%	8%	4%
2005	87%	7%	0%	7%

The mean deviation of supported data across all years is \$4,762.34; the standard deviation of the normalized error is 1.007. Support for bait costs varied, but included general ledger detail (financial statement detail), final crew settlement sheets, invoices and/or receipts or internal calculations. Variability also resulted because of uncertainty as to how to allocate to the crab fishery vs. overall operations.



APPENDIX B

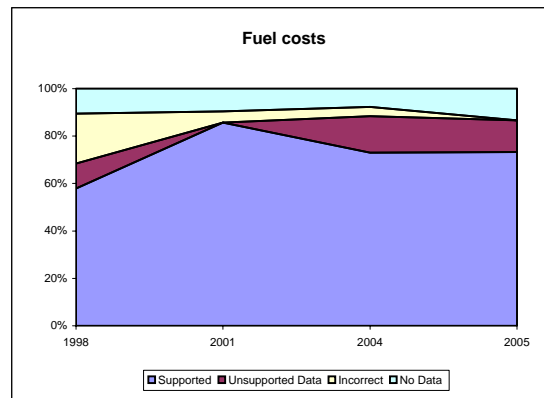
CATCHER VESSEL DETAIL - VESSEL SPECIFIC (Cont.)

Year	Supported	Unsupported Data	Incorrect	No Data
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Fuel costs				
1998	58%	11%	21%	11%
2001	86%	0%	5%	10%
2004	73%	15%	4%	8%
2005	73%	13%	0%	13%

The mean deviation of supported data across all years is \$18,624.53; the standard deviation of the normalized error is 0.311.

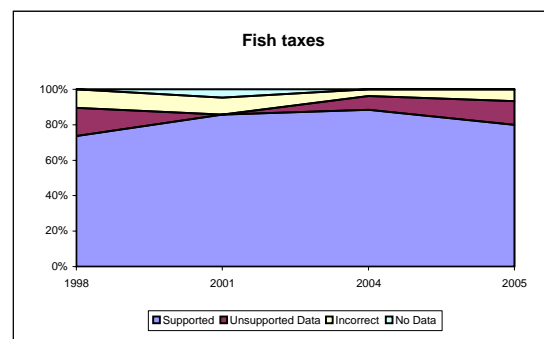
Support for fuel costs varied, but included general ledger detail, final crew settlement sheets, vendor invoices and/or receipts, and internal calculations based upon an average number of gallons per day and price per gallon. Difficult to determine if amount was over or underestimated (cannot determine if all of the gas included on the receipt was used for the crab fishery trip).



Fish taxes				
1998	74%	16%	11%	0%
2001	86%	0%	10%	5%
2004	88%	8%	4%	0%
2005	80%	13%	7%	0%

The mean deviation of supported data across all years is \$848.77; the standard deviation of the normalized error is 0.594.

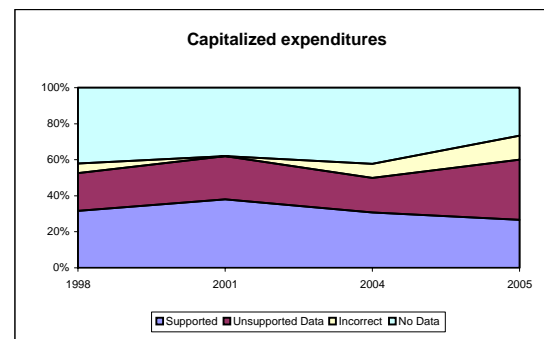
Fish taxes were generally always supported, but by a variety of methods. Some information came from general ledger detail, financial statements, fish tickets, or settlement sheets. Generally, amount reported matched the support exactly.



Capitalized expenditures				
1998	32%	21%	5%	42%
2001	38%	24%	0%	38%
2004	31%	19%	8%	42%
2005	27%	33%	13%	27%

The mean deviation of supported data across all years is \$20,718; the standard deviation of the normalized error is 0.298.

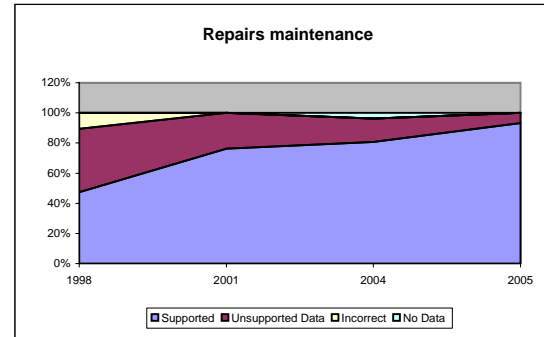
Support for capitalized expenditures generally included general ledger detail, financial statements or fixed asset detail. Frequently, no information was reported, which could have been the result of no capital expenditures in the applicable year.



Repairs maintenance				
1998	47%	42%	11%	0%
2001	76%	24%	0%	0%
2004	81%	15%	0%	4%
2005	93%	7%	0%	0%

The mean deviation of supported data across all years is \$8,420.55; the standard deviation of the normalized error is 0.879.

Support for repair and maintenance costs was generally the general ledger detail or specific vendor receipts. Some estimated the cost based upon an allocation to the fishery, but more frequently, respondents entered entire costs for the year.

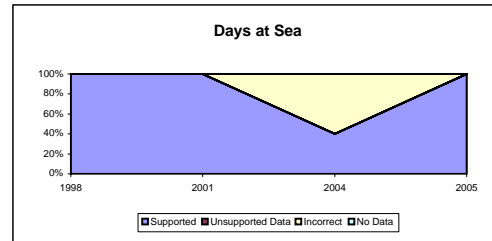


APPENDIX C

CATCHER PROCESSOR DETAIL - FISHERY SPECIFIC

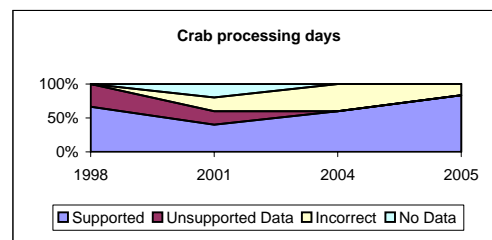
Year	Supported	Unsupported Data	Incorrect	No Data
Days at sea				
1998	100%	0%	0%	0%
2001	100%	0%	0%	0%
2004	40%	0%	60%	0%
2005	100%	0%	0%	0%

Support for this variable was generally settlement sheets or summary of settlement sheets.



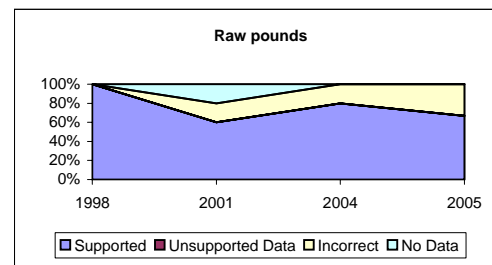
Crab processing days				
1998	67%	33%	0%	0%
2001	40%	20%	20%	20%
2004	60%	0%	40%	0%
2005	83%	0%	17%	0%

Support for this variable was generally settlement sheets.



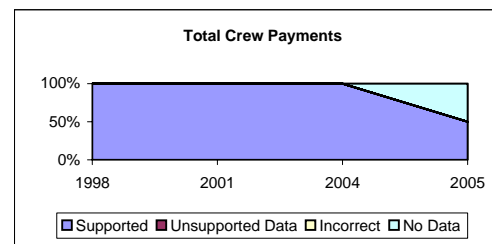
Raw pounds				
1998	100%	0%	0%	0%
2001	60%	0%	20%	20%
2004	80%	0%	20%	0%
2005	67%	0%	33%	0%

Support for this variable was internal detail of fish tickets or other internal calculations.



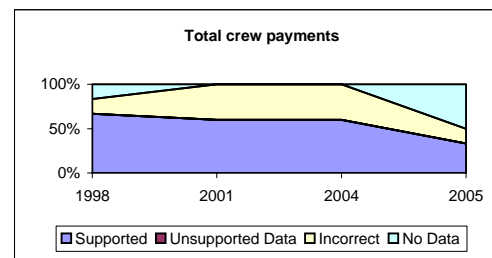
Crew earning shares				
1998	100%	0%	0%	0%
2001	100%	0%	0%	0%
2004	100%	0%	0%	0%
2005	50%	0%	0%	50%

Support for this variable was generally crew logs or settlement sheets.



Total crew payments				
1998	67%	0%	17%	17%
2001	60%	0%	40%	0%
2004	60%	0%	40%	0%
2005	33%	0%	17%	50%

Support for this variable was generally crew logs or settlement sheets.



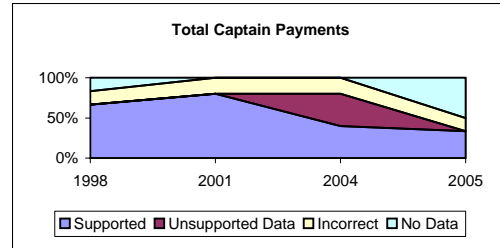
APPENDIX C

CATCHER PROCESSOR DETAIL - FISHERY SPECIFIC (cont.)

Year	Supported	Unsupported Data	Incorrect	No Data
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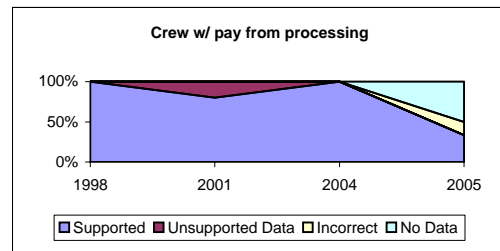
Total captain payments				
1998	67%	0%	17%	17%
2001	80%	0%	20%	0%
2004	40%	40%	20%	0%
2005	33%	0%	17%	50%

Support for this variable was generally crew logs or settlement sheets.



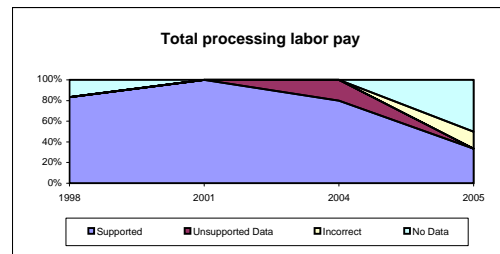
Crew w/ pay from processing				
1998	100%	0%	0%	0%
2001	80%	20%	0%	0%
2004	100%	0%	0%	0%
2005	33%	0%	17%	50%

Support for this variable was generally crew logs or settlement sheets.



Total processing labor pay				
1998	83%	0%	0%	17%
2001	100%	0%	0%	0%
2004	80%	20%	0%	0%
2005	33%	0%	17%	50%

Support for this variable varied and included internal financial statements or an allocation based upon total crew and captain payments.



APPENDIX C

CATCHER PROCESSOR DETAIL - PRODUCT SPECIFIC

Year	Supported	Unsupported Data	Incorrect	No Data
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Product code				
1998	100%	0%	0%	0%
2001	100%	0%	0%	0%
2004	100%	0%	0%	0%
2005	100%	0%	0%	0%

Support for this variable was difficult to validate and was often based upon representation of catcher processor; sometimes it was difficult to match the product code or process code to detail. One processor was able to provide annual report of crab production.

Process code				
1998	100%	0%	0%	0%
2001	100%	0%	0%	0%
2004	100%	0%	0%	0%
2005	100%	0%	0%	0%

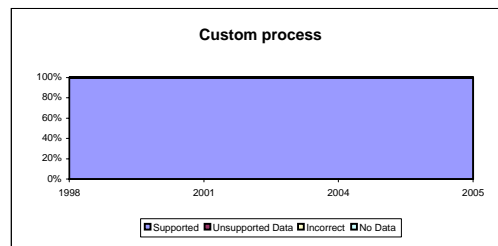
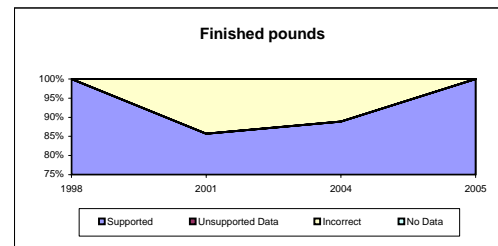
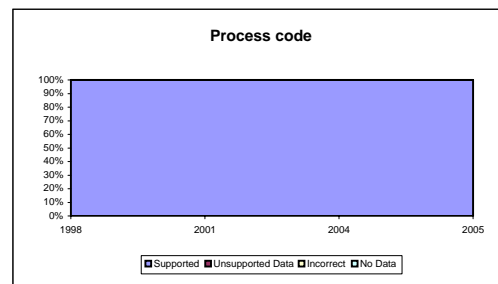
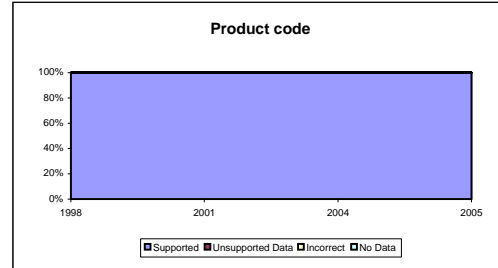
Support for this variable varied depending on the data provided for other variables. Sometimes, it was difficult to match the product code or process code to detail. One processor was able to provide annual report of crab production.

Finished pounds				
1998	100%	0%	0%	0%
2001	86%	0%	14%	0%
2004	89%	0%	11%	0%
2005	100%	0%	0%	0%

Support for this variable varied from production report to financial statements to fish tickets. One processor was able to provide annual report of crab production.

Custom process				
1998	100%	0%	0%	0%
2001	100%	0%	0%	0%
2004	100%	0%	0%	0%
2005	100%	0%	0%	0%

This variable was difficult to validate and was based upon representation of catcher processor.



APPENDIX C

CATCHER PROCESSOR DETAIL - SPECIES AND PLANT SPECIFIC

Year	Supported	Unsupported Data	Incorrect	No Data
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Product code				
1998	100%	0%	0%	0%
2001	100%	0%	0%	0%
2004	100%	0%	0%	0%
2005	80%	0%	0%	20%

Support for this variable was difficult to validate and was often based upon representation of catcher processor; sometimes it was difficult to match the product code or process code to detail. One processor was able to provide annual report of crab production.

Process code				
1998	100%	0%	0%	0%
2001	100%	0%	0%	0%
2004	100%	0%	0%	0%
2005	80%	0%	0%	20%

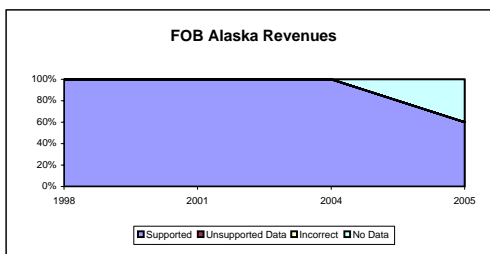
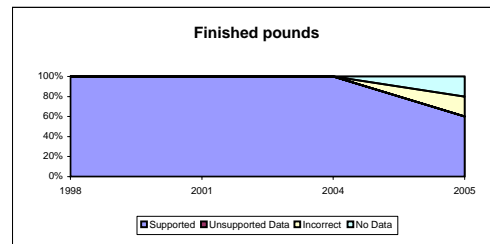
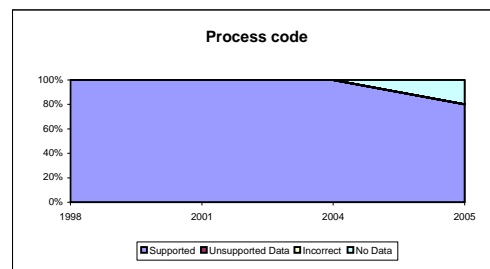
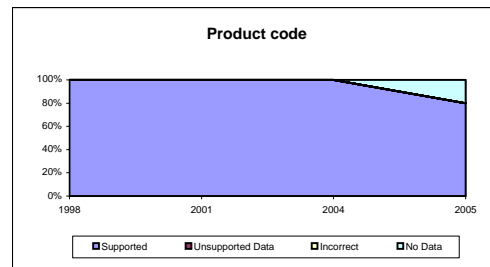
Support for this variable varied depending on the data provided for other variables. Sometimes, it was difficult to match the product code or process code to detail. One processor was able to provide annual report of crab production.

Finished pounds				
1998	100%	0%	0%	0%
2001	100%	0%	0%	0%
2004	100%	0%	0%	0%
2005	60%	0%	20%	20%

Support for this variable varied from production report to financial statements to fish tickets. One processor was able to provide annual report of crab production.

FOB Alaska Revenues				
1998	100%	0%	0%	0%
2001	100%	0%	0%	0%
2004	100%	0%	0%	0%
2005	60%	0%	0%	40%

Support for this variable was generally internal calculations, including an operator report.



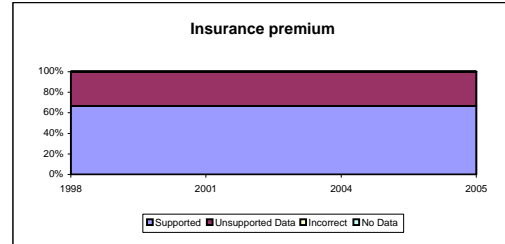
APPENDIX C

CATCHER PROCESSOR DETAIL - VESSEL SPECIFIC

Year	Supported	Unsupported Data	Incorrect	No Data
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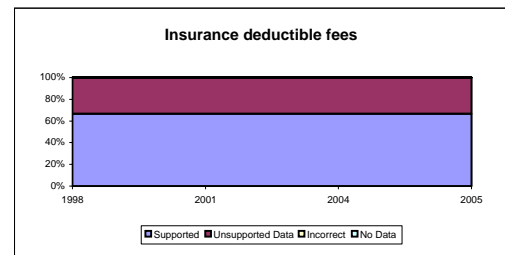
Insurance premium				
1998	67%	33%	0%	0%
2001	67%	33%	0%	0%
2004	67%	33%	0%	0%
2005	67%	33%	0%	0%

Support for this variable was generally internal financial statements; some found it difficult to allocate to crab activities.



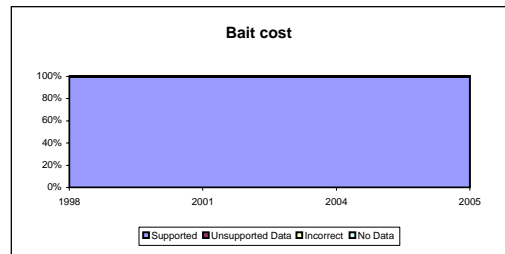
Insurance deductible fees				
1998	67%	33%	0%	0%
2001	67%	33%	0%	0%
2004	67%	33%	0%	0%
2005	67%	33%	0%	0%

Support for this variable was generally internal financial statements, if applicable; otherwise, no support was provided or they did not know how to allocate to crab.



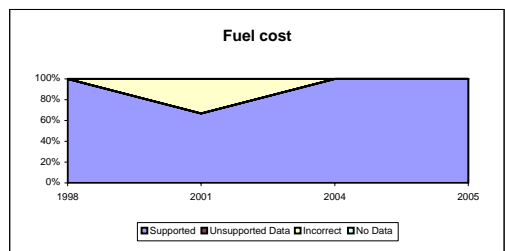
Bait cost				
1998	100%	0%	0%	0%
2001	100%	0%	0%	0%
2004	100%	0%	0%	0%
2005	100%	0%	0%	0%

Support for this variable included internal financial statements, settlement sheets or invoices.



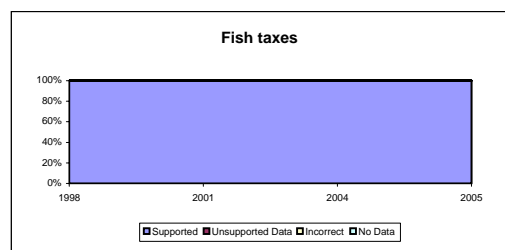
Fuel cost				
1998	100%	0%	0%	0%
2001	67%	0%	33%	0%
2004	100%	0%	0%	0%
2005	100%	0%	0%	0%

Support for this variable included internal financial statements, settlement sheets or invoices.



Fish taxes				
1998	100%	0%	0%	0%
2001	100%	0%	0%	0%
2004	100%	0%	0%	0%
2005	100%	0%	0%	0%

Support for this variable included internal financial statements, tax returns or other internal detail.



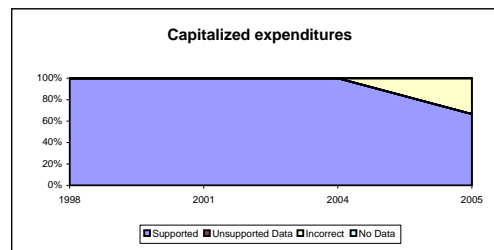
APPENDIX C

CATCHER PROCESSOR DETAIL - VESSEL SPECIFIC (Cont.)

Year	Supported	Unsupported Data	Incorrect	No Data
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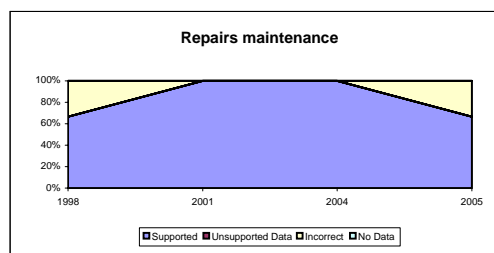
Capitalized expenditures				
1998	100%	0%	0%	0%
2001	100%	0%	0%	0%
2004	100%	0%	0%	0%
2005	67%	0%	33%	0%

Support for this variable included internal financial statements or internal detail of capital expenditures.



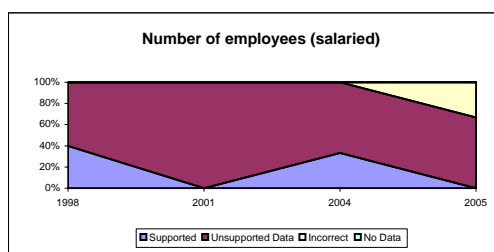
Repairs maintenance				
1998	67%	0%	33%	0%
2001	100%	0%	0%	0%
2004	100%	0%	0%	0%
2005	67%	0%	33%	0%

Support for this variable included internal financial statements or general ledger.



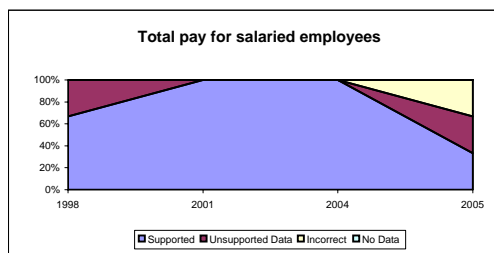
Number of employees (salaried)				
1998	40%	60%	0%	0%
2001	0%	100%	0%	0%
2004	33%	67%	0%	0%
2005	0%	67%	33%	0%

There was minimal supporting data provided for this variable.



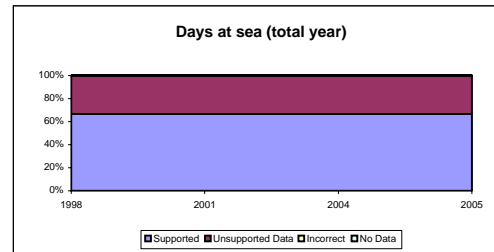
Total pay for salaried employees				
1998	67%	33%	0%	0%
2001	100%	0%	0%	0%
2004	100%	0%	0%	0%
2005	33%	33%	33%	0%

Support for this variable included internal financial statements or general ledger detail.



Days at sea (total year)				
1998	67%	33%	0%	0%
2001	67%	33%	0%	0%
2004	67%	33%	0%	0%
2005	67%	33%	0%	0%

Support for this variable included summary of settlement sheets or log books; one did not provide supporting data.



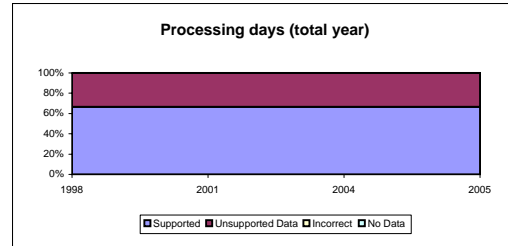
APPENDIX C

CATCHER PROCESSOR DETAIL - VESSEL SPECIFIC (Cont.)

Year	Supported	Unsupported Data	Incorrect	No Data
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Processing days (total year)				
1998	67%	33%	0%	0%
2001	67%	33%	0%	0%
2004	67%	33%	0%	0%
2005	67%	33%	0%	0%

Support for this variable included summary of settlement sheets or log books; one did not provide supporting data.



APPENDIX D

PROCESSORS DETAIL - FISHERY SPECIFIC

Year	Supported	Unsupported Data	Incorrect	No Data
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Crab processing days				
1998	80%	20%	0%	0%
2001	40%	40%	20%	0%
2004	43%	57%	0%	0%
2005	0%	100%	0%	0%

Support for this variable included fish ticket reports, plant production report or other internal reports. 2005 support was not available for 2 of the 5 processors, however information was reasonable relative to results from prior years.

Raw pounds				
1998	80%	0%	0%	20%
2001	100%	0%	0%	0%
2004	86%	0%	14%	0%
2005	40%	60%	0%	0%

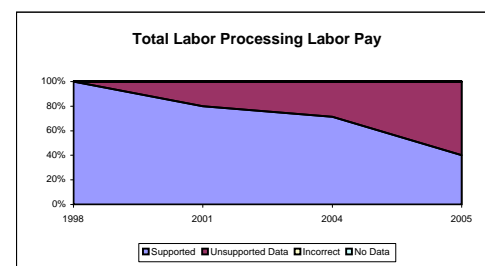
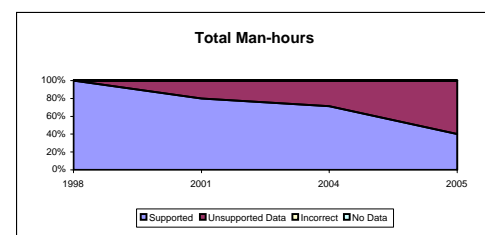
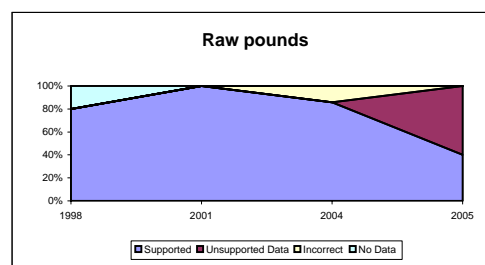
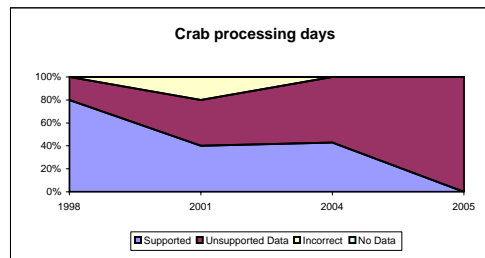
Support for this variable included a plant production report or other internal report. 2005 support was not available for 2 of the 5 processors, however information was reasonable relative to results from prior years.

Total Man-hours				
1998	100%	0%	0%	0%
2001	80%	20%	0%	0%
2004	71%	29%	0%	0%
2005	40%	60%	0%	0%

Support for this variable was generally an internal plant labor report. 2005 support was not available for 2 of the 5 processors, however information was reasonable relative to results from prior years.

Total Labor Processing Labor Pay				
1998	100%	0%	0%	0%
2001	80%	20%	0%	0%
2004	71%	29%	0%	0%
2005	40%	60%	0%	0%

Support for this variable included internal plant labor reports or other internal data. 2005 support was not available for 2 of the 5 processors, however information was reasonable relative to results from prior years.



APPENDIX D

PROCESSORS DETAIL - PRODUCT AND FISHERY SPECIFIC

Year	Supported	Unsupported Data	Incorrect	No Data
------	-----------	------------------	-----------	---------

Product code				
1998	100%	0%	0%	0%
2001	100%	0%	0%	0%
2004	91%	9%	0%	0%
2005	58%	42%	0%	0%

Support for this variable included internal sales or production report. 2005 support was not available for 2 of the 5 processors, however information was reasonable relative to results from prior years.

Process code				
1998	93%	0%	7%	0%
2001	100%	0%	0%	0%
2004	73%	27%	0%	0%
2005	58%	42%	0%	0%

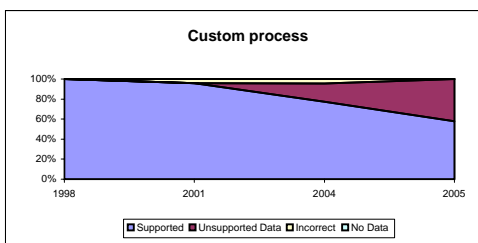
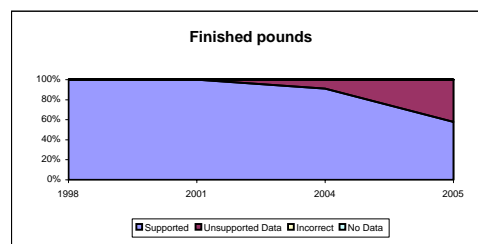
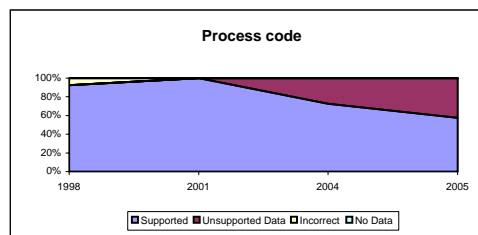
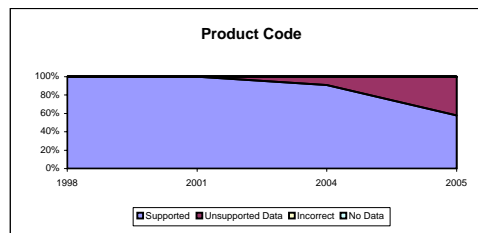
Support for this variable included internal sales or production report. 2005 support was not available for 2 of the 5 processors, however information was reasonable relative to results from prior years.

Finished pounds				
1998	100%	0%	0%	0%
2001	100%	0%	0%	0%
2004	91%	9%	0%	0%
2005	58%	42%	0%	0%

Support for this variable included internal sales or production report. 2005 support was not available for 2 of the 5 processors, however information was reasonable relative to results from prior years.

Custom process				
1998	100%	0%	0%	0%
2001	96%	0%	4%	0%
2004	77%	18%	5%	0%
2005	58%	42%	0%	0%

Difficult to determine if custom processing is appropriate - necessary to rely on information provided. 2005 support was not available for 2 of the 5 processors, however information was reasonable relative to results from prior years.



APPENDIX D

PROCESSORS DETAIL - SPECIES AND PROCESSOR SPECIFIC

Year	Supported	Unsupported Data	Incorrect	No Data
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Product code				
1998	86%	0%	14%	0%
2001	95%	0%	5%	0%
2004	88%	12%	0%	0%
2005	91%	9%	0%	0%

Support for this variable included internal sales or production reports. 2005 support was not available for 2 of the 5 processors, however information was reasonable relative to results from prior years.

Process code				
1998	86%	0%	14%	0%
2001	95%	0%	5%	0%
2004	82%	18%	0%	0%
2005	91%	9%	0%	0%

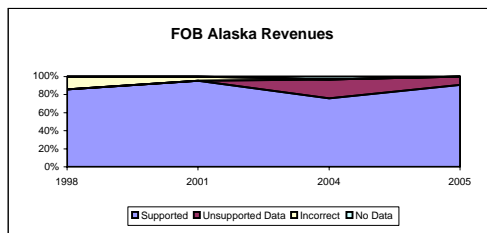
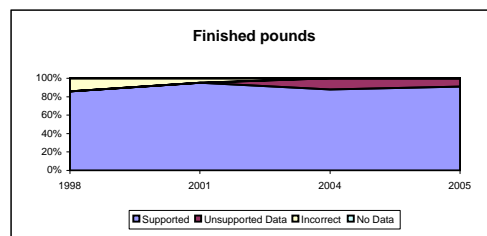
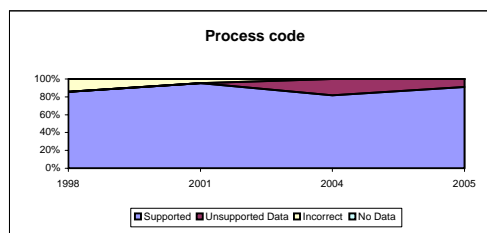
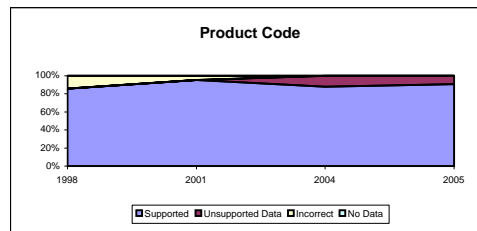
Support for this variable included internal sales or production reports. 2005 support was not available for 2 of the 5 processors, however information was reasonable relative to results from prior years.

Finished pounds				
1998	86%	0%	14%	0%
2001	95%	0%	5%	0%
2004	88%	12%	0%	0%
2005	91%	9%	0%	0%

Support for this variable included internal sales or production reports. 2005 support was not available for 2 of the 5 processors, however information was reasonable relative to results from prior years.

FOB Alaska Revenues				
1998	86%	0%	14%	0%
2001	95%	0%	5%	0%
2004	76%	21%	0%	3%
2005	91%	9%	0%	0%

Support for this variable included internal sales or production reports. 2005 support was not available for 2 of the 5 processors, however information was reasonable relative to results from prior years.



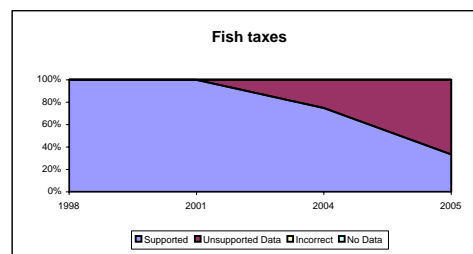
APPENDIX D

PROCESSORS DETAIL - PROCESSOR SPECIFIC

Year	Supported	Unsupported Data	Incorrect	No Data
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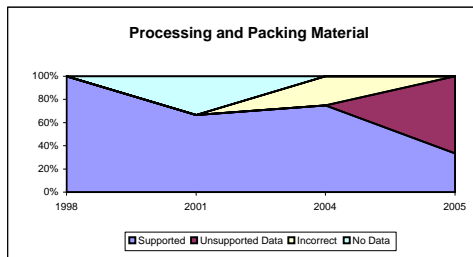
Fish taxes				
1998	100%	0%	0%	0%
2001	100%	0%	0%	0%
2004	75%	25%	0%	0%
2005	33%	67%	0%	0%

Support for this variable included internal reports or Alaska fisheries tax return details. 2005 support was not available for 2 of the 5 processors, however information was reasonable relative to results from prior years.



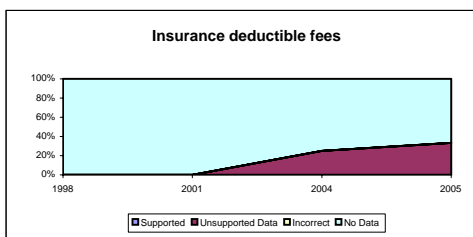
Processing and Packing Material				
1998	100%	0%	0%	0%
2001	67%	0%	0%	33%
2004	75%	0%	25%	0%
2005	33%	67%	0%	0%

Support for this variable included internal detail of packaging costs; may include allocated costs. 2005 support was not available for 2 of the 5 processors, however information was reasonable relative to results from prior years.



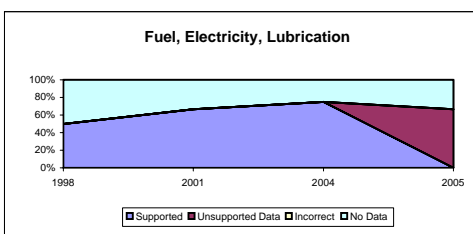
Insurance deductible fees				
1998	0%	0%	0%	100%
2001	0%	0%	0%	100%
2004	0%	25%	0%	75%
2005	0%	33%	0%	67%

This variable was difficult to validate as there was generally no support indicating if there were no deductible fees. 2005 support was not available for 2 of the 5 processors, however information was reasonable relative to results from prior years.



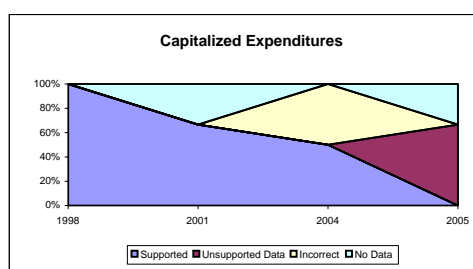
Fuel, Electricity, Lubrication				
1998	50%	0%	0%	50%
2001	67%	0%	0%	33%
2004	75%	0%	0%	25%
2005	0%	67%	0%	33%

Support for this variable was generally internal detail. 2005 support was not available for 2 of the 5 processors, however information was reasonable relative to results from prior years.



Capitalized Expenditures				
1998	100%	0%	0%	0%
2001	67%	0%	0%	33%
2004	50%	0%	50%	0%
2005	0%	67%	0%	33%

Support for this variable was generally an asset report or other internal detail. 2005 support was not available for 2 of the 5 processors, however information was reasonable relative to results from prior years.



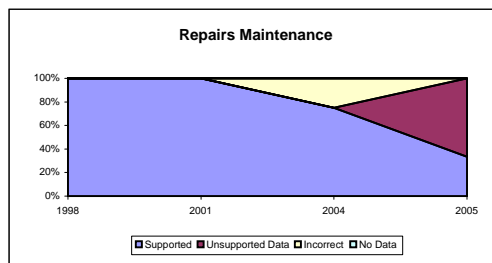
APPENDIX D

PROCESSORS DETAIL - PROCESSOR SPECIFIC (Cont.)

Year	Supported	Unsupported Data	Incorrect	No Data
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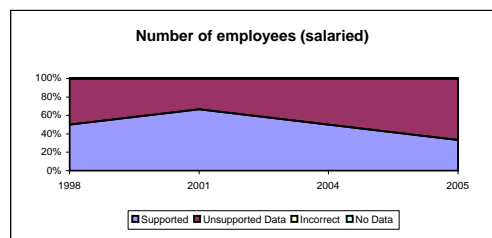
Repairs Maintenance				
1998	100%	0%	0%	0%
2001	100%	0%	0%	0%
2004	75%	0%	25%	0%
2005	33%	67%	0%	0%

Support for this variable was generally internal detail or the general ledger. 2005 support was not available for 2 of the 5 processors, however information was reasonable relative to results from prior years.



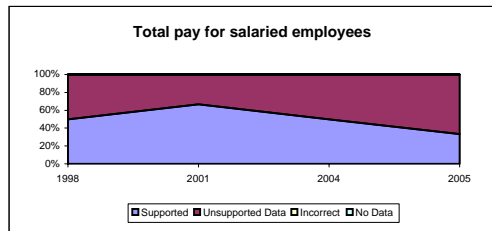
Number of employees (salaried)				
1998	50%	50%	0%	0%
2001	67%	33%	0%	0%
2004	50%	50%	0%	0%
2005	33%	67%	0%	0%

This variable was difficult to validate. Some provided count of employees per labor distribution report; otherwise reliant upon support provided by company.



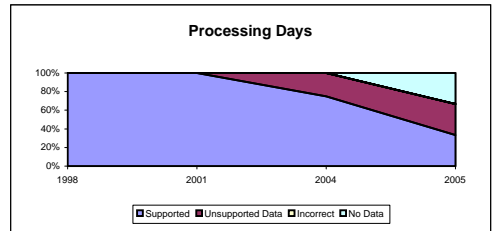
Total pay for salaried employees				
1998	50%	50%	0%	0%
2001	67%	33%	0%	0%
2004	50%	50%	0%	0%
2005	33%	67%	0%	0%

Support for this variable included internal detail. 2005 support was not available for 2 of the 5 processors, however information was reasonable relative to results from prior years.



Processing Days				
1998	100%	0%	0%	0%
2001	100%	0%	0%	0%
2004	75%	25%	0%	0%
2005	33%	33%	0%	33%

Support for this variable was a log or other internal worksheet. 2005 support was not available for 2 of the 5 processors, however information was reasonable relative to results from prior years.



APPENDIX E

CATCHER VESSEL OUTLIER DETAIL - FISHERY SPECIFIC

Year	Supported	Unsupported Data	Incorrect	No Data
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Number of days at sea				
1998	44%	39%	17%	0%
2001	56%	13%	31%	0%
2004	71%	21%	7%	0%
2005	54%	31%	15%	0%

Support and calculation for this variable varied by vessel. Support included crew settlement sheets, fish tickets, estimates by company. Calculation is often inconsistent across vessels and years. Delivery, offloading and travel time were key variabilities. 2005 data did not include fisheries for which the IFQ was leased.

Crew earning shares				
1998	61%	39%	0%	0%
2001	88%	13%	0%	0%
2004	93%	7%	0%	0%
2005	77%	23%	0%	0%

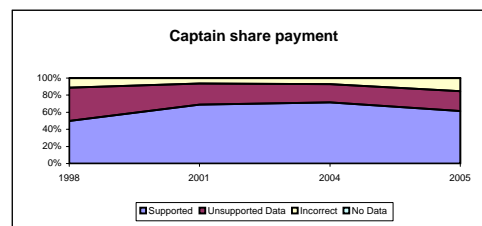
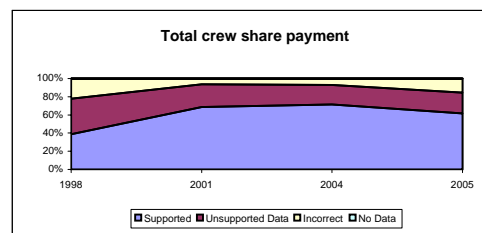
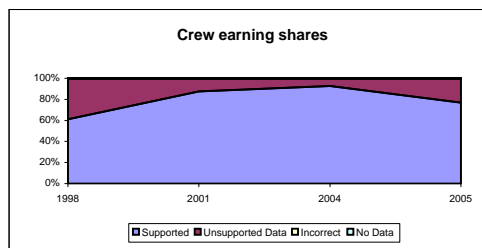
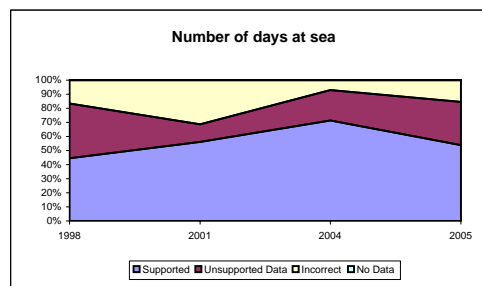
Support for this variable was generally the number of crew settlement sheets. Variability could result from different crew on different trips. 2005 data did not include fisheries for which the IFQ was leased.

Total crew share payment				
1998	39%	39%	22%	0%
2001	69%	25%	6%	0%
2004	71%	21%	7%	0%
2005	62%	23%	15%	0%

Support for this variable was almost always the crew settlement sheets. 2005 data did not include fisheries for which the IFQ was leased.

Captain share payment				
1998	50%	39%	11%	0%
2001	69%	25%	6%	0%
2004	71%	21%	7%	0%
2005	62%	23%	15%	0%

Support for this variable was almost always the crew settlement sheets. 2005 data did not include fisheries for which the IFQ was leased.



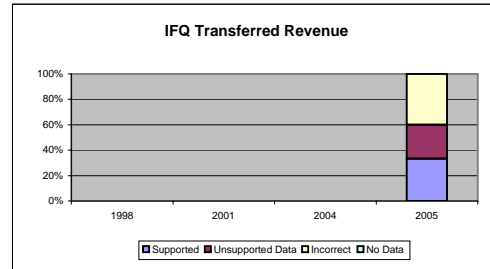
APPENDIX E

CATCHER VESSEL OUTLIER DETAIL - FISHERY SPECIFIC (Cont.)

Year	Supported	Unsupported Data	Incorrect	No Data
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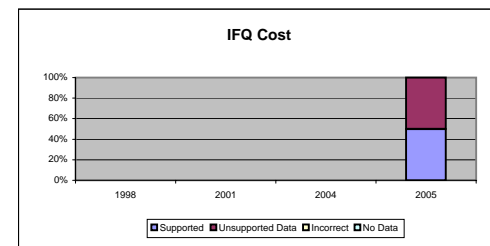
IFQ Transferred Revenue (combined)				
1998	0%	0%	0%	0%
2001	0%	0%	0%	0%
2004	0%	0%	0%	0%
2005	33%	27%	40%	0%

IFQ transferred revenue was not consistently reported, and frequently did not contain supporting documentation or the amount reported did not match the supporting documentation provided. Often, there was no formal agreement supporting the transferred revenue.



IFQ Cost (combined)				
1998	0%	0%	0%	0%
2001	0%	0%	0%	0%
2004	0%	0%	0%	0%
2005	50%	50%	0%	0%

IFQ cost was not consistently reported, and frequently did not contain supporting documentation. Often there was no formal agreement supporting the cost.

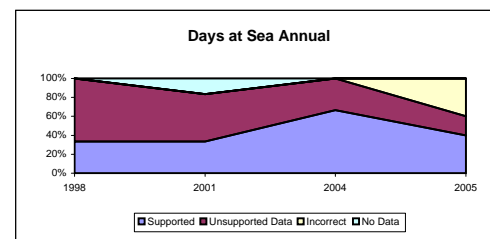


CATCHER VESSEL OUTLIER DETAIL - VESSEL SPECIFIC

Year	Supported	Unsupported Data	Incorrect	No Data
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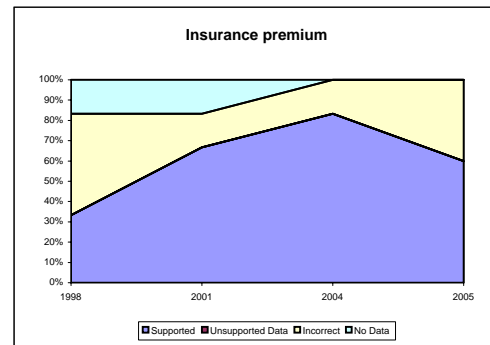
Days @ Sea - Annual				
1998	33%	67%	0%	0%
2001	33%	50%	0%	17%
2004	67%	33%	0%	0%
2005	40%	20%	40%	0%

This variable was the most difficult variable to validate as supporting information was frequently not provided. There was also variability in reporting of this number in the definition of days.



Insurance premium				
1998	33%	0%	50%	17%
2001	67%	0%	17%	17%
2004	83%	0%	17%	0%
2005	60%	0%	40%	0%

Support for this variable was generally vendor invoices and or internal financial statements detail. There is variability whether or not the reported amount is the entire premium or an estimate has been made to allocate to the BSAI crab fishery. Frequently this data element was left blank, either because the proportion to allocate to the crab fisheries would be minimal or they submitter did not know how to fill out the information.



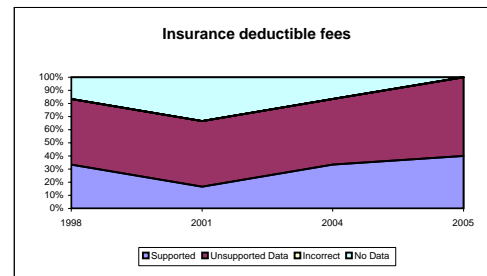
APPENDIX E

CATCHER VESSEL OUTLIER DETAIL - VESSEL SPECIFIC (Cont.)

Year	Supported	Unsupported Data	Incorrect	No Data
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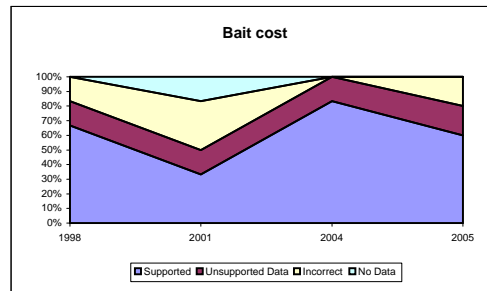
Insurance deductible fees				
1998	33%	50%	0%	17%
2001	17%	50%	0%	33%
2004	33%	50%	0%	17%
2005	40%	60%	0%	0%

Support for this variable was generally internal support; email documentation that there were no claims in the current year, or was not reported. Uncertain if the non report was due to no expense or to lack of understanding of the request.



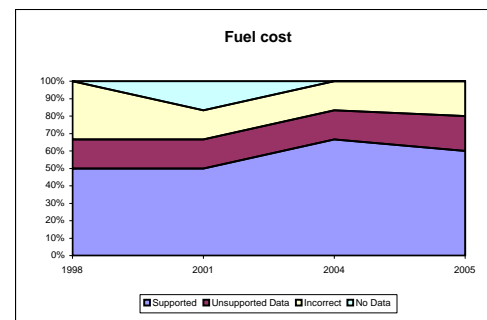
Bait cost				
1998	67%	17%	17%	0%
2001	33%	17%	33%	17%
2004	83%	17%	0%	0%
2005	60%	20%	20%	0%

Support for bait costs varied, but included general ledger detail (financial statement detail), final crew settlement sheets, invoices and/or receipts or internal calculations. Variability also resulted because of uncertainty as to how to allocate to the crab fishery vs. overall operations.



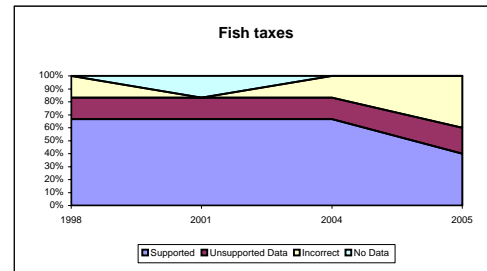
Fuel cost				
1998	50%	17%	33%	0%
2001	50%	17%	17%	17%
2004	67%	17%	17%	0%
2005	60%	20%	20%	0%

Support for fuel costs varied, but included general ledger detail (financial statement detail), final crew settlement sheets, vendor invoices and/or receipts, and internal calculations based upon an average number of gallons per day and price per gallon. Difficult to determine if amount was over or underestimated (cannot tell if all of the gas included on the receipt was used for the crab fishery trip).



Fish taxes				
1998	67%	17%	17%	0%
2001	67%	17%	0%	17%
2004	67%	17%	17%	0%
2005	40%	20%	40%	0%

Fish taxes was generally always supported, but by a variety of methods. Some information came from general ledger detail, financial statements, fish tickets, or settlement sheets. Generally, amount reported matched the support exactly.



APPENDIX E

CATCHER VESSEL OUTLIER DETAIL - VESSEL SPECIFIC (Cont.)

Year	Unsupported			
	Supported	Data	Incorrect	No Data

Capitalized expenditures				
1998	0%	67%	17%	17%
2001	50%	17%	0%	33%
2004	33%	50%	0%	17%
2005	40%	60%	0%	0%

Support for capitalized expenditures generally included general ledger detail, financial statements or fixed asset detail. Frequently, no information was reported, which could have been the result of no capital expenditures in the applicable year.

Repairs maintenance				
1998	83%	17%	0%	0%
2001	83%	0%	0%	17%
2004	100%	0%	0%	0%
2005	80%	0%	20%	0%

Support for repair and maintenance costs was generally the general ledger detail or specific vendor receipts. Some estimated the cost based upon an allocation to the fishery, but more frequently, respondents entered entire costs for the year.

