

STOCK ASSESSMENT AND FISHERY EVALUATION REPORT FOR THE KING AND  
TANNER CRAB FISHERIES OF THE GULF OF ALASKA AND BERING  
SEA/ALEUTIAN ISLANDS AREA:

ECONOMIC STATUS OF THE BSAI KING AND TANNER CRAB FISHERIES OFF ALASKA,  
2015

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The authors of the BSAI King and Tanner Crab SAFE Economic Status Report invite users to provide feedback regarding the quality and usefulness of the Report and recommendations for improvement. AFSC's Economic and Social Sciences Research Program staff have begun an initiative to revise the SAFE Economic Status Reports for Alaska Groundfish and BSAI Crab to incorporate additional analytical content and synthesis, improve online accessibility of public data in electronic formats, and otherwise improve the utility of the reports to users. We welcome any and all comments and suggestions for improvements to the SAFE Economic Status Reports, and have developed an online survey to facilitate user feedback. The survey is available at:  
[http://www.afsc.noaa.gov/REFM/Socioeconomics/Contact/SAFE\\_survey.php](http://www.afsc.noaa.gov/REFM/Socioeconomics/Contact/SAFE_survey.php)

This report will be available at:  
<http://www.afsc.noaa.gov/refm/Socioeconomics/SAFE/default.php>

Time series of data for the tables presented in this report (in CSV format) are available at:  
<http://www.afsc.noaa.gov/refm/Socioeconomics/SAFE/default.php>

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## **ABSTRACT**

This report presents information on economic activity in commercial crab fisheries currently managed under the Federal Fishery Management Plan (FMP) for Bering Sea and Aleutian and Islands King and Tanner Crab (BSAI crab), with attention to the subset of fisheries included in the Crab Rationalization (CR) Program. Statistics on harvesting and processing activity; effort; revenue; labor employment and compensation; operational costs; and quota ownership, usage and disposition among participants in the fisheries are provided. Additionally, this report provides a summary of BSAI crab-related research being undertaken by the Economic and Social Sciences Research Program (ESSRP) at the Alaska Fisheries Science Center (AFSC).

## ECONOMIC STATUS REPORT EXECUTIVE SUMMARY: BSAI CRAB FISHERIES, 2015

The Bering Sea/Aleutian Islands (BSAI) crab fisheries managed under the North Pacific Fishery Management Council's Fishery Management Plan (FMP) are currently prosecuted by an active fleet of 107 catcher vessels and two catcher processors, and landed and processed at 17 processing facilities throughout the region. Of the 10 crab stocks and 11 fisheries managed under the FMP<sup>1</sup>, seven are currently open to targeted fishing. The Bering Sea Tanner (BST) crab fisheries reopened for targeted fishing for the 2013/14 season<sup>2</sup> after being closed since the 2010/11 season. Pribilof Islands red and blue king, and Western Aleutian red king crab stocks are currently designated overfished, as detailed in the assessments for these stocks, and the Saint Matthew blue king (SMB) crab fishery was closed for the 2013/14 season under the State of Alaska's management strategy.

This report provides a comprehensive presentation of available information on status and trends in a variety of indicators of economic performance of BSAI crab fisheries for 2014. The full report provides detailed information regarding production, sales, revenue, and price indices in the harvesting and processing sectors, income, employment, and demographics of labor in both sectors, capital and operating expenditures in the fishery, quota share lease and sale market activity, changes in distribution of quota holdings, productivity in the harvesting sector, U.S. imports and exports of king and Tanner crab, price forecasts, performance metrics for catch share programs, and other information regarding data collection and ongoing economic and social science research related the BSAI crab fisheries and related communities. The following summarizes three sets of primary indicators describing aggregate changes in gross volume and value of production, labor earnings and employment in the crab processing and harvesting sectors, and crab harvest quota leasing activity.

*Response to Comments from the Scientific and Statistical Committee (SSC) on the 2014 Crab Economic SAFE Report*

Comments by the SSC are in italics.

*"The Crab Economic SAFE report contains many good indicators of economic activity and performance in the crab fisheries, and seems particularly useful for monitoring the status and evolution of these fisheries over recent years. The report continues to improve over time as relevant metrics for monitoring the status of the crab fisheries are added. The SSC recommends that the analysts*

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<sup>1</sup>There are currently 11 distinctly managed fisheries on the 10 crab stocks managed under the FMP; catch allocations and other management elements are administered separately for the Eastern and Western components of the Bering Sea Tanner crab stock, and for the Eastern and Western components of the Aleutian Islands golden king crab stock, and the Pribilof Island blue and red king crab stocks are managed collectively as a single fishery. For fisheries characterized by a small number of participating entities, individual statistics where indicated in Tables 1 - 3, and elsewhere in the report, are suppressed due to confidentiality restrictions; this includes most values for the Pribilof Island golden king (PIG) crab fishery and the Norton Sound red king (NSR) crab fisheries, and aggregate statistics for both Aleutian Islands golden king crab fisheries and both Bering Sea Tanner crab fisheries are reported in aggregate, respectively. Values that are indicated as suppressed for a specific fishery are also excluded from values reported in aggregate over multiple crab fisheries. Except where noted, the suppressed values are sufficiently small that they have minimal effect on the accuracy of aggregate information at the level of precision reported here.

<sup>2</sup>Although opened as of October, 2013, most activity in the reopened BST fisheries occurred during Spring of 2014.

*consider the possibility of providing measures of net revenues in the rationalized crab fisheries by using the cost data collected by the Economic Data Reports.*

It is the intent of the authors to improve the integration of operating, labor, and IFQ royalty cost data available from EDR data for the crab harvest sector, with ex-vessel revenue information available from the EDR and other sources, to provide indices of relative profitability in the fishery over time. As available cost data are limited to the primary operating costs, profitability can only be assessed in relative rather than absolute terms, but this is essential for assessing the economic performance of the fishery. Also, while there are sufficient numbers of distinct vessels operating in most of the crab fisheries to avoid concerns about confidentiality limits, there are some strata (sector, year, fishery, etc.) for which small numbers of observations are available and care must be taken to avoid disclosing confidential information, or to overly constrain flexibility in what information can be reported in the future. In light of the upcoming 10-Year Review of the CR Program, the authors prefer to postpone development of this analysis in the current document in order to maintain flexibility in the alternatives for presenting relevant results in the program review, but will continue to develop more analytical economic metrics using the available data in subsequent editions of the SAFE report.

*"In addition, most performance measures in the document are presented as annual values by individual crab fisheries. The SSC encourages the analysts to explore ways to also present these at an aggregate or average vessel level, to capture the changes in overall economic performance. The SSC appreciates the analysts' response to our request to provide an "Economic Report Card" that summarizes important trends in the crab fisheries. The executive summary provides an overview of new information and important trends in the crab fisheries, supported by a few figures and tables. While this summary is not a "report card" per se, it nicely summarizes the most frequently referenced economic statistics pertaining to the crab fisheries, highlights measures that have been the emphasis of recent policy actions, and points users to more detailed information available in the full report."*

Both in the executive summary tables and figures, and elsewhere in the full report, most reported information includes vessel- or plant-level average values (median and/or mean) presented along with aggregate totals at the fishery and sector level a information regarding production and gross earnings in the harvest and processing sectors. The comment may be intended to suggest a more consistent approach to presenting results aggregated over all crab fisheries in addition to by-fishery results. This is most feasible in results where either no individual strata are suppressed for confidentiality, or sufficient numbers of complimentary cells are suppressed, i.e, where "margin totals" do not permit simple calculations to reveal the suppressed values. Given the breath of results reported in the Economic SAFE, it has been a challenge to construct a consistent strategy for optimally presenting the most detailed, disaggregated summaries of the primary economic data available to us, while preserving the flexibility to provide more integrated analyses that incorporate multiple sources of information and provide more meaningful assessments of the performance of the fishery and effects of management. Additional guidance from the SSC on which direction to emphasize in future development of the Economic SAFE would be useful, and the authors will continue to monitor other Council's efforts to develop economic information about thier fisheries for useful contributions.

*Fisheries rationalization has induced economic and operational inefficiencies, reflected, in part, through tradable (i.e., marketable) units of harvestable quota amounts. The Economic SAFEs' documentation and analysis of quota sales and leasing patterns provide key empirical evidence of how these management programs are achieving their objectives over time. The SSC regards this analysis as an important element within the annual SAFE report, and we recommend continued*

*efforts to improve collection and analysis of these "Quota Share market performance" data. The SSC encourages the analysts to report quota leases and shares in a context that reflects the proportion of quota that is traded or leased, rather than, or in addition to, quota units.*

We acknowledge that information on QS transfers reported in Tables 4.27 and elsewhere, with denominations in terms of quota units, are not readily interpreted in terms of the relative scale of the changes being reported. The comment has not been fully addressed in the current edition of the SAFE report, but it is the authors' intent to provide more information on the scale of IFQ and QS market flow information relative to the size of the associated catch allocations and QS pools for presentation in the 10 Year Review, and subsequent editions of this report.

*The SSC noted in our last review of the Economic SAFEs that the inclusion of retrospective information on where, and to whom, attributable fisheries benefits accrue should be an integral part of an economic performance profile. We are gratified to see this addition reflected in the 2015 drafts, and encourage continued refinement of presentation and interpretation of these distributional data. The SSC notes the importance of information pertaining to socio-economic dimensions of the fisheries, such as employment statistics, labor compensation, source of labor, and shares accruing to labor inputs within the several sectors of the industry. The present drafts make a reasonable effort to address the SSC's interest in providing these statistics, building upon last-year's presentations. The SSC is also encouraged to learn that AFSC is constructing "Community Snapshots", which will provide additional fishery-specific data and information on fishing communities to complement the AFSC's Community Profiles.*

Community Snapshots are currently in development. To the extent feasible, appropriate reference to community profile information in the content of the Economic SAFE would provide additional context for interpretation of the demographic information presented regarding vessel owner, QS entity, and crew and processing labor. This is a long-term objective, and will be addressed as time and staff resources are available.

*The SSC had a lengthy discussion regarding the purpose and objectives of the Economic SAFE reports, particularly about the depth of explanation SAFEs should offer for notable trends that emerge from the reported fishery performance metrics: should analysts conduct quantitative analyses to explain them, offer short narrative explanations summarizing extant research, or should the Economic SAFEs simply report data that support the preparation and use of economic information in more targeted analyses of fishery management measures?*

The authors agree with the SSC that the answer to this question is not readily apparent. To date, the Economic SAFE has been essentially been a statistical almanac rather than a primarily analytical document, and there is considerable improvement yet to be made in pursuing this more limited objective.

*Human dimensions data are absolutely critical to meeting the obligations imposed by MSA National Standard 8. Confronted with this need, and the perceived chronic deficiency of human dimensions in the Economic SAFE treatment, the SSC suggests exploring the feasibility of developing a Human-Dimensions SAFE, with specific focus on the social, cultural, and community facets of fishery management impacts."*

This suggestion is appreciated, however, it cannot be meaningfully addressed within the context of the Economic SAFE, particularly in the near term.

Harvest- and processing sector production statistics by crab fishery, including ex-vessel and first wholesale output, estimated revenue, and average prices are shown in Table 1 for calendar years 2010-2014 and summarized in Figure 1. Across all fisheries managed under the BSAI Crab FMP, the total volume of ex-vessel landings commercially sold to processors during 2014 was 80.9 million pounds, a 6.8 percent decrease from the previous year. Processing sector finished production volume during 2014 was 53.5 million pounds aggregated over all BSAI crab species and product forms, a 6.7 percent decrease over the previous year. Average prices for most BSAI crab produced in 2014 as reported in both sectors declined for the third year from the recent peak 2011 levels, with the result of total gross revenues over all fisheries declining in 2014. Ex-vessel revenue was \$245.7<sup>3</sup> million for the year, down from \$259 million for 2013 (-5%), and \$331 million first wholesale revenues (-4.5% from the previous year).

As of 2014, allowable catch quantities in all BSAI crab fisheries currently open to targeted fishing are fully exploited (> 98% of total allocation landed), and recent inter-annual variation in commercial landings largely reflects the results of stock assessments and the State of Alaska's specified catch limits rather than changes in fishing capacity or exploitation rate. The decrease in aggregate production during 2014 was driven largely by the 22 percent decrease in volume landed in the Bering Sea snow crab (BSS) fishery compared to 2013, with total catch at 55.2 million pounds. Landings of 9.9 million pounds in Bristol Bay red king (BBR) in 2014 increased for a second year to 16% over 2013, and the BST fishery returned to full production in 2014 after reopening for the 2013/14 season, producing 9.1 million pounds of ex-vessel landings. Norton Sound red king crab (NSR) landings were 420 thousand pounds, and landings of 6.07 million pounds in Aleutian Islands golden king (AIG) crab fisheries increased slightly from the previous year (+2.2%).

Similar to ex-vessel production, the proportional decrease in processing sector output aggregated over all active crab fisheries was driven by the 36 million pounds of BSS fishery production, declining by 22 percent in volume over the previous year. Finished volume in the BBR fishery of 6.7 million pounds reflects an increase of 16% in 2014, and AIG and NSR fisheries produced 3.9 million and 320 thousand pounds of finished volume, respectively. Total 2014 finished volume in the BST fishery was 6.2 million pounds.

Ex-vessel and wholesale Alaska crab prices in 2014 showed significant declines in two of the three largest fisheries shown in Table 1. Average prices declined most sharply in red king crab fisheries; the BBR ex-vessel price dropped 9 percent to \$6.64 per landed pound, and the first wholesale price dropped 10 percent to \$11.97 per finished pound, with the NSR ex-vessel and first wholesale prices decreasing to \$5.27 (-10%) and \$9.20 (-5%) per pound, respectively. Prices in the BST fishery declined to \$2.39 ex-vessel (-5%) and \$5.82 (-10%) first wholesale. More moderate declines occurred in snow crab prices, with \$2.38 average ex-vessel (-4.8%) and \$5.03 average first wholesale (-4%) per-pound. Golden king crab ex-vessel price decreased to \$4.06 (-7%), and first wholesale to \$7.96 (-11%) per-pound.

The decline in production volume in the BSS fishery, without a significant increase in price, reduced gross revenue by 21 percent compared to 2013, to \$132 million in the harvest sector and \$181 million in the processing sector. Earnings were more stable in the BBR fishery, with ex-vessel revenue of \$65 million and wholesale revenue of \$80 million only slightly less than in 2013, and revenues in the

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<sup>3</sup>All prices are inflation-adjusted to 2014 dollars.

AIG fisheries increased very slightly to \$24.6 million ex-vessel, declining by 6 percent wholesale to \$30.7 million. The reopened BST fishery produced gross revenue of \$22 million ex-vessel and \$36 million wholesale, and the NSR fishery produced gross ex-vessel revenue of \$2.2 million (-11%), and \$3 million at first wholesale (-16%). The proportional inter-annual variation in gross revenue from 2013 to 2014 was somewhat less than the average degree of variation over the last 15 years in the historically volatile crab fisheries; longer time series for these and other measures of crab fishery performance are available in the data tables section of the full report.

### *Employment and Income*

A summary of selected indicators from the most recent employment data available for Crab Rationalization (CR) program fisheries is provided in Table 2<sup>4</sup> and depicted graphically in Figure 2.

The number of vessels operating in one or more of the CR fisheries in 2014 declined from 81 to 76, and from 115 to 108 across all BSAI FMP crab fisheries. Based on the average (mean) number of crew onboard (as reported in eLandings catch accounting records for crab vessels), there were an estimated 1093 crew positions across all 79 vessels in CR fisheries in 2014. The AIG fisheries together had one fewer vessel active during 2014 and the BSS fishery had two fewer vessels active during 2014, while 112 additional vessels fished in the BST fishery during 2014 than in the previous year. Based on the average number of crew onboard (as reported in eLandings catch accounting records for crab vessels), there were an estimated 1197 crew positions across all 76 vessels and CR fisheries in 2014<sup>5</sup>.

Revenue-share payments to crab vessel crew members as a group totaled approximately \$32 million in 2014, with an additional \$14 million paid to vessel captains<sup>6</sup>. Over both groups, incomes declined by 6 percent in 2014, reflecting the overall decrease in ex-vessel revenue described above. Aggregate crew and captain earnings in the BSS fishery declined by 21 percent to \$17.7 million and \$7.8 million, respectively. On a median vessel basis, crew and captain pay in the BSS fishery were \$237 thousand and \$107 thousand respectively, with pay to captains decreasing from 2013 by 29 percent on average compared to 23 percent for crew. While aggregate crew and captain earnings in the AIG and BBR fisheries declined for 2014 (to \$3.3 million and \$1.4 million in AIG, respectively, and \$7.6 million and \$3.6 million in BBR), crew payments by the median vessel increased in both fisheries, to \$702 thousand in AIG (+21%) and \$106 thousand in BBR (+3%). Median captain pay increased by 6 percent to \$292 thousand in the AIG fishery, but declined slightly in the BBR fishery to \$52 thousand for the season. Crew and captain earnings in the BST fishery totaled \$3.1 million and \$7.8 million, respectively.

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<sup>4</sup>BSAI Crab Economic Data Report (EDR) data are collected for CR fisheries only. The NSR and Pribilof Island golden king (PIG) crab fisheries are managed by the State of Alaska under the FMP, but are not included in the CR program.

<sup>5</sup>Note that the aggregate count of vessels indicates the total number of distinct vessels, while the count of crew positions counts positions separately by fishery and vessel, such that individual crew members are counted more than once. The reopened BST fishery added 112 positions during 2014, which accounts for the increase in positions across all fisheries despite the reduced number of distinct vessels operating.

<sup>6</sup>In addition to revenue-share payments, income is derived by some crew and many captains from royalties for harvesting quota shares held by either the captain or crew. While this may become an increasingly important source of income as opportunities for investment in QS ownership are advanced, there is no evidence to date that the proportion of CR fishery quota share pools held by crab crew members has changed in recent years, following a small amount of consolidation occurring during the initial years of the program (see NMFS Alaska Region, Restricted Access Management Program, Bering Sea and Aleutian Islands Crab Rationalization Program Report, Fishing Year 2011/12 for information on quota allocation and transfer activity, and other current CR program administration details).



Crab processing labor input at processing plants that received IFQ and CDQ crab landings in 2014 is estimated at nearly 843 thousand labor hours, 12 percent less than 2013, and with the number of active plants decreasing from 12 to nine. Aggregate processing labor income generated across all CR fisheries during 2014 was nearly \$9 million, declining 16 percent from the previous year. The larger proportional drop in processing labor pay compared to labor hours reflects a downward trend in hourly processing wage rates across all fisheries, with median plant-level hourly wage rate declining from \$10.98 in 2012 to \$9.48 in 2014 for processors in the BBR fishery, with similar but more moderate changes indicated for other fisheries. This likely reflects reduced reliance on overtime hours to process crab landings, and reduction in overtime premiums paid, rather than a decline in base wage-rates.

### *IFQ Leasing*

This report provides results from the BSAI Crab Rationalization Economic Data Report (EDR) program collection of crab harvest quota allocation lease data associated with 2012 through 2014 calendar year crab fishing activity. Table 3 and Figure 3 shows aggregated results for crab fishing quota lease volume (in pounds) and cost reported for crab vessels active during the last three calendar year CR fisheries,<sup>7</sup> by fishing quota type category, including total quantities summed over all reporting vessels, and average values (both median and mean) for volume and cost of leased quota per vessel, and average lease price paid (\$US per pound) and average lease rate (lease price as percentage of ex-vessel price) per vessel. Both median and arithmetic mean average value metrics are presented to provide information on the variation in reported values within each stratum, with the higher mean values shown indicating the presence of a subset of high-value data points in these data. Harvest quota types are categorized as the following: catcher vessel owner (CVO) Class A IFQ; catcher vessel owner Class B IFQ and catcher/processor owner (CPO) IFQ; catcher vessel crew IFQ and catcher/processor crew IFQ, and community development quota (CDQ).

The number of vessels reporting quota leases in the 2014 BBR fishery range from 50 vessels leasing CVO Class A shares to 7 vessels leasing CDQ shares (out of 63 crab vessels active during the 2014 BBR fishery), and from 57 vessels leasing CVO Class A BSS IFQ allocation to 10 vessels leasing CDQ allocation (out of 69 active vessels) in the BSS fishery. Total volume and cost over all vessels leasing the respective quota types during 2014 range from 5.23 million pounds and \$22.3 million for BBR CVO Class A IFQ, to 213 thousand pounds and \$928 thousand for BBR CVO and CPC crew IFQ allocation; BSS lease volume and cost ranged from 29.7 million pounds and \$32.4 million for CVO Class A IFQ to 1.3 million pounds and \$1.5 million for crew share IFQ allocation.

Median vessel-level values<sup>8</sup> for 2014 BBR quota leased volume and cost ranged from 118 thousand pounds and \$503 thousand per vessel for the seven vessels leasing BBR CDQ allocation, 89 thousand pounds and \$373 thousand for BBR CVO-A shares, and 7 thousand pounds and \$23 thousand for BBR CVO and CPO crew IFQ. BSS per-vessel averages ranged from 442 thousand pounds and \$489 thousand per vessel for BSS CVO- Class A allocation to 29 thousand pounds and \$38 thousand for BSS crew share allocation.

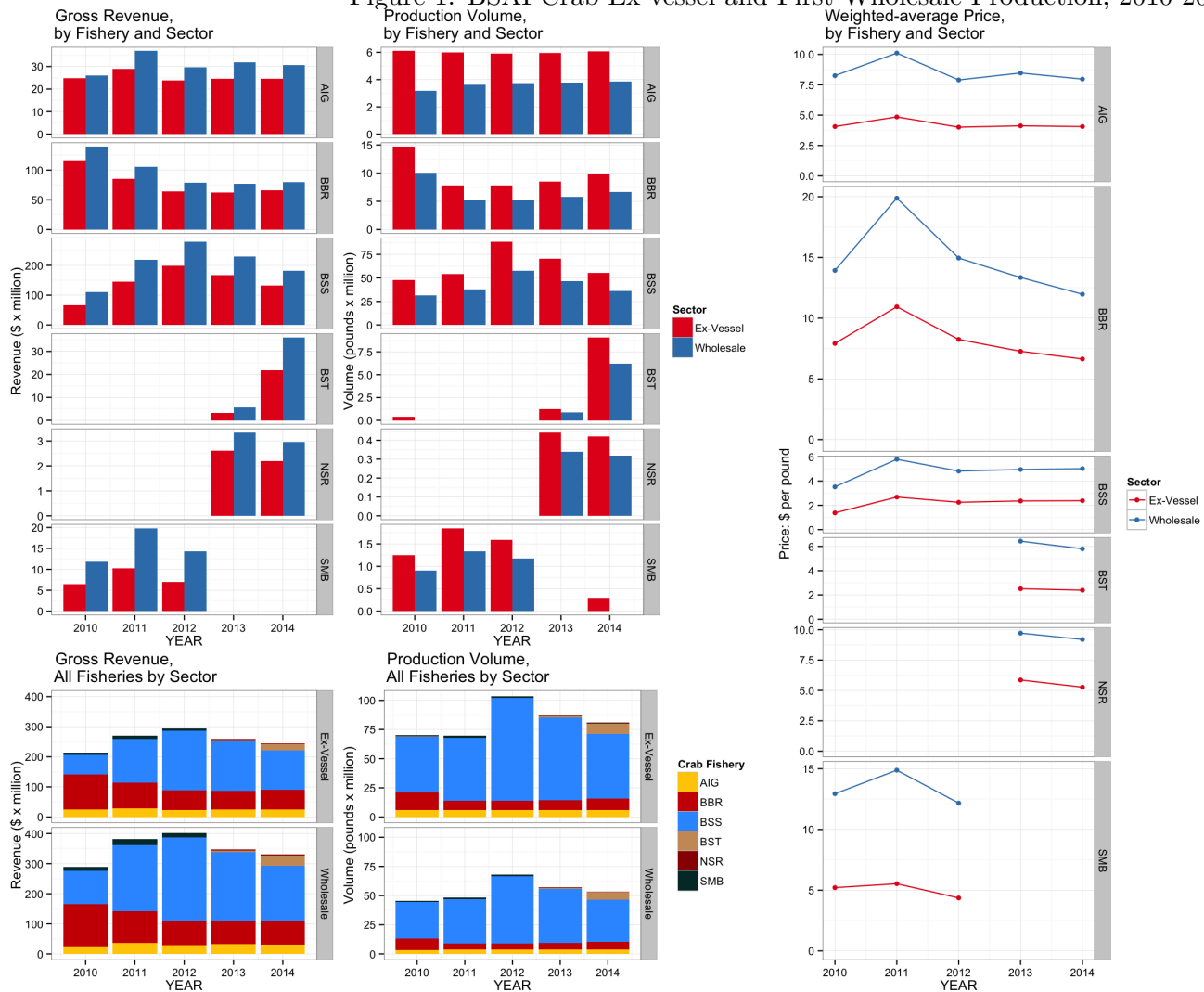
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<sup>7</sup>Note that CR crab fisheries are managed on a July-June seasonal calendar, 2014 calendar year fisheries include the 2013/2014 BSS season and 2014/2015 BBR season.

<sup>8</sup>Differences between median and mean average values shown in Table 3 are most pronounced in the per-vessel pounds and cost statistics; this primarily reflects the relative concentration of high-volume quota leasing activity by a small number of vessels within each quota type category.

Average (median) lease prices and lease rates in the BBR fishery shown in Table 3 have remained quite stable over the three years for which data are available, varying slightly year-to-year and by quota type within fishery, and with interannual variation in price per pound corresponding to changes in ex-vessel prices. In the 2014 BBR fishery, median lease price ranged from \$4.21 per pound for BBR CVO Class A allocation (62% of ex-vessel value) to \$4.47 per pound (63% of ex-vessel value) for CDQ allocation. Median lease price and rate in the 2014 BSS fishery were least for CVO Class A IFQ at \$1.12 (46% of ex-vessel value), and \$1.21-\$1.23 for other allocation types (46-49% of ex-vessel price).

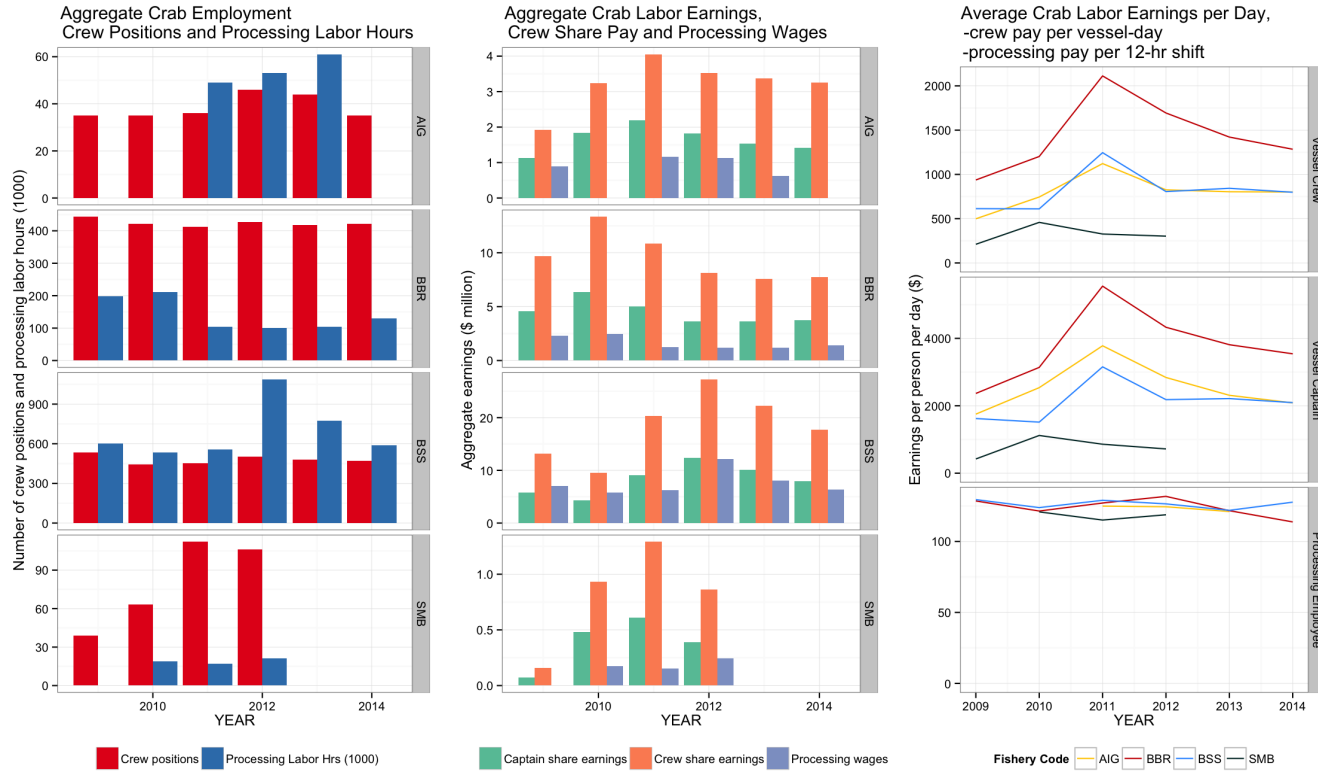
Figure 1: BSAI Crab Ex-vessel and First Wholesale Production, 2010-2014



Source: ADF&G fish tickets, eLandings, CFEC pricing, ADF&G Commercial Operator’s Annual Report, NMFS AFSC BSAI Crab Economic Data Report (EDR) database. See Table 1 footnotes for details.

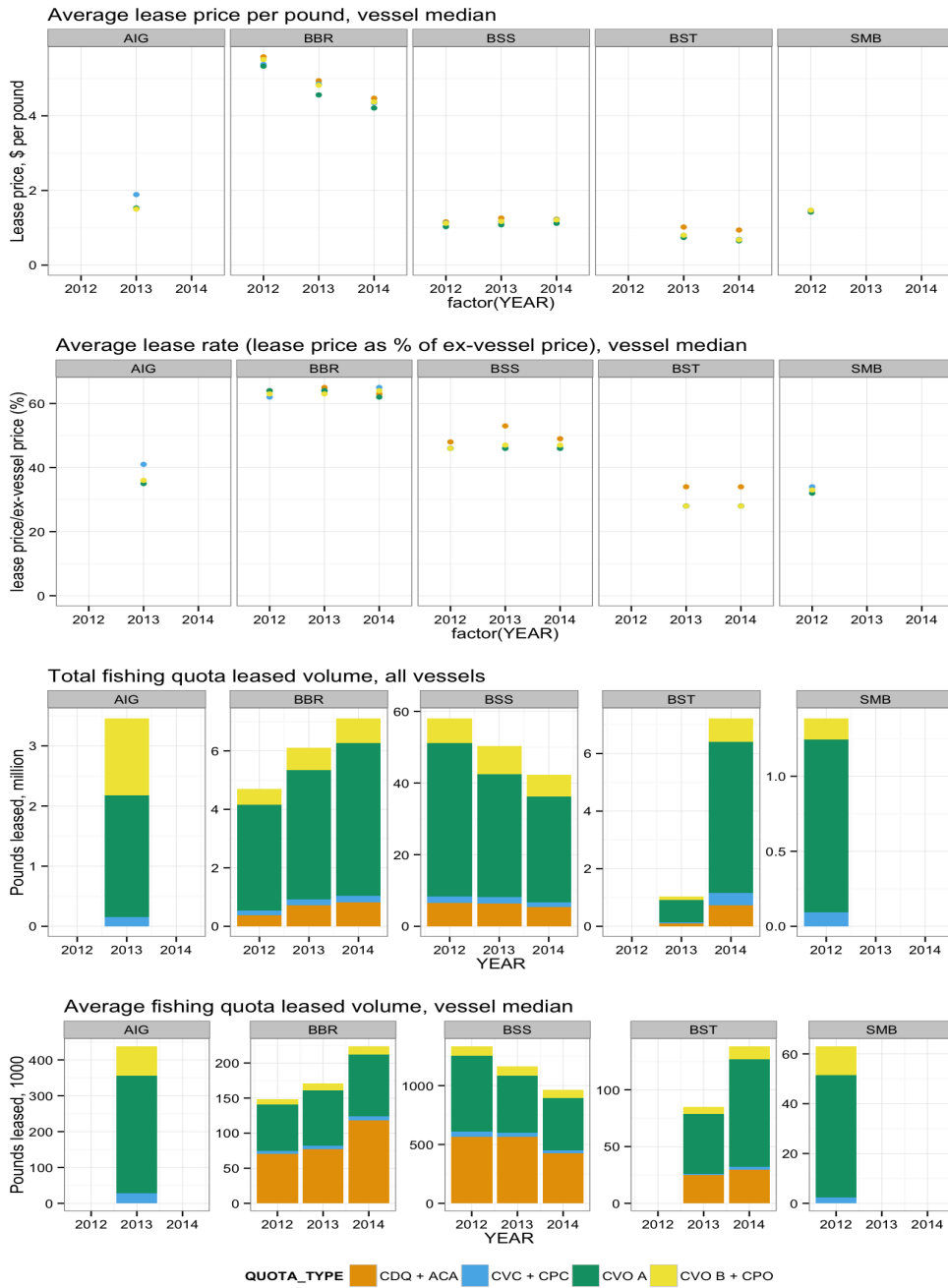
(a) Revenue, (b) Volume, and (c) Weighted Average Price, 2010-2014; gross revenue and production volume by sector are presented in the upper pair of panels by individual crab fishery for comparison of within-fishery variation over time, and summarized over all fisheries in the lower panels to illustrate the variation in aggregate values and relative contribution of each fishery over time. Figure does not display information for PIG fishery due to confidentiality. See Table 1 footnotes for data sources and details.

Figure 2: Harvest and Processing Employment and Compensation, Selected Crab Fisheries, 2010-2014



Source: NMFS AFSC BSAI Crab Economic Data Report (EDR) database; ADF&G Shellfish Observer Program, Confidential Interview Form (CIF) database. See Table 2 footnotes for details.

Figure 3: Crab Harvest Quota Lease Activity; Lease Volume, Price, and Rate, Selected Crab Fisheries, 2012-2014



*Source: NMFS AFSC BSAI Crab Economic Data Report (EDR) database; ADF&G Shellfish Observer Program, Confidential Interview Form (CIF) database. See Table 3 footnotes for details.*

Table 1: BSAI Crab Harvesting and Processing Sector Output – Production Volume, Gross Revenue, and Average Price<sup>a</sup>

	Harvesting Sector: Ex-Vessel Statistics <sup>a</sup>							Processing Sector:First Wholesale Statistics <sup>b</sup>					
	Year	Vessels	CFEC permits	Landed volume 1000t	Landed volume million lbs	Buyers	Gross revenue \$million	Average price \$/lb	Plants	Finished volume, 1000t	Finished volume, million lbs	Gross revenue \$million	Average price \$/lb
All	2010	102	232	31.88	70.29	24	\$213.97	-	19	20.65	45.53	\$288.23	-
	2011	102	235	31.61	69.68	27	\$269.38	-	18	21.85	48.17	\$381.51	-
	2012	113	284	46.97	103.55	26	\$293.75	-	20	30.84	68.00	\$401.33	-
	2013	115	238	39.39	86.85	29	\$259.09	-	22	25.87	57.03	\$346.78	-
	2014	108	253	36.72	80.94	24	\$245.63	-	17	24.14	53.22	\$331.01	-
AIG	2010	5	13	2.76	6.09	9	\$24.76	\$4.06	5	1.44	3.17	\$26.12	\$8.25
	2011	5	13	2.72	6.00	14	\$29.05	\$4.85	7	1.65	3.64	\$36.84	\$10.11
	2012	6	14	2.69	5.92	14	\$23.73	\$4.01	8	1.71	3.76	\$29.69	\$7.90
	2013	6	14	2.70	5.94	13	\$24.49	\$4.12	7	1.71	3.77	\$31.95	\$8.47
	2014	5	11	2.75	6.07	12	\$24.63	\$4.06	5	1.75	3.85	\$30.71	\$7.97
BBR	2010	65	79	6.68	14.73	17	\$116.67	\$7.92	14	4.55	10.03	\$139.68	\$13.93
	2011	62	71	3.53	7.79	18	\$85.19	\$10.94	14	2.41	5.30	\$105.44	\$19.88
	2012	64	74	3.54	7.80	17	\$64.42	\$8.25	12	2.39	5.27	\$78.77	\$14.95
	2013	63	73	3.86	8.52	17	\$61.90	\$7.27	11	2.61	5.75	\$76.80	\$13.35
	2014	63	72	4.48	9.87	17	\$65.52	\$6.64	9	3.02	6.66	\$79.77	\$11.97
BSS	2010	68	87	21.70	47.84	13	\$66.01	\$1.38	11	14.25	31.41	\$110.60	\$3.52
	2011	68	88	24.52	54.05	16	\$144.90	\$2.68	14	17.18	37.89	\$219.41	\$5.79
	2012	72	109	40.02	88.23	16	\$198.65	\$2.25	13	26.21	57.79	\$278.56	\$4.82
	2013	71	90	32.07	70.69	15	\$166.96	\$2.36	12	21.00	46.31	\$229.19	\$4.95
	2014	70	94	25.03	55.19	13	\$131.56	\$2.38	10	16.40	36.15	\$181.43	\$5.02
BST	2010	4	5	0.17	0.37	7	*	*	7	*	*	*	*
	2013	22	26	0.57	1.25	13	\$3.14	\$2.51	9	0.39	0.86	\$5.50	\$6.43
	2014	40	57	4.12	9.09	13	\$21.73	\$2.39	9	2.82	6.23	\$36.13	\$5.80
NSR	2010	24	37	*	*	3	*	*	2	*	*	*	*
	2011	25	38	*	*	2	*	*	2	*	*	*	*
	2012	30	64	*	*	3	*	*	3	*	*	*	*
	2013	34	52	0.20	0.44	5	\$2.60	\$5.86	5	0.16	0.34	\$3.33	\$9.72
	2014	34	65	0.19	0.42	4	\$2.20	\$5.27	4	0.15	0.32	\$2.96	\$9.20

Continued on next page.

Table 1: Continued

	Harvesting Sector: Ex-Vessel Statistics <sup>a</sup>							Processing Sector:First Wholesale Statistics <sup>b</sup>					
	Year	Vessels	CFEC permits	Landed volume 1000t	Landed volume million lbs	Buyers	Gross revenue \$million	Average price \$/lb	Plants	Finished volume, 1000t	Finished volume, million lbs	Gross revenue \$million	Average price \$/lb
PIG	2010	1	1	*	*	2	*	*	2	*	*	*	*
	2011	2	2	*	*	1	*	*	1	*	*	*	*
	2012	1	1	*	*	1	*	*	1	*	*	*	*
	2013	1	1	*	*	1	*	*	1	*	*	*	*
	2014	1	1	*	*	1	*	*	1	*	*	*	*
SMB	2010	11	14	0.57	1.25	9	\$6.52	\$5.21	5	0.41	0.91	\$11.83	\$12.94
	2011	18	23	0.84	1.85	11	\$10.24	\$5.53	6	0.60	1.33	\$19.82	\$14.88
	2012	17	22	0.72	1.59	11	\$6.95	\$4.36	6	0.53	1.18	\$14.30	\$12.17
	2014	4	5	0.14	0.30	6	*	*	1	*	*	*	*

**Notes:** Data shown for all BSAI crab fisheries by calendar year. All dollar values are adjusted for inflation to 2014-equivalent value. Information suppressed for confidentiality where indicated by “\*”, and data not available where indicated by “-”.

<sup>a</sup> Except where noted, ex-vessel results reflect total commercial sales volume and value across all management programs (LLP/open access, IFQ, CDQ, ACA), inclusive of all harvesting sector production (CV, CP, and catcher-sellers); ex-vessel value of CP and catcher-seller landings incorporated in revenue total by approximation using average CV ex-vessel sale price; ex-vessel average price results are sourced from CV sector EDR data where available (2008-2011 for CR program fisheries) and secondarily from CFEC gross earnings estimates (2012 for CR fisheries; all years for non-CR fisheries).

<sup>b</sup> Counts of buyers include CPs landing and processing their own crab, but exclude catcher sellers (NSR fishery only); processing sector results inclusive of all CP and shoreside processor output; finished volume sourced from crab processor EDR production reports where available (2008-2011), or eLandings ex-vessel sales volume adjusted by average product recovery rate (PRR) by fishery (2012). Wholesale price results are sourced from crab processor EDR gross earnings reports where available (2008-2011) and secondarily from COAR gross earnings estimates (2012); gross wholesale revenue estimates are derived from price and volume sourced or estimated as described.

<sup>c</sup> Statistics reported for “All BSAI Fisheries” reflect information aggregated over all FMP crab fisheries, excluding fishery-level confidential information suppressed where indicated by “\*”.

<sup>d</sup> Landings and ex-vessel revenue suppressed in years where CDQ fishery landings are confidential.

<sup>e</sup> Data for Norton Sound red king crab are aggregated over the summer and winter commercial fisheries.

**Source:** ADF&G fish ticket data; eLandings; CFEC ex-vessel pricing; ADF&G Commercial Operator’s Annual Report; NMFS AFSC BSAI Crab Economic Data Report (EDR) database

Table 2: CR program fisheries crew and processing sector employment and earnings

	Year	Crew positions <sup>a</sup>			Crew share		Captain share		Processing labor hours			Processing labor payment		
		Obs	Total	Vessel Mean	Total \$million	Vessel median	Total \$million	Vessel median \$1,000	Obs	Total 1,000 hrs	Plant median 1000 hrs	Total \$million	Plant median, \$1,000	Median \$/hour
All	2009	89	1,155	-	\$25.47	-	\$11.95	-	17	828.29	-	\$10.50	-	-
	2010	79	964	-	\$26.99	-	\$12.94	-	15	771.12	-	\$8.42	-	-
	2011	77	1,014	-	\$36.51	-	\$16.94	-	16	724.96	-	\$8.84	-	-
	2012	83	1,081	-	\$39.76	-	\$18.23	-	13	1,261.90	-	\$14.71	-	-
	2013	81	1,099	-	\$33.69	-	\$15.49	-	12	955.77	-	\$10.07	-	-
	2014	76	1,197	-	\$31.81	-	\$14.42	-	9	842.63	-	\$8.99	-	-
AIG	2009	5	35	7.00	\$1.93	\$388.30	\$1.13	\$209.42	4	*	*	\$0.89	\$139.24	*
	2010	5	35	7.00	\$3.24	\$653.51	\$1.84	\$281.91	3	*	*	*	*	*
	2011	5	36	7.20	\$4.05	\$685.93	\$2.20	\$364.88	6	48.97	4.79	\$1.16	\$78.29	\$10.41
	2012	6	46	7.67	\$3.53	\$643.22	\$1.82	\$322.24	7	53.16	2.60	\$1.13	\$60.31	\$10.37
	2013	6	44	7.33	\$3.37	\$542.65	\$1.53	\$276.96	6	61.09	5.96	\$0.62	\$62.29	\$10.09
	2014	5	35	7.00	\$3.25	\$702.44	\$1.41	\$292.22	4	*	*	*	*	*
BBR	2009	70	443	6.33	\$9.67	\$123.68	\$4.58	\$64.90	10	198.90	16.06	\$2.28	\$131.77	\$10.71
	2010	65	422	6.48	\$13.33	\$197.53	\$6.35	\$102.15	11	211.56	20.09	\$2.44	\$197.70	\$10.12
	2011	62	413	6.66	\$10.88	\$157.90	\$5.05	\$85.89	12	104.38	6.71	\$1.26	\$76.52	\$10.59
	2012	64	428	6.68	\$8.11	\$103.17	\$3.65	\$54.91	10	100.36	6.51	\$1.19	\$68.62	\$10.98
	2013	63	418	6.63	\$7.58	\$94.93	\$3.61	\$53.45	8	103.96	10.00	\$1.20	\$94.79	\$10.14
	2014	63	422	6.70	\$7.73	\$106.34	\$3.74	\$52.86	7	129.98	21.07	\$1.41	\$76.19	\$9.48
BSS	2009	77	536	6.96	\$13.17	\$150.40	\$5.84	\$74.40	10	600.07	58.41	\$7.02	\$322.02	\$10.79
	2010	68	444	6.53	\$9.50	\$125.68	\$4.26	\$60.13	9	534.17	50.90	\$5.74	\$379.31	\$10.32
	2011	68	453	6.66	\$20.29	\$286.30	\$9.08	\$132.86	12	554.86	45.69	\$6.26	\$362.94	\$10.75
	2012	72	502	6.97	\$27.26	\$377.91	\$12.36	\$177.44	11	1,087.26	77.94	\$12.15	\$619.76	\$10.54
	2013	71	481	6.77	\$22.29	\$286.77	\$10.14	\$143.08	10	774.12	63.55	\$8.09	\$487.66	\$10.16
	2014	69	472	6.84	\$17.73	\$237.01	\$7.84	\$106.90	8	590.39	76.01	\$6.35	\$459.07	\$10.64

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Table 2: Continued

Year	Crew positions <sup>a</sup>			Crew share		Captain share		Processing labor hours			Processing labor payment		
	Obs	Total	Vessel Mean	Total \$million	Vessel median	Total \$million	Vessel median \$1,000	Obs	Total 1,000 hrs	Plant median 1000 hrs	Total \$million	Plant median, \$1,000	Median \$/hour
2009	14	102	7.29	\$0.55	\$28.46	\$0.34	\$16.05	7	29.32	4.27	\$0.30	\$34.35	\$10.32
2010	4	*	*	*	*	*	*	5	6.43	0.70	\$0.07	\$7.18	\$10.33
2013	22	156	7.09	\$0.45	\$14.68	\$0.21	\$7.55	6	16.58	1.86	\$0.16	\$15.77	\$9.74
2014	39	268	6.87	\$3.09	\$69.33	\$1.44	\$31.07	7	122.27	8.51	\$1.23	\$79.52	\$9.64
2009	7	39	5.57	\$0.16	\$18.18	\$0.07	\$7.84	2	*	*	*	*	*
2010	11	63	5.73	\$0.93	\$73.02	\$0.48	\$43.65	5	18.96	0.40	\$0.17	\$4.10	\$10.07
2011	17	112	6.56	\$1.29	\$60.35	\$0.61	\$32.69	6	16.75	0.84	\$0.15	\$8.18	\$9.59
2012	17	106	6.24	\$0.86	\$44.54	\$0.39	\$22.70	6	21.12	0.76	\$0.25	\$7.40	\$9.90
2014	4	*	*	*	*	*	*	1	*	*	*	*	*

**Notes:** Data shown for all BSAI crab fisheries by calendar year. All dollar values are adjusted for inflation to 2014-equivalent value. Information suppressed for confidentiality where indicated by “\*”, and data not available where indicated by “-”.

<sup>a</sup> For catcher/processors, EDR reporting may be used to adjust eLandings crew size reporting in order to estimate the number of fishing crew positions.

<sup>b</sup> Crew and captain payments reflect amounts paid for labor during the crab fishery and include all post-season adjustments, bonuses, and deductions for shared expenses such as fuel, bait, and food and provisions; payments for IFQ royalties, labor outside of crab fishery, health/retirement or other benefits are excluded.

<sup>c</sup> Processing labor hours for catcher/processors are estimated by multiplying processing positions, number of days processing, and an assumed shift length of 12 hours per day.

<sup>d</sup> For all years, pay per hour statistics reflect only the shoreside and floating processing sectors.

**Source:** NMFS AFSC BSAI Crab Economic Data Report (EDR) database, and Crew positions from eLandings.

Table 3: Crab Harvest Quota Lease Activity, Volume, Cost, and Average Lease Prices and Rates; CR Program Fisheries

	Year	Vessels <sup>a</sup>	Pounds Leased (1000lbs)			Cost (\$1000)			Lease Price (\$/pound) <sup>b</sup>		Lease Rate (percent of ex-vessel price) <sup>c</sup>	
			Total	Median	Mean	Total	Median	Mean	Median	Mean	Median	
AIG	CVO A	2012	4	*	*	*	*	*	*	*	*	
		2013	5	2,026.23	327.87	405.25	3,645.84	582.53	\$729.17	\$1.53	\$1.68	35%
		2014	4	*	*	*	*	*	*	*	*	*
	CVO B + CPO	2012	4	*	*	*	*	*	*	*	*	*
		2013	6	1,284.80	83.15	142.76	1,861.89	234.23	\$206.88	\$1.50	\$1.75	36%
		2014	4	*	*	*	*	*	*	*	*	*
	CVC + CPC	2012	4	*	*	*	*	*	*	*	*	*
		2013	5	151.06	27.36	25.18	311.48	45.46	\$51.91	\$1.89	\$1.92	41%
		2014	4	*	*	*	*	*	*	*	*	*
CDQ + ACA	2012	4	*	*	*	*	*	*	*	*	*	
	2013	2	*	*	*	*	*	*	*	*	*	
	2014	3	*	*	*	*	*	*	*	*	*	
BBR	CVO A	2012	50	3,618.97	65.48	72.38	18,396.83	315.44	\$367.94	\$5.33	\$5.48	64%
		2013	51	4,425.47	78.75	86.77	20,596.31	349.03	\$403.85	\$4.56	\$4.71	64%
		2014	50	5,229.07	88.41	104.58	22,262.78	373.57	\$445.26	\$4.21	\$4.24	62%
	CVO B + CPO	2012	42	539.10	7.60	11.72	3,008.70	42.98	\$66.86	\$5.51	\$5.90	63%
		2013	45	777.86	10.07	15.56	3,761.14	48.01	\$75.22	\$4.82	\$4.72	63%
		2014	43	853.62	11.77	17.42	3,731.39	54.57	\$76.15	\$4.37	\$4.36	64%
	CVC + CPC	2012	36	171.60	4.24	4.52	926.45	21.90	\$24.38	\$5.38	\$5.43	62%
		2013	37	198.96	4.52	4.85	989.43	21.97	\$24.13	\$4.85	\$5.00	64%
		2014	34	212.79	5.98	5.91	927.82	23.71	\$25.77	\$4.35	\$4.42	65%
	CDQ + ACA	2012	5	368.62	70.68	73.72	2,252.46	446.86	\$450.49	\$5.58	\$6.13	64%
		2013	8	713.42	77.40	89.18	3,517.35	380.38	\$439.67	\$4.94	\$4.93	65%
		2014	7	826.41	117.86	118.06	3,700.24	503.45	\$528.61	\$4.47	\$4.46	63%

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Table 3: Continued

		Vessels <sup>a</sup>	Pounds Leased (1000lbs)			Cost (\$1000)			Lease Price (\$/pound) <sup>b</sup>		Lease Rate (percent of ex-vessel price) <sup>c</sup>	
Year			Total	Median	Mean	Total	Median	Mean	Median	Mean	Median	
BSS	CVO A	2012	55	42,796.16	640.32	778.11	43,946.54	677.81	\$799.03	\$1.03	\$1.03	46%
		2013	56	34,352.58	486.63	613.44	37,495.10	522.57	\$669.56	\$1.08	\$1.09	46%
		2014	57	29,682.64	442.04	520.75	32,362.23	489.15	\$567.76	\$1.12	\$1.08	46%
	CVO B + CPO	2012	47	6,989.61	83.97	131.88	8,061.94	103.55	\$152.11	\$1.12	\$1.19	46%
		2013	50	7,740.91	78.48	133.46	9,693.49	96.14	\$167.13	\$1.17	\$1.20	47%
		2014	48	5,987.69	69.15	106.92	7,187.37	93.82	\$128.35	\$1.21	\$1.27	47%
	CVC + CPC	2012	39	1,879.88	47.96	45.85	2,071.08	51.97	\$51.78	\$1.13	\$1.15	46%
		2013	41	1,767.02	35.03	40.16	2,114.26	40.55	\$48.05	\$1.15	\$1.25	46%
		2014	37	1,258.30	29.13	31.46	1,464.50	34.45	\$37.55	\$1.22	\$1.23	46%
	CDQ + ACA	2012	11	6,463.57	563.35	587.60	7,526.71	683.75	\$684.25	\$1.16	\$1.17	48%
		2013	11	6,409.21	563.98	582.66	8,116.99	759.94	\$737.91	\$1.26	\$1.26	53%
		2014	10	5,367.24	422.75	536.72	6,338.00	510.43	\$633.80	\$1.23	\$1.23	49%
BST	CVO A	2013	16	776.65	52.73	48.54	552.78	25.65	\$34.55	\$0.74	\$0.67	28%
		2014	32	5,255.66	94.55	128.19	3,433.50	65.41	\$83.74	\$0.65	\$0.70	28%
	CVO B + CPO	2013	13	130.35	6.21	8.15	121.27	4.58	\$7.58	\$0.80	\$0.86	28%
		2014	25	819.58	11.65	21.02	603.72	9.25	\$15.48	\$0.68	\$0.81	28%
	CVC + CPC	2013	10	41.62	1.10	3.20	32.08	1.18	\$2.47	\$0.80	\$0.76	28%
		2014	24	427.60	2.64	11.25	182.28	2.01	\$4.80	\$0.69	\$0.80	28%
	CDQ + ACA	2013	5	88.01	24.87	17.60	75.49	15.90	\$15.10	\$1.02	\$1.06	34%
		2014	6	728.51	29.61	80.95	584.15	31.24	\$64.91	\$0.94	\$0.89	34%

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Table 3: Continued

	Year	Vessels <sup>a</sup>	Pounds Leased (1000lbs)			Cost (\$1000)			Lease Price (\$/pound) <sup>b</sup>		Lease Rate (percent of ex-vessel price) <sup>c</sup>	
			Total	Median	Mean	Total	Median	Mean	Median	Mean	Median	
SMB	CVO A	2012	17	1,149.28	49.07	67.61	1,681.36	68.29	\$98.90	\$1.42	\$1.65	32%
		2014	3	*	*	*	*	*	*	*	*	*
	CVO B + CPO	2012	10	143.73	11.56	11.06	214.29	18.52	\$16.48	\$1.47	\$1.52	33%
		2014	2	*	*	*	*	*	*	*	*	*
	CVC + CPC	2012	9	94.70	2.48	10.52	46.47	5.53	\$5.16	\$1.47	\$1.66	34%
		2014	2	*	*	*	*	*	*	*	*	*
	CDQ + ACA	2012	3	*	*	*	*	*	*	*	*	*
		2014	1	*	*	*	*	*	*	*	*	*

**Notes:** Other fishery data is not shown due to insufficient observations. Lease data shown represent arms length lease transactions reported by quota purchasers in the EDR.

Harvest quota types are categorized in this report as the following: CVO A (catcher vessel owner Class A IFQ), CVO B + CPO (catcher vessel owner Class B IFQ and catcher/processor owner IFQ), and CVC + CPC (catcher vessel crew IFQ and catcher/processor crew IFQ). Statistics reported represent results pooled over all quota types and/or regional designations within each category.

<sup>a</sup> Vessels column shows total count of vessel-level observations for fishery-year where both pounds and cost of quota leased were reported as non-zero values; in a small number of observations where leased pounds was reported for a given fishery/quota type but lease cost was missing, the mean price over all complete observations was used to impute the missing data in computing the total aggregate lease cost over all vessels.

<sup>b</sup> Average lease price statistics by fishery and quota type are calculated as the median and arithmetic mean, respectively, over all observations where both pounds and cost for one or more quota type within the respective category were reported as non-zero values.

<sup>c</sup> Average lease rate statistics by fishery and quota type are calculated as the median and mean, respectively, of the ratio of lease price to ex-vessel price, over all observations where both ex-vessel and lease pounds, and ex-vessel revenue and lease cost, were reported as non-zero values. Lease rate for each quota type is calculated with respect to ex-vessel value of crab sold using the same quota type. As such, variation in lease price and lease rate in a given fishery may not be consistent between different quota types.

**Source:** NMFS AFSC BSAI Crab Economic Data Report (EDR) database

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## ABBREVIATIONS

### Crab fisheries

AIG	Aleutian Islands golden king crab (East and West fisheries combined)
BBR	Bristol Bay red king crab
BSS	Bering Sea snow crab
BST	Bering Sea Tanner crab (East and West fisheries combined)
EAG	Eastern Aleutian Islands golden king crab
EBT	Eastern Bering Sea Tanner crab
NSR	Norton Sound red king crab
PIG	Pribilof Islands golden king crab
PIK	Pribilof Islands red and blue king crab
SMB	St. Matthew Island blue king crab
WAG	Western Aleutian Islands golden king crab
WAI	Western Aleutian Islands (Adak) red king crab
WBT	Western Bering Sea Tanner crab

### Other

ACA	Adak Community Allocation
ADF&G	Alaska Department of Fish & Game
AFSC	NMFS Alaska Fisheries Science Center
AKR	NMFS Alaska Regional Office
BSAI	Bering Sea and Aleutian Islands
CDQ	Community Development Quota
CFEC	Alaska Commercial Fisheries Entry Commission
COAR	Commercial Operators Annual Report
CP	Catcher/Processor (vessel type and/or industry sector)
CPC	Catcher/Processor Crew (Quota Share sector)
CPO	Catcher/Processor Owner (Quota Share sector)
CPUE	Catch per unit effort
CR	Crab Rationalization
CV	Catcher vessel (vessel type and/or industry sector)
CVC	Catcher Vessel Crew (Quota Share sector)
CVCP	Catcher Vessel + Catcher/Processor (collectively denotes crab industry sectors with harvesting activity components)
CVO	Catcher Vessel Owner (Quota Share sector)
CVOA	Catcher Vessel Owner Class A (Individual Fishing Quota type)
CVOB	Catcher Vessel Owner Class B (Individual Fishing Quota type)
EDR	Economic Data Report
ESSRP	Economic and Social Sciences Research Program
FMP	Fishery Management Plan
GHL	Guideline Harvest Limit
IFQ	Individual Fishing Quota
IPQ	Individual Processing Quota

LLP	License Limitation Program
MSA	Magnuson-Stevens Fishery Conservation and Management Act
NMFS	National Marine Fisheries Service (NOAA Fisheries)
NOAA	National Oceanic and Atmospheric Administration
NPFMC	North Pacific Fishery Management Council
PQS	Processing Quota Share
PSMFC	Pacific States Marine Fisheries Commission
QS	Quota Share (harvesting QS)
RAM	NMFS Alaska Regional Office, Restricted Access Management Program
RCR	Registered Crab Receiver
RPUE	Revenue per unit effort
SAFE	Stock Assessment and Fishery Evaluation
SFCP	Shoreside Processor, Stationary Floating Processor, and Catcher/Processor (collectively denotes crab industry sectors with processing activity components)
SFP	Shoreside Processor and Stationary Floating Processor (collectively denotes shore-based crab processing sectors)
SP	Shoreside Processor
SFP	Stationary Floating Processor
TAC	Total Allowable Catch



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## 1. INTRODUCTION

This report provides statistics on economic activity in commercial crab fisheries managed under the North Pacific Fishery Management Council's *Federal Fishery Management Plan For Bering Sea/Aleutian Islands King and Tanner Crabs* (BSAI Crab FMP), with substantial additional detail available for active fisheries managed under the Crab Rationalization Program. The report is produced as part of the annual *Stock Assessment and Fishery Evaluation For The King and Tanner Crab Fisheries Of The Bering Sea and Aleutian Islands Regions* (SAFE), provided as a reference source for information on status and trends in social and economic dimensions of fisheries managed under the FMP, to support evaluation of management and regulatory decision making.

Across all fisheries managed under the FMP, total volume of commercial ex-vessel landings in 2014 was 81 million pounds, with an estimated gross ex-vessel revenue value of \$246 million. Total finished pounds reported by processors in 2014 across all FMP crab species and product forms was 53.2 million pounds, with an estimated first wholesale value of \$331 million (F.O.B Alaska). Of the 10 crab stocks managed under the FMP, six were open to targeted fishing during 2014, prosecuted by an active fleet of approximately 108 vessels, and landed and processed at 17 processing facilities throughout the region. In the rationalized fisheries that currently represent some 99 percent of the volume of these landings, there were an estimated 1197 fishing crew positions across 76 active vessels in 2014, with labor share earnings totaling \$31.8 million paid to deck crew members and \$14.4 million to captains. Processing these landings for the first wholesale market is estimated to have accounted for some 843 thousand hours of line labor in 2014, generating \$9 million in wages.

As an indicator of the relative economic importance of Alaska crab fisheries to the state and U.S. economies, the 81 million pounds (36.6 thousand metric tons) of commercial catch of king and tanner crab in domestic waters off Alaska (including catch in the gulf of Alaska and other fisheries not managed under the FMP) during 2014 represented 0.85 percent of the total volume of U.S. commercial seafood landings, but accounted for 4.1 percent of total ex-vessel value; with respect to Alaska alone, these fisheries account for 1.41 percent of total catch volume and 12 percent of total ex-vessel value produced in the State's commercial fisheries.

The Council has identified maximizing the social and economic benefits to the nation over time as one of seven management objectives in the FMP, which include, but are not limited to "*profits, income, employment, benefits to consumers, and less tangible or less quantifiable social benefits such as the economic stability of coastal communities*" (NPFMC, 2011; pp. 28-29). The Council further stipulated that, in the selection of management measures, specific examination of socioeconomic metrics will include: the value of crab harvested (less deadloss), both during the season for which measures are considered, as well in the future based on value as reproductive as well as harvestable stock; subsistence harvests; and economic impacts on coastal communities, "*... accomplished by considering, to the extent that data allow, the impact of management alternatives on the size of the catch during the current and future seasons and their associated prices, harvesting costs, processing costs, employment, the distribution of benefits among members of the harvesting, processing and consumer communities, management costs, and other factors affecting the ability to maximize the economic and social benefits as defined in this section.*"

The information presented in this report is provided as an annual summary of the economic status of the BSAI crab fisheries in terms of the magnitude and distribution of benefits produced by the fisheries, as broadly outlined in the FMP, in the context of the most recent period for which data are available and the flow of benefits as produced over time. The report is not intended to provide a dedicated analysis of any specific management measure, either prospectively or retrospectively, but is expected to facilitate greater access to social and economic indices of fishery performance and support preparation and use of such information in more targeted analyses. The report consolidates relevant information published in annual management reports by Alaska Department of Fish and Game and NOAA Fisheries Alaska Region, supplemented with additional analysis and information derived from primary data collected annually by the State of Alaska’s Commercial Fisheries Entry Commission, NOAA Fisheries Alaska Fisheries Science Center, and Pacific States Marine Fisheries Commission.

Chapter 2 of this report presents summary statistics and discussion of social and economic status and trends in commercial fisheries encompassed under the following categories: i) economic output; ii) income and employment; iii) operating and production costs; iv) use and distribution of ownership in quota share allocations and other fishery capital assets; v) fishing and processing capacity and effort, and vi) international trade in crab commodities. Within each of these categories, current status is represented in terms of annual averages and totals for the most recent five to seven years of data available. In most cases the most recent period is the prior calendar year or crab fishery year. All monetary values are inflation-adjusted to 2014-equivalent U.S. dollar terms. See below for additional introductory notes regarding data sources and reporting conventions used in this document.

Chapter 3 of the report provides results of a selected set of economic performance metrics calculated for Individual Fishing Quota (IFQ) crab fisheries as part of an initiative led by NOAA Fisheries Office of Science and Technology (OST) to coordinate monitoring and reporting of economic performance of rationalized fisheries across all regions and catch share programs (additional information can be found at <http://www.st.nmfs.noaa.gov/economics/fisheries/commercial/catch-share-program/>). Values calculated for IFQ crab fisheries are reported using OST protocols for catch share performance metrics depicting status and trends in program fisheries with respect to catch and landings, effort, economic value, and cost recovery. As discussed further below, coordinated monitoring and reporting of performance metrics under OST protocols is a recent effort under active development. Much of this information overlaps the analysis reported in Section 2, but is limited to a defined set of primary performance indicators for the eight CR program fisheries and is reported on the basis of crab fishery year rather than calendar year reporting as in much of the rest of the report.

## 1.1. Fishery Overview

Ten crab stocks are currently managed under the BSAI crab FMP: four red king crab (*Paralithodes camtschaticus*) stocks: Bristol Bay, Pribilof Islands, Norton Sound, and Adak (Western Aleutians); two blue king crab (*Paralithodes platypus*) stocks: Pribilof District and St. Matthew Island; two golden (or brown) king crab (*Lithodes aequispinus*) stocks: Aleutian Island and Pribilof Islands; Bering Sea Tanner crab (*Chionoecetes bairdi*), and Bering Sea snow crab (*Chionoecetes opilio*). These ten crab stocks are targeted in eleven fisheries, managed by NMFS and the State of Alaska (SOA) as distinct units: Bristol Bay red king crab, Bering Sea snow crab, Eastern Aleutian Islands

golden king crab, Western Aleutian Islands golden king crab, Norton Sound red king crab, Pribilof Islands golden king crab, St. Matthew Island blue king crab, Adak red king crab, separate fisheries for the Eastern- and Western- components of the Bering Sea Tanner stock, and a single combined fishery for Pribilof Islands red and blue king crab Eastern.

Management of these stocks is shared between NMFS and SOA under terms set forth in the FMP, which defines management measures within three categories:

1. Those that are fixed in the FMP and require FMP amendment to change;
2. Those that are framework-type measures that the state can change following criteria set out in the FMP; and
3. Those measures that are neither rigidly specified nor frameworked in the FMP.

Under the shared state and federal management structure specified in the FMP, decisions regarding management of crab stocks that are reserved to the Council and NMFS under the FMP Annual OFL and ACL status determinations are made by NMFS with Council input subject to federal requirements under the Magnuson-Stevens Reauthorization Act; as the findings of scientific assessments, stock status determinations and not in themselves considered to be management decisions.

Amendments to the FMP itself (Category 1 measures) pertain to changes in the federal regulatory framework under which the crab fisheries are managed, and are thus reserved to the Council and NMFS. Such changes typically involve measures of sufficient scope that they require federal rulemaking and call for preparation of dedicated socioeconomic analyses of decision alternatives, typically in the form of a combined Environmental Impact Statement or Environmental Assessment, Regulatory Impact Review, and Initial Regulatory Flexibility Analysis (EIS or EA/RIR/IRFA; e.g. NMFS, 2004). Category 2 and 3 measures are deferred to the State subject to terms of the FMP. Annual OFL and ACL stock status determinations are approved by the Council and NMFS Alaska Regional Office under the FMP in conformance with the Magnuson Stevens Act. As the findings of scientific assessments, status determinations and not in themselves considered to be management decisions. Although these determinations set the upper bound on total catch of FMP crab stocks , including both directed fishing and bycatch in other fisheries, decisions with respect to annual TAC/GHL levels for directed fishing are designated Category 2 measures deferred in the FMP to the state. TACs are set for crab fisheries managed under the Crab Rationalization Program, described in further detail below, while GHLs are set by the state for the Pribilof Islands golden king crab and Norton Sound red king crab.

To date, there has been no stock survey for Adak red king crab and therefore no basis for stock status determinations, and the fishery has been closed since 2003/2004. After closure for ten years while under a rebuilding plan beginning in 1999, the Saint Matthew Island blue king crab stock was declared rebuilt in 2009 and the fishery was opened for the 2009/10 season. Due to low area-swept survey results in 2013, the fishery was closed for the 2013/14 season, but was subsequently reopened for the 2014/15 season and is currently open to fishing. The Pribilof Islands blue king crab stock was declared overfished in 2002 and the combined red and blue king crab fishery has been closed to directed fishing to date. The Council took final action in June, 2012 recommending a preferred option for a rebuilding plan that would limit bycatch of the stock in the directed Pacific cod pot fishery, and analysis was being prepared for Secretarial review as of October 2012 (NPFMC, 2012).

After being opened to targeted fishing in 2005/06, the Western and Eastern Bering Sea Tanner crab fisheries were designated overfished and closed to targeted fishing, beginning 2008/09 and 2009/10, respectively. As detailed in the 2012 SAFE summary chapter and Bering Sea Tanner crab assessment chapter and appendices, the CPT has analyzed, and the Council subsequently approved, a revised baseline period for determination of the current recruitment potential of the stock, resulting in a determination that the stock had not been in an overfished condition in 2010 or subsequently. Despite the EBT stock status determination for 2012/13 as not overfished, the SOA did not open the fishery for 2012/13, but the fishery was reopened for the following 2013/14 season.

### *1.1.1 BSAI Crab Rationalization Program*

In March 2005, NMFS issued a final rule to implement the Crab Rationalization (CR) Program as Amendments 18 and 19 to the BSAI Crab FMP. The CR Program went into effect with the 2005/2006 crab season that began in August 2005, which affects the following fisheries: Bristol Bay red king crab (BBR), Bering Sea snow crab (BSS), Eastern Bering Sea Tanner crab (EBT), Western Bering Sea Tanner crab (WBT), Pribilof blue and red king crab (PIK), St. Matthew Island blue king crab (SMB), Western Aleutian Islands golden king crab (WAG), Eastern Aleutian Islands golden king crab (EAG), and Western Aleutian Islands (Adak) red king crab (WAI). Two fisheries managed under the BSAI crab FMP, Norton Sound red king crab (NSR) and Pribilof Islands golden king crab (PIG), are excluded from the CR Program.

The CR Program allocates BSAI crab resources to qualifying harvesters, vessel crew members, processors, and Western Alaska coastal communities. Under terms of FMP Amendments 18 and 19 and subsequent amendments, harvest and processing privileges in the CRP fisheries are granted as long-term percentage shares, designated as harvest quota share (QS) and processor quota share (PQS). Subject to annual application requirements, annual allocations proportional to QS and PQS percentages are issued to participating share holders as Individual Fishing Quota (IFQ) and Individual Processing Quota (IPQ) permits, granting pound-denominated quantities of catch and processing shares of the annual Total Allowable Catch (TAC). The harvest component of the CR fisheries is divided between the QS/IFQ component, representing 90 percent of the annual TAC, and the remaining ten percent allocated as Community Development Quota (CDQ) or, for Western Aleutian Islands golden king crab fishery, Adak Community Allocation (ACA) quota. Under the three-pie allocation system that is unique to the CRP, a portion of the harvest shares issued as IFQ are subject to a share matching requirement, wherein subject IFQ must be sold to qualified crab buyers holding shares of IPQ, with additional delivery requirements designating a portion of share-matched IFQ for delivery to specified regions within the BSAI. Specifically, IFQ allocations issued to catcher vessel owners (CVO-IFQ) are issued as 90 percent Class A IFQ, subject to regional delivery requirements and share-matching, and the remaining 10% designated Class B IFQ exempt from share matching and regional delivery requirements. All other QS/IFQ pools, including those issued to catcher/processor owners, catcher/processor crew members, and catcher vessel crew members, as well as CDQ and ACA allocations, are exempt from regional delivery and share matching requirements.

In this report the terms “BSAI crab” and “FMP crab” are alternately used to denote the collective commercial crab fisheries associated with the ten crab stocks currently managed under the BSAI crab FMP, and “CR crab” to denote those fisheries included in the CR program, inclusive of all QS/PQS, CDQ, and ACA allocations; and the term “IFQ fisheries” to denote specifically the QS/IFQ



and PQS/IPQ allocation fisheries within the program. All other crab stocks in waters off Alaska are exclusively managed by the State and are outside the scope of this report.

This overview outlines the key details regarding the structure of BSAI crab management and the CR program as referenced in this report. For detailed information regarding the regulatory structure of BSAI crab fisheries and recent management actions, readers are referred to the FMP, NMFS Alaska Region's Annual Bering Sea and Aleutian Islands Crab Rationalization Program webpage, and the Council's Crab Rationalization webpage website address URL's and links to other useful references regarding the CR Program are provided below). Several elements of annual CR program administration of importance to economic status of the fisheries are provided in the annual CR Report, including QS/PQS permanent transfer and IFQ/IPQ annual allocation transfer activity, harvest cooperative formation and IFQ assignment by fishery, initiation and outcomes of arbitration proceedings between harvesters and processors, safety and regulatory compliance by program participants, loan issuance under the NMFS Fisheries Finance Program, and CRP cost recovery fee assessment and collection.

- Additional information on BSAI crab fisheries is available from the Alaska Department of Fish & Game (ADF&G); NOAA Fisheries (NMFS), Alaska Region (AKR); and the North Pacific Fishery Management Council (NPFMC). Readers seeking more extensive discussion of fishery history and management may find the following resources particularly useful:
- NOAA Fisheries Alaska Region
  - BSAI Crab Fisheries: <https://alaskafisheries.noaa.gov/fisheries/crab>
  - BSAI Crab Rationalization (includes history of relevant amendments to the FMP): <https://alaskafisheries.noaa.gov/fisheries/bsai-crab-rationalization>
- NPFMC
  - BSAI Crab FMP: <http://www.npfmc.org/wp-content/PDFdocuments/fmp/CrabFMP0ct11.pdf>
  - Bering Sea and Aleutian Islands Crab Rationalization Program: <http://www.npfmc.org/crabrationalization/>
  - BSAI Crab Plan Team: <http://www.npfmc.org/fishery-management-plan-team/bsai-crab-plan-team/>
- ADF&G Shellfish Management
  - Westward Region, Bering Sea & Aleutian Islands Area Shellfish: <http://www.adfg.alaska.gov/index.cfm?adfg=commercialbyareaaleutianislands.shellfish>
  - Arctic-Yukon-Kuskokwim Region, Norton Sound and Kotzebue Shellfish (for information on the Norton Sound red king crab fishery): <http://www.adfg.alaska.gov/index.cfm?adfg=commercialbyareanortonsound.shellfish>

## 1.2. Data Sources

The current report summarizes information available to-date, largely comprising data reported through 2015 for the 2014 calendar year and 2013/2014 or 2014/2015 crab season. All data sources

are subject to revision as data errors at the observation level are identified and corrected. Data for the most recent period available for all sources, but particularly from BSAI Crab Economic Data Report data, is presented on a preliminary basis and may change significantly in the next annual release of the report, or in an amended version of the current report.

This document is the primary channel for publication of aggregate data from the BSAI Crab EDR program administered by NMFS Alaska Fisheries Science Center (AFSC), Economic and Social Sciences Research Program (ESSRP). The EDR program is a mandatory census involving reporting of detailed operational and financial information by owners and leaseholders of vessels and processing plants participating in CR program fisheries. The EDR program was designed by the Council as a component of rationalization to improve its ability to monitor and assess achievement of social and economic objectives of management set forth in the FMP. Broadly speaking, the objectives of this reporting requirement are to monitor the economic performance of the rationalization program in terms of changes in the efficiency and profitability of the fisheries, and economic stability for harvesters, processors, and coastal communities, as a result of the rationalization of the fisheries and in response to ongoing management decisions. The EDR reporting requirement was implemented in 2005, with baseline data submission required retroactively for 1998, 2001, and 2004, and subsequently, on an annual basis, for calendar year crab fishing and processing activities for 2005 to present. Revised EDR reporting requirements implemented under Amendment 42 (78 FR 36122, June 17, 2013) to the FMP went into effect during 2013 for 2012 and subsequent calendar year data.

The current Economic Status Report focuses on reporting summary statistics for reported values across EDR data elements identified as sufficiently accurate for public reporting. Several key elements in the EDR data collection prior to 2012 were limited by data quality have not been used in analysis of the CR program (AFSC, 2011) and have been withheld from the current report. These include quantity and cost of fuel used in the fishery, prices and costs for leasing of Individual Fishing Quota (IFQ), and spending for factor inputs by individual location. Given the importance of these elements in examining changes in profitability and distribution of income generated by and within the fishery, these data quality issues have limited the analysis of several key performance metrics for the fishery. Revised data collection protocols implemented for 2012 and subsequent reporting years have corrected errors associated with quantity and cost of fuel and prices and costs for leasing of crab fishing quota, and data reported for 2012 forward are presented in the current report; data reported previous to 2012 continue to be withheld due to data quality limitations. Several data elements were eliminated under revised EDR protocols, most notably all operating and capital cost elements for the crab fishing vessel and processing sectors, with the exception of fishing crew wages, processing labor wages, aggregate salary expenses, lease expenses for fishing quota (IFQ and CDQ/ACA quota) and processing quota (IPQ), vessel expenses for fuel, bait, and food and provisions, and payments for custom processing of crab purchased but not processed by the buyer submitting the EDR.

Varying degrees of coverage error apply to EDR data collected retroactively in 2005 for calendar years 1998, 2001, and 2004, as well as for certain processing-sector reporting elements in all years of the data collection. The historic (pre-2005) reporting requirement was tied to issuance of fishing and processing quota in the rationalized fishery. As such, the historic data may exclude operations that participated in the crab fisheries in 1998, 2001, and/or 2004 but did not anticipate receiving quota in the rationalized fishery. Additionally, because purchasers of CR crab that do not process any crab in their own facility are exempt from EDR reporting requirements, the data collection does not represent a full census of activity, revenue, and costs in the processing sector. Statistics on

EDR coverage of harvesting and processing sector activity in comparison to other administrative data collections are presented in the Appendix.

A number of other sources in addition to the EDR database have been utilized to compile the statistics presented in this report. ADF&G fish tickets document commercial harvest from Alaska commercial fishery resources, including all BSAI crab fisheries. Since implementation of the crab rationalization program in 2005/06, NMFS Alaska Region, Restricted Access Management (RAM) division has maintained accounting on landings, quota usage, and quota disposition in the IFQ crab fisheries. The ADF&G Commercial Operator's Annual Report (COAR) provides data on statewide crab production differentiated by crab species, product, and process type; and is additionally used by the Alaska Commercial Fisheries Entry Commission (CFEC) to estimate crab ex-vessel pricing. Regular reporting on BSAI crab fisheries cited in this document include the *Bering Sea and Aleutian Islands Crab Rationalization Program Report*, published annually by NMFS Alaska Region, RAM Division; and area management reports published by ADF&G.<sup>1</sup>

The Program Report provides information on the annual management of the CR program fisheries, and particularly the IFQ fishery component of the program. ADF&G fishery management reports provide information on fishery history, management, and stock status, in addition to detailed information on fishing activity occurring in the most recent fishing season. Citations for these and other sources used in compiling this report are provided in figure and table footnotes and in the References section.

### 1.3. Data Conventions

Under the Magnuson-Stevens Fishery Conservation and Management Reauthorization Act (P.L. 109-479), fishery information required to be submitted under Fishery Management Plans, including landings data, is confidential. NOAA Administrative Order (NAO) 216-100 is the principal guidance for NOAA Fisheries employees on protocols for handling confidential data. To assure confidentiality, data must be structured or aggregated so that the identity of the submitter cannot be determined from the present release of the data or in combination with other releases. "Submitter" is applied in context for the specific data presented. Data provided by the State of Alaska are treated consistent with the Memorandum of Understanding between NMFS and the State of Alaska regarding data sharing. Due to the sensitive nature of financial information reported in this document, confidentiality protocols have been interpreted conservatively and may result in greater suppression of statistical information representing contributions from low numbers of reporting units.

Data cited in this report have been aggregated across individual reporting entities by year and management unit so as to satisfy confidentiality requirements, while maximizing detail and comparability of statistics both within and among tables and figures. All price, revenue, and other monetary results are inflation-adjusted to 2014 base-year equivalent value using the Gross Domestic Product (GDP) price deflator; index values from 1991 to 2015 are provided in Table 4.48 of the

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<sup>1</sup>With the exception of Norton Sound red king crab, all fisheries included in the BSAI crab FMP are managed as part of the ADF&G Westward Region, Bering Sea/Aleutian Islands Management Area, with annual reporting on these fisheries available in the *Annual Management Report for the Commercial and Subsistence Shellfish Fisheries of the Aleutian Islands, Bering Sea and the Westward Region's Shellfish Observer Program* (<http://www.adfg.alaska.gov/index.cfm?adfg=commercialbyareaaleutianislands.shellfish#/management>). Norton Sound red king crab is managed as part of the Norton Sound and Kotzebue Management Area within the Artic-Yukon-Kuskokwim Region; reporting is provided in *Annual Management Report Norton Sound, Port Clarence, and Kotzebue* (<http://www.adfg.alaska.gov/index.cfm?adfg=commercialbyareanortonsound.shellfish>)

Appendix. Previous editions of the report used U.S. Bureau of Labor Statistics Producer Price Index for unprocessed and packaged fish to adjust for inflation, but for consistency with the Groundfish Economic SAFE document, this and subsequent editions of the report use the GDP deflator.

Some notable discontinuities and other limitations in source data exist, which limit comparability of statistics between tables or in time series within some tables. In particular, discontinuation or revision of several capital and operating expenditure data elements are reflected in the currently report, with data series for the affected data elements terminating at 2011 or beginning at 2012. To replace data previously provided by EDR reporting of days active in crab fisheries in the EDR (days fishing, days steaming and offloading, and days processing; discontinued for 2012 and subsequent years), data collected by Alaska Department of Fish and Game is incorporated in the current report. However, as the replacement data set (Confidential Interview Form (CIF) data) is only available beginning 2008, all statistics presented on a daily pro-rata basis in the report use CIF data where available, and EDR data otherwise. The calendar-year basis by which most statistics in this report are presented is incongruent with the July-to-June management season of BSAI crab fisheries, resulting in some statistics being presented on fishery-year basis where disaggregation to the calendar-year is infeasible with available data. Declining participation in CR program fisheries following rationalization has reduced the number of reporting entities in some strata below minimum thresholds for nondisclosure, necessitating aggregation across strata in order to maximize use and dissemination of available data. EDR data for the Eastern and Western Aleutian Islands golden king crab fisheries are reported together in aggregate, even though the fisheries are prosecuted by partially distinct fleets and managed as distinct fisheries. Users should also note the discontinuity in presentation of EDR statistics by industry sector between 2009 and earlier years: due to low participation in the catcher/processor sector, EDR data from 2009 forward are presented with aggregations over the catcher/processor and catcher vessel sectors for statistics related to harvesting activity; and over the catcher/processor, shoreside processor, and floating processor sectors for statistics related to processing activity. Users should also note that the validation process for EDR data and finalization of the dataset may take several months following the EDR submission deadline, and statistical values for the most recent period published in the report may be subject to revision in the next annual edition.

Users of this report are strongly encouraged to consult table and figure footnotes, which provide citations of data sources, interpretive guidance, and discussion of data limitations and qualifications in addition to those already noted above and/or in discussion text accompanying figures and tables. Figures for selected results are accompanied by cross-references to the relevant tabular data; more extensive footnotes are provided with tabular data in order to conserve space. Users should also note the abbreviation and notation conventions used in tabular and graphical presentations of data in this report:

*Abbreviations and notations used in tables and figures*

*	Data suppressed to prevent disclosure of confidential information
n/a or -	Not applicable
-	No data available (data not collected, no observations in reported data, or available data are insufficient for public reporting).
2005 or 05	Calendar year, or FMP crab fishing season that occurred wholly within calendar year
2005/06 or 05/06	FMP crab fishing year
lbs.	Pounds
mt or <i>t</i>	Metric tons
obs or observations for measure of interest	Number of observations with value > 0
sd	Standard deviation
\$	US dollars; inflation-adjusted to 2014-equivalent value
(blank)	Statistic not calculated; in some tables, certain statistics (e.g. mean or median) are calculated only for a subset of categories or strata, such that columns or rows in a portion of the table are left blank.

## 2. ECONOMIC STATUS AND TRENDS IN BSAI CRAB FISHERIES

The following section presents information on the economic status of BSAI crab commercial fisheries in terms of economic output, income, and employment; operating and production costs; use and distribution of ownership in quota share allocations and other fishery capital assets; fishing and processing capacity and effort; and international trade in crab commodities. Data are summarized as aggregate totals and/or averages calculated over relevant economic units, primarily at the level of harvesting and processing sectors within individual crab fisheries, with mean and/or median values representing the average value across individual vessels and processing facilities within the respective sector with additional levels of stratification as appropriate, and/or aggregated over some or all crab fisheries. The presentation is largely limited to these descriptive statistics, with measures of variability and/or uncertainty for selected variables where supported by available data. Depending on the data source, results are reported by calendar year (denoted as a single year; for example, 2013), or crab fishery year (spanning July-June and denoted, for example, as 2012/13). The current report summarizes information available in primary databases to-date, largely comprising data reported through 2015 for the 2014 calendar year and 2014/15 crab season.

As many of the key data sources are reported on an annual basis, current status and trends are framed in the context of inter-annual variation, with a focus on the most recent five to seven years of the crab fishery, with longer time series presented where available and longer historical perspectives noted where relevant, particularly with regard to pre- and post-rationalization comparisons. To the extent that descriptive statistics indicate a sustained directional change in magnitude or distribution of economic benefits, discussion of potential trends and associated management and/or market changes is limited to qualitative description of observed changes over time. Statistical tests to assess significant differences in measured values of the descriptive statistics or attribute causality to management or market factors, or models to forecast changes in status of the fisheries in the future, are not employed in the presentation. However, further analytically and statistical treatment of these and other data in applied social and economic research regarding aspects of fishery management are ongoing, and research under the sponsorship of AFSC is documented in an appendix to the report. In future iterations of this report, as data and methods are developed, the authors intend to incorporate improved analytically methods to enable greater synthesis of recent changes in socioeconomic conditions in the fishery and forecasting to anticipate potential changes in the near-to mid-term future.

### 2.1. Economic Output

#### *2.1.1 Annual TAC/GHL, Landings, Deadloss, and Finished Product Volume*

Annual TAC/GHL levels since 2005/06 are reported by crab fishery in Table 4.1 and summarized graphically in Figure 3.1. Recent variation in TACs issued in BBR and BSS fisheries is consistent with year-to-year volatility in the physical productivity of BSAI crab stocks over the longer term, but in both cases the 2011/12 TAC level represented an extreme (a lower extreme in the case of BBR, and an upper extreme for BSS) over the recent (post-rationalization) period. The allowable catch in BSS has varied substantially over the 2005/06 to 2013/14 period, with inter-annual changes

as great as 64 percent. The TAC for the 2013/14 of 54 million pounds (-19%) continued a third year of decline, but was reversed for the 2014/15 season with 68 million pounds. BBR TACs have varied within a narrower range proportionately, but declined in 2011/12 by the greatest margin since 2005, reduced by 42 percent from the previous year to 7.83 million pounds; the BBR TACs have increased in the most recent seasons, to 10 million pounds for 2014/15. Four fisheries open since the 2005/06 season, EAG, WAG, NST, and PIG, have all seen stable TAC levels over the period, but closure of the eastern (EBT) component of the Bering Sea Tanner crab fishery from 2010/11 through 2012/13, of the western component from 2009/10 through 2012/13 (both reopened for 2013/14), and reopening of the St. Matthew Island blue king crab fishery beginning in 2009/10 and closure again for 2013/14, have been significant changes in the economic status of the crab fishery overall.

Table 4.4 provides statistics for deadloss landings by fishery, including the number of vessels with deadloss landings, total volume of deadloss landings and as proportion of overall landed ex-vessel volume, and the average deadloss per vessel, with all statistics stratified by type of quota share permit used. Deadloss rates over the 2006-2014 period vary by fishery and are reported for most participating vessels. Rates are lowest in the BBR and BSS fisheries, ranging from 0.05-1.5 percent of landings, and are highest in the AIG fisheries, ranging from 0.3-3.5 percent, with a single episode of higher deadloss in 2010 reaching 16.3 percent of the 124 thousand pounds of crab landed on CVC and CPC (crew "C" share) IFQ. In both BSS and BBR fisheries, Class B and CDQ landings account for between 14 percent and 27 percent of total CV deadloss landings, with crew share quota accounting for between 0.3 percent to 3.9 percent of deadloss landings over the same period. The unique episode in the 2010 AIG fishery notwithstanding, no distinct pattern with respect to type of quota used on deadloss landings is discernible, and no results are available indicating relative compensation of quota share holders for harvest quota used for deadloss landings.

Figure 3.2 summarizes 1998 to 2014 annual (calendar year) values for total landed live catch and gross ex-vessel revenue (detailed in Tables 4.5 to 4.8), and finished production volume and first wholesale value (Tables 4.9 to 4.11), respectively, for all crab fisheries managed under the BSAI crab FMP. Upper panels in the figure display production and revenue time series in separate vertical bar graphs for each fishery (note that the vertical scales vary by fishery). To enable clearer comparison of the relative contribution of individual fisheries over time (graphed separately for harvesting and processing sectors), the lower panels of the figure display values of revenue and volume, respectively, aggregated over all crab fisheries and color coded by fishery in proportional area of vertical bars. Figure 3.3 summarizes the corresponding time series of ex-vessel and first wholesale prices by crab fishery, represented as weighted average price per pound.<sup>1</sup>

<sup>1</sup>A note on the term "price" as used in this report: a variety of price indices are presented herein that are derived from data on volume and revenue of sales of landed crab and/or finished crab product, collected and reported at different levels of aggregation. The typical representation of ex-vessel or first-wholesale prices in fishery management reports (e.g., NMFS, 2012) is fishery- or fleet-level average price, calculated as aggregate revenue divided by aggregate volume. Rather than representing the per-unit market "price" for a uniform commodity, this index is equivalent to the weighted arithmetic mean calculated over individual sale price observations, weighted by volume of individual sale. For example, ex-vessel price calculated as the quotient  $\frac{\sum_i r_i}{\sum_i v_i}$ , where  $\sum_i r_i$  is the ex-vessel sale revenue and  $\sum_i v_i$  is volume of sold landings, aggregated over all vessels  $i \dots j$ , is equivalent to the weighted arithmetic mean price calculated as  $p = \frac{\sum_i v_i p_i}{\sum_i v_i} = \frac{\sum_i v_i (\frac{r_i}{v_i})}{\sum_i v_i} = \frac{\sum_i r_i}{\sum_i v_i}$ , where  $p_i$  is the individual price observation for the  $i^{th}$  vessel. In relevant tables and figures in this report, the aggregate revenue (or cost) per volume ratio is referred to as weighted average price; this representation of average per-unit value places greater emphasis on large volume sales (or sellers), relative to smaller volume sales. This is of particular importance where factors that may affect an individual transaction price are correlated with the volume of the transaction and/or the frequency of similar transactions, such as type of harvest

Across all fisheries managed under the BSAI Crab FMP, the total volume of ex-vessel landings during 2014 was 80.9 million pounds (36.7 thousand *t*), a 7 percent decrease from the previous year. As of 2014, allowable catch quantities in all BSAI crab fisheries currently open to targeted fishing are fully exploited (i.e., 98-100 percent of total allocation landed), with the exception of the Western Bering Sea Tanner crab fishery (WBT), which reached 93 percent in 2014, the highest since the fishery was rationalized. As such, recent inter-annual variation in commercial landings largely reflects stock assessment results and catch limits rather than changes in fishing capacity or exploitation rate. The decrease in aggregate ex-vessel production during 2014 was driven largely by the 55.2 million pounds (25 thousand *t*) of Bering Sea snow crab (BSS) landed, a 22 percent decrease in volume from the previous year. Landings of 6.1 million pounds (2.75 thousand *t*) in Aleutian Islands golden king (AIG) were changed only slightly from the previous year (+2%), and 9.9 million pounds (4.5 thousand *t*) in Bristol Bay red king (BBR) fisheries were increased by 16 percent. Norton Sound red king crab (NSR) landings decreased by 5 percent to 420,000 pounds (0.19 thousand *t*) landed. The decline in production in the BSS fishery was offset substantially by increased production in the BST fisheries, which combined produced 9.09 million pounds (4.12 thousand *t*) landed during 2014, a six-fold increase over 2013 when the fishery opened for the first season since 2010/11.

Similar to ex-vessel production, the 7 percent proportional decrease in processing sector output to 53.22 million finished pounds (24.1 thousand *t*), aggregated over all active crab fisheries, was driven by the 22 percent decline in finished production in the BSS fishery to 36.2 million pounds (16.4 thousand *t*), with a slight decline in the NSR fishery by 20 thousand pounds. The drop in BSS production was partially offset by output in the BST fisheries, which increased from 860 thousand pounds in 2013 to 6.23 million pounds in 2014, and by output in the BBR fishery of 6.7 million pounds (3.1 *t*) with a moderate (+16%) increase for 2014, the largest proportional increase in a four-year upward trend. AIG production of 3.85 million pounds (1.75 thousand *t*) was also a slight (+2%) increase from 2013 output.

### *2.1.2 Ex-vessel and First Wholesale Prices and Revenue Value of Production*

Ex-vessel and first wholesale estimated prices in four of the five Alaska crab fisheries shown in Figure 3.3 declined during 2014. Average ex-vessel price for red king crab from both the BBR and NSR fisheries both dropped by \$0.60 per pound (to \$6.64 and \$5.27, respectively, or approximately 9 percent below 2013 levels), and a more similar proportional decline in first wholesale price for BBR crab, which dropped by \$1.38 per pound (-10%); wholesale price for NSR declined by \$0.52 to \$9.20 per pound. Golden king crab average ex-vessel price decreased by 1 percent to \$4.06 per pound, and decreased by 5 percent in the wholesale sector to \$7.97 per pound. Average price for Tanner crab from the BST fisheries dropped to \$2.39 per pound ex-vessel (-5%) and \$5.80 per pound wholesale (-10%), still somewhat higher, but more closely approaching average prices in the BSS fishery. Prices

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quota used in sales of ex-vessel landings, or wholesale product form of individual processor sales. It is important to note that, with limited exceptions, observation level data used to prepare this report represent yearly aggregate sale volume and revenue reported by industry entities for different categories of goods, rather than transaction-level data representing sales of uniformly-defined commodities. For selected tables and figures displaying economic value per unit metrics (price, cost, wages, or other per-unit rates), medians and/or unweighted means and associated measures of dispersion are included where appropriate to represent the center and, in some cases, dispersion of observation-level data. In cases where data do not appear to conform to an approximately normal distribution, median value of observation-level price per-unit is reported rather than mean.



increased during 2014 only in the BSS fishery, though modestly, to \$2.38 (+1%) per pound exvessel, and \$5.02 (+3%) per pound at first wholesale.

The combined effect of changing prices, catch allocations, and production levels across crab fisheries produced an overall 5 percent decline in gross revenues in both harvesting and processing sectors for 2014, with estimated total gross ex-vessel revenues of \$246 million and first wholesale revenues of \$331 million. Estimated gross ex-vessel revenues increased in the AIG and BBR fisheries, to \$25 million (+1%) and \$66 million (+6%), respectively, and most notably, in the BST fishery, which produced a gross ex-vessel value of \$22 million value of production in the 2014 BSS fishery, approaching the value of all but the BBR and BST fisheries. However, the decline in BSS production, despite moderate price improvement, produced a 21 percent decrease in ex-vessel revenues of \$65.5 million, with the reduced NSR catch producing a gross ex-vessel value of \$2.2 million (-15% from 2013).

Gross first wholesale revenues were similarly reduced in aggregate over all BSAI crab fisheries, which declined by 4.5 percent for 2014, to \$331 million. Gross wholesale revenue of \$181 million (-20%) in the BSS fishery, \$30.7 million (-4%) in AIG, and \$2.96 million (-11%) in the NSR fishery were all in decline in 2014, while BBR production increased wholesale revenues to \$79.8 million (+4%). As illustrated in Figure 3.2, increased production in the BST fishery during 2014 had its most appreciable affect on aggregate wholesale revenues since the beginning of the during 2014, contributing \$36 million.

As illustrated in both Figure 3.2 and 3.3, the relative magnitude of volume, revenue, and price statistics between harvesting and processing sectors is generally consistent from year to year for the two largest CR fisheries (BBR and BSS), particularly since rationalization in 2005, and to a somewhat lesser degree in the AIG fishery. Under the terms of the arbitration provisions incorporated into the structure of the CR program, annual determination of a nonbinding price formula for Class A IFQ in each CR fishery is made by an independent third-party Formula Arbitrator. Although the formula is nonbinding, it does act as a starting point for annual price negotiations between crab harvesters and processors, providing a consistent reference for evaluating price offers relative to the historical average split between ex-vessel and first wholesale price levels. Since the 2005/06 crab year, the ratio of weighted average ex-vessel to first wholesale price in the AIG fisheries has varied between a low in 2007 of 41.5 percent to a high in 2012 of 55.6 percent, between the 2006 low of 51.4 percent and a high of 56.8 in 2010 in the BBR fishery, and from a low of 39.3 percent in the 2010 BSS fishery to a high of 47.6 in 2013.

Figure 3.4 compares prices for ex-vessel landings sold using quota share permits grouped into Class A IFQ, CDQ and Class B IFQ, and Class C (crew) IFQ (see Table 4.8 for source data and additional detail). In contrast to the weighted average price statistics shown in Figure 3.3 and other tables, price statistics illustrated in Figure 3.4 show the mean price calculated over the vessel-level price observations for a given share type, with a measure of between-vessel price variation shown (error bars indicate +/- one standard deviation). While the by-share type price distributions substantially overlap (display of some results is limited due to data confidentiality) general consistency over time and CR fisheries in relative ordering of share-type in average prices provides some evidence that ex-vessel prices received for Class A IFQ landings, which are encumbered by the processor quota share matching requirement, are systematically lower than those produced from CDQ and Class

B/Crew share ex-vessel sales. The price differential is consistent directionally in BBR and BSS fisheries, but is most notable over the last four seasons in the BSS fishery<sup>2</sup>.

Production volume, value, and price statistics for the processing sector summarized in Figures 3.2 and 3.3 are displayed by CR program fishery in Table 4.9. Similar statistics for aggregate statewide processed crab production by species is presented in Table 4.10, disaggregated by primary product type (whole crab, sections, and other) in Table 4.11. Reporting of disaggregated results is limited by confidentiality and data cannot be shown for all years, species, and product forms. However, frozen crab sections consistently predominate as the primary product form across all species. A notable exception is golden king crab, for which a relatively large proportion of product sales are in the form of whole crab, comprising more than 16 percent of total sales volume and 19 percent of revenue in 2010-2013; sales of whole Golden king crab dropped 160 thousand pounds in 2014, representing 8 percent of sales revenue and less than 5 percent of sales volume.

A more comprehensive analysis of King and snow crab product markets, including product forms and associated wholesale and retail markets and import/export trade, are provided in the forthcoming *Market Profiles for Alaska Groundfish and Crab*.

## 2.2. Income and Employment

### 2.2.1 Processing Sector Employment

Tables 4.14 and 4.12 present data on crab processing labor employment and wages associated with the IFQ and CDQ fisheries. Aggregating over all crab production at processing plants that received IFQ and CDQ crab landings in 2014, it is estimated that processing employees worked nearly 843 thousand paid hours during 2014, generating nearly \$9 million in wages. This represents a third consecutive year of declining labor hours and wages in the crab processing sector, with 2014 total hours and wages reduced by 12 percent and 16 percent, respectively, compared to 2013. Processing labor in the BBR fishery during 2014 accounted for 130 thousand hours and \$1.41 million (increasing from 2013 by 25 percent and 17 percent, respectively), and 122 thousand hours and \$1.23 million in wages in the 2014 BST fishery. Corresponding to reduced production volume in the BSS fishery, hours and wages declined by 24 percent and 21 percent, respectively, to 590 thousand hours and \$6.4 million.

As indicated in Figure 3.5, inter-annual variation in processing labor input indicates general consistency with catch and production volume fluctuations, but estimated daily wage rates (prorated, based on an assumed 12-hour shift) have exhibited a general decline over the 2005-2014 period. It should be noted that most processing facilities that receive crab landings do not exclusively process crab, however, and it is likely that processing labor hours and wages reported and attributed to specific crab fisheries may be influenced by production activity and working conditions in other fisheries, including the relative amount of overtime labor and associated wages generated, which may influence estimates of average earnings and wage rates. Average wage rate increases in 2011 and 2012 in the BBR fishery, for example, do not appear to be driven by changes in production level within the fishery (which were declining) that would affect the relative amount of overtime hours and associated wages paid by processors. The increase in average wage in the 2014 BSS fishery may, however, be indicative of overtime wages paid as a result of contraction in the number of facilities

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<sup>2</sup>the small number of observations available for BST and AIG fisheries limits any meaningful comparison.

actively processing landed snow crab, which decreased from 15 to 12. Further analysis of this trend may be appropriate, and will likely be affected by forthcoming changes in minimum wage laws in the State of Alaska.

Table 4.13 reports the total number of individual crab processing workers employed by participating crab plants annually, by location of residence. The total count of processing employees reported, aggregated over all plants, decreased by 24 percent in 2014 to 2,370. The proportion of Northwest state (Oregon, Washington, and Idaho) residents is relatively constant at 30 percent of total processing workers reported by residence, with Alaska residents varying between 20-33 percent of the total in recent years and other US State residents representing between 37-47 percent of the total, and non-US residents representing less than one percent most years.

### *2.2.2 Harvest Sector Employment*

Consolidation in the crab-harvesting sector following rationalization in 2005/06 resulted in both a substantial reduction in the number of active vessels and longer seasons. Correspondingly, the number of crew positions was reduced and working conditions changed, resulting in longer periods of active work in the fisheries for a smaller number of remaining crab crew participants<sup>3</sup>. A summary of selected indicators from the most recent employment and labor earnings data available for CR program fisheries are presented in Tables 4.18 to 4.19 and summarized in Figures 3.5 and 3.6. Two primary data sources are used to compute employment statistics for the harvesting sector. The eLandings catch accounting system collects trip-level information on the size of the crew onboard a vessel at each landing. These data provide the basis for estimating the number of crew positions across the fleet during a fishing season and for observing changes over time in the aggregate- and average per-vessel quantity of crew labor employed in crab fishing. For each CR fishery, EDR data report the value of fishing crew contract settlement payments (net labor payment after deductions for shared vessel operating costs) to vessel captains and fishing crews and the number of paid fishing crew members (excluding captains) at the fishery level for each vessel<sup>4</sup>. In addition, EDR reporting of commercial fishing crew license data captures information on the number of unique individuals working as crew on crab fishing vessels as deckhands, vessel captains, and other positions in a given year (see Table 4.16 notes for details on crew license data). EDR labor payment data provides the basis for estimating aggregate labor earnings statistics, and the data reported on numbers of paid crew and counts of distinct crew licenses provides the basis for estimating the number of distinct labor participants in a given crab fishery, as well as the annual count of distinct crew participants over all crab fisheries.

The number of vessels operating in CR fisheries in 2014 declined from 81 to 76 in total, with 109 distinct vessels participating across all 2014 BSAI crab fisheries (Table 4.2). Based on the average (mean) number of crew onboard during each of the respective fisheries (as reported in eLandings catch accounting records for crab vessels), there were an estimated 1,197 crew positions across all

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<sup>3</sup>Consolidation occurred largely in 2005 and 2006, but the size of the fleet active in CR fisheries remained highly variable until 2009; the fleet has ranged between 76 and 83 fishing vessels prosecuting the IFQ and CDQ fisheries since 2010.

<sup>4</sup>Prior to 2012, EDR data collection included number of individual crew members paid, reported by CR fishery; this data element was discontinued in revised EDR protocols implemented for 2012, and both Figure 3.5 and Table 4.15 show counts of distinct crew participants through 2011 only.

vessels in CR fisheries in 2014, compared to 1,099 in 2013.<sup>5</sup> The 63 vessels fishing in the BBR fishery in 2013 and 2014 generated and estimated 422 crew positions, and the 69 vessels active in the BSS fishery during 2014 generated 472 positions, 2 vessels and crew 9 positions fewer than in 2013, respectively. Vessels fishing in the BST fisheries increased from 22 to 39 in 2014, increasing the number of crew positions by 112 to 268. Using counts of individual captains and crew members identified by license or permit number in EDR records, it is estimated that 676 unique individuals worked on board during 2014 CR fisheries, a slight increase from 670 in 2013 (Table 4.17). Of the 584 commercial crew license holders participating in CR crab fisheries during 2014, 200 (34 percent), and 24 of 93 (25 percent) CFEC gear operator permit holders, were identified as Alaska state residents.

Total labor payments<sup>6</sup> to crab vessel captains and crews totaled \$14.9 million and \$31.8 million during 2014, respectively, declining by 6 percent in both groups from 2013 earnings (Figure 3.5 and Table 4.18). The aggregate drop in labor earnings over all CR fisheries reflected the general decline in gross ex-vessel earnings, with the largest change in captain and crew labor earnings of \$8 million and \$18 million, respectively, in the 2014 BSS fishery. Total captain and crew earnings in the 2013 BBR fishery remained nearly constant at \$3.7 million and \$7.7 million, respectively, and the BST fishery increased crew earnings to \$3.1 million and \$1.4 million in 2014.

As shown in Figure 3.5 (right panel), average daily earnings for crew and captains in the BBR fishery, and captains in the AIG fishery, declined for a third year in 2014 from peak levels observed in both fisheries in 2011. Average daily crew and captain earnings in the BSS fishery, and crew earnings in the AIG fishery, have been relatively constant since 2012.<sup>7</sup> In the BBR fishery, estimated total active days at sea increased by approximately 109 days (see Table 4.20), offsetting the increased earnings across the season due to the longer time at sea. In contrast, total days active in the BSS fishery during 2014 were reduced from the previous year by 779 days, with the result of maintaining or slightly improving daily pro-rata labor earnings despite the substantial decline of aggregate earnings in the fishery for 2014.

The effects of rationalization on crew earnings and the relative distribution of economic benefits between quota share owners and active crews working in the crab fishery remain ongoing concerns for fishery managers. Identifying trends in labor earnings is complicated by the lay share system that is commonly the basis of crew compensation in commercial fisheries. Unlike typical labor market conditions, where prevailing wage rates are substantially stable from year-to-year, the value of crab crew pay settlements under the lay share system is highly influenced by the price and market value of landed crab as well as prices and costs of other factor inputs (e.g. fuel), both of which are exogenously determined by larger external markets. It is therefore difficult to clearly associate the effect of management changes under rationalization and changing productivity of the fishery with any trend in the status of crew earnings. The volatility of both crab prices and catch levels over the period following rationalization contributes to highly variable annual results for both aggregate- and per-vessel average payments to crab crews and captains as described above.

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<sup>5</sup>This figure counts positions in each fishery separately for a given vessel, noting that the same crew member may work two or more fisheries on the same vessel

<sup>6</sup>In addition to direct labor earnings, income is derived by some crew members and many captains as lease royalties for crab IFQ quota shares. While this may become an increasingly important source of income as opportunities for investment in QS ownership are advanced, there is no evidence in data available to-date that the proportion of CR fishery quota share pools held by crab crew members has changed in recent years (see the section on QS holdings below for further detail).

<sup>7</sup>See Figure 3.12 and Table 4.20 and associated footnotes for details on data sources for vessel activity-days used for daily pro-rata earnings calculations.

Additional metrics providing alternative indicators of changes in crew labor and remuneration conditions over the period 1998 to 2014 are presented in Figure 3.6 (summarizing results in Tables 4.18 and 4.19). The figure illustrates changes over time in median vessel-level crew and captain labor earnings relative to three indices: median "gross-share" (value of payments to the captain and crew as a share of gross ex-vessel revenue), median "net share" (share of ex-vessel revenue less deducted operating costs), and the "crab-equivalent" index of earnings for crab crews. Net share percentages were reported annually by vessel owners in EDR data from 2005-2011 as the ratios used in the calculation of crew settlements, where "net" refers to the revenue residual after deductions for quota leases and operating expenses shared between vessel owners and crews under the terms of lay share contracts. Gross share values are calculated as the ratio of reported captain and crew payments to gross ex-vessel revenue reported by fishery. Limited data for both gross and net share values is available prior to 2005<sup>8</sup>, but vessel owners reported an average 40 percent net share percentage over all fisheries in which they participated as the basis for crew settlement payments (Table 4.19). By comparison, during the same baseline period, median crew payment as gross share was 35 percent averaged over all vessels and crab fisheries. Due to confidentiality limitations, only results for BBR and BSS fisheries can be shown for the full 2005-2014 period. As illustrated in Figure 3.6, both net- and gross-share metrics have remained largely stable over the post-rationalization period; median net-share as reported for 2005-2011 for captains remained at 12-14 percent, and crews at 26-27 percent in both the BBR and BSS fisheries. Over the rationalized fishery to date, median gross-share percentages in the BBR fishery have varied between 18 to 23 percent, but have generally declined over the period, remaining at 18 percent for the most recent two years. Data shown for the 2005 BSS fishery reflect crew payments during the 2004/05 season, prior to implementation of the CR program, with gross share percentage to labor (combined) of 35 percent. During 2006, the first year of BSS fishing under the CR program, gross share for crew and captain payments declined to 22 percent, and have varied between 20 - 23 percent subsequently, with declining trend, remaining at 20 percent in the last two years. The crab-weight equivalent pay index presented in Table 4.18 and Figure 3.6 is derived by standardizing annual payments to crew relative to the average price received by the vessel for landed crab, resulting in a metric denominated in pounds of crab.<sup>9</sup> Statistics calculated using this index reflect the quantity of physical output of the fishery that is devoted to the compensation of crew labor (shown for crew only, excluding payment to captains). In principle, the index decomposes changes over time in the gross monetary payments to crew: for a given quantity of catch landed by a vessel, the value of the index will remain constant insofar as any percentage change in monetary payment to crew is equal to the percentage change in price (e.g., if both increase by 10 percent); inversely, if price remains constant but landings increase, the index value will remain unchanged if any proportional change in crew pay is equal to the proportional change in output. Therefore, a change in the value of the index

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<sup>8</sup>Revenue net share percentages over all crab fisheries were collected in Crab EDR forms in for pre-rationalization years, and by individual fishery for calendar years 2005-2011, in addition to information regarding treatment of selected operating cost items in crew settlement calculations (i.e., deducted from gross revenue, directly charged to crew members, or not included in crew settlements). With the implementation of IFQ, treatment of quota lease expenses has become a key determinant of the revenue basis for crew settlements. Due to the variation in deductions from ex-vessel revenue for quota lease expenses and a variety of other operating costs over time and between vessel owners, the "net share" metric is not a reliable metric for comparison among vessels, or as an index of net operating profit, and it is not possible to derive a reliable estimate of net operating profit by comparison of net share and gross revenue share percentages. Data elements regarding crew share settlement terms have been discontinued in EDR reporting as of calendar year 2012.

<sup>9</sup>The index is calculated by dividing vessel-level crew payments in a given crab season by the average ex-vessel price received by the vessel; statistics shown are the median value of the index over all active vessels. See Abbott et al (2010) for further discussion of the index and analysis applied to effects of the CR program and IFQ leasing on crew remuneration.

indicates a change in the relative proportion of gains or losses in the net economic value of the fishery due to changes in price or physical production that are distributed to crew.

Due to confidentiality limitations, only results for BBR and BSS fisheries can be reported in Table 4.18 and Figure 3.6 for the full 1998-2014 period. The crab-equivalent index follows a pattern of change over the post-rationalization period that is roughly the inverse of that observed in ex-vessel prices (Figure 3.3), increasing by approximately 200 percent between the baseline period to 2008, during which time the red king crab price declined from \$9.32 to \$4.63, and snow crab price fell from \$2.63 to \$1.35. The index for the BSS fishery varied between 97 thousand to 104 thousand pounds (median per-vessel) over the 2009-2011 period, concurrent with a moderate increase in prices and flat production. More recently, the index increased to 164 thousand pounds for 2012, concurrent with an increase in production and a decline in price, and declined to 120 thousand pounds in 2013 and 97 thousand pounds in 2014, as ex-vessel production has declined concurrent with increasing prices. In contrast, the index for the BBR fishery declined over the 2008-2013 period from 25 thousand pounds to 13 thousand pounds in 2013, compared to the sharp increase in ex-vessel price to \$10.47 for 2011, approximately on par with the previous peak in 2002, and increased in 2014 to 16 thousand pounds. In comparison to the direct monetary value of crew earnings, which have varied substantially between 2005-2014, the pattern of change shown in crab prices and the crab-equivalent metric indicates that crew earnings have been relatively insulated from the effects of price-driven variation in ex-vessel earnings. In periods of rising prices, this reduces the distribution of price-driven increases in ex-vessel revenues to crew, but also limits the effect of price-driven declines in revenue during periods of falling prices. This finding provides limited insight regarding a general trend in the earning status of fishing crews. However, it does suggest that any change in fishery management intended increase prices received for Alaska crab products (through improved production processes or marketing, for example) may have a relatively small effect on crew earnings in absolute terms.

### 2.3. Operating and Production Costs

Statistics reporting information available for crab vessel operating expenditures are summarized in Figure 3.7; in addition to tables and figures reporting harvest labor and quota costs presented previous sections, Tables 4.22 and 4.23 provide summary statistics for available data on bait, fuel, and food and provisions costs in the harvest sector. Total aggregated expenditure by fishery sector and per-vessel or plant median expenditure are presented for cost data elements where data of sufficient quality to warrant dissemination are available through the current period.<sup>10</sup> Analysis of trends in operating and/or capital expenditures over time, or in relation to production or revenue, is inhibited by a variety of factors. In addition to data quality limitations for specific cost elements collected prior to 2012 (vessel fuel expenditures and quota lease costs), discontinuities in data time series also limit use of the data. As with other information contained in this report, catcher-processor sector data in many cases cannot be reported at the sector level due to confidentiality requirements, and therefore aggregate harvesting sector (CV and CP) and processing sector (CP and shore-based) results are presented for fishing- and processing-specific expenditure items respectively.

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<sup>10</sup>Cost elements that were discontinued in the crab EDR data collection program as of 2012 are not included; see the 2013 volume of this report for additional detail on discontinued harvest and processing cost data collected prior to 2012.

Total bait expenditures across all fisheries and vessels (excluding the SMB fishery, for which data is not reported for 2014 due to confidentiality) reached \$3.5 million during 2014, increased from \$3.2 million in 2013; the BSS fishery accounts for the majority of bait expenditures, with \$1.47 million during 2014 reduced by 7 percent from 2013. Reported costs in the BBR fishery increased 25 percent to \$653 thousand, and by 6 percent in the AIG fisheries to \$767 thousand, despite the relatively small change in catch and effort in these fisheries (see Table 4.46). Reported expenditures for food and provisions costs totaled \$1.46 million over all fisheries during 2014, 19 percent higher than in 2013. The largest costs accrued to the BSS fishery, with \$677 thousand, 4 percent less than in 2013, followed by \$395 thousand in the BBR fishery (+25%), \$198 thousand in the BST fishery (more than twice the level of 2013), and \$186 thousand in the AIG fishery (+28%).

Total fuel expenditures reached \$3.8 million in 2014, 16 percent less than in 2013. Fuel cost in the BSS fishery of \$2.8 million were reduced by 37 percent from the previous year, and fuel costs in the BBR fishery declined by 7 percent to \$680 thousand. Vessel operating in the BST fishery incurred \$546 thousand in fuel costs, while AIG fishery vessels spent \$355 thousand during 2014, an increase of 9 percent from 2013.

#### 2.4. Quota Holdings, Leasing Activity, and Quota Share Sale Transfers

The following section provides information regarding transfers of harvesting Quota Share (QS) and Processing Quota Share (PQS) allocation holdings among eligible shareholder entities under the CR program, lease transfer of Individual Fishing Quota (IFQ) and Individual Processing Quota (IPQ) annual permits, and changes in the distribution of use of annual harvesting and processing quota permits and ownership/holding of QS and PQS shares, and results from the BSAI Crab Rationalization Economic Data Report (EDR) program collection of crab harvest quota allocation lease data associated with 2012 through 2014 calendar year CR crab fisheries.

##### 2.4.1 Harvest Quota Lease Activity and Average Prices

Table 4.25, summarized in Figure 3.8 displays aggregated results for crab fishing quota lease volume (in pounds) and cost reported for crab vessels active in 2012 and 2013 calendar year CR fisheries<sup>11</sup>, by fishing quota type category, with total quantities summed over all reporting vessels, and average values (both median and mean) for volume and cost of leased quota per vessel. Average lease price paid (\$US per pound) and average lease rate (lease price as percentage of ex-vessel price) per vessel are shown as well. Both median and arithmetic mean average value metrics are presented to provide information on the variation in reported values within each stratum, with the higher mean values shown indicating the presence of a subset of high-value data points in these data. Harvest quota types are categorized as the following: Catcher Vessel Owner Class A (CVOA) IFQ;

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<sup>11</sup>EDR data collection for the 2012 calendar year implemented newly revised data collection protocols under Amendment 42 to the BSAI King and Tanner Crabs FMP (78 FR 36122, June 17, 2013); prior to the implementation of EDR revisions, data collected regarding EDR lease activity and costs did not differentiate between transfers of quota between independent entities that were priced at competitive market rates from non-arms-length transactions (i.e., those between affiliated entities or other types of non-market transfers characterized by nominal prices or in-kind compensation). For this reason, EDR quota lease data collected previously for 2005-2011 fisheries was not deemed of sufficient quality to disseminate. For collection of data associated with 2012 fisheries, revised EDR forms employ revised instructions specifying quota lease data elements as market-rate or negotiated-price transfers. Also note that CR crab fisheries are managed on a July-June seasonal calendar, and 2013 BBR and BSS calendar year fisheries are comprised of the 2012/13 BSS season and 2013/14 BBR seasons.

Catcher Vessel Owner Class B (CVOB) IFQ and Catcher/Processor Owner (CPO) IFQ; Catcher Vessel Crew (CVC) IFQ and Catcher/Processor Crew (CPC) IFQ, Community Development Quota (CDQ), and Adak Community Allocation (ACA).

The number of vessels reporting quota leases in the 2014 BBR fishery range from 51 vessels leasing CVO Class A shares, to 8 vessels leasing CDQ shares (out of 63 crab vessels active during the 2013 BBR fishery), and from 56 vessels leasing CVO A Class BSS IFQ allocation to 11 vessels leasing CDQ allocation (out of 70 active vessels) in the BSS fishery. Total volume and cost over all vessels leasing the respective quota types during 2013 range from 4.1 million pounds and \$18.6 million for BBR CVO Class A IFQ, to 195 thousand pounds and \$954 thousand for BBR CVO and CPC crew IFQ allocation; BSS lease volume and cost ranged from 62.9 million pounds and \$66.5 million for CVO A Class IFQ to 3.4 million pounds and \$3.9 million for crew share IFQ allocation.

Per-vessel averages (median)<sup>12</sup> for 2014 BBR quota leased volume and cost ranged from 88 thousand pounds and \$374 thousand per vessel for BBR CVO A Class allocation, to 6,000 pounds and \$24,000 for BBR CVO and CPO crew IFQ; BSS per-vessel averages ranged from 442 thousand pounds and \$489,000 per vessel for per vessel CVO- A Class allocation to 29 thousand pounds and \$34,000 for BSS crew share allocation.

Average (median) lease prices and lease rates in the 2014 BBR fishery shown in Table 4.25 range from from \$4.47 per pound CDQ allocation (63 percent of ex-vessel value; see table footnote regarding calculation of lease rate), to \$4.21 per pound (62 percent of ex-vessel value) for BBR CVO A Class allocation. Median lease price and rate in the BSS fishery ranged from \$1.23 for CDQ allocation (49 percent of ex-vessel value) to \$1.12 per pound for BSS CVO A Class IFQ (46 percent of ex-vessel). Average value metrics are calculated over individual vessel-level observations of both quota lease price and ex-vessel value; the general consistency of results between median and mean statistics across quota types indicates the relative uniformity of quota price paid by leasing vessels and the limited effect that the small number of high-price outliers in data have on aggregate statistical results.

During the first year of rationalization, 23 distinct crab harvesting cooperatives were formed by vessel and QS owner entities, and a rapid shift toward pooling of IFQ within cooperatives occurred in response to program incentives, as noted above. As of 2009, only a small fraction of the issued IFQ was landed by non-cooperative vessels, and beginning with the 2009/10 crab season, virtually all IFQ has been pooled within harvest cooperatives.<sup>13</sup> Correspondingly, all IFQ lease transactions registered with NMFS (Table 4.26) have taken place within harvest cooperatives, primarily in the form of IFQ assignment to the cooperative by member QS holders. Since 2005, leases registered by cooperatives have ranged from 144 during 2005/06, to slightly more than 300 in 2007/08 and 2008/09, with 281 leases registered in 2013/14. Noncooperative leases were most common in the

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<sup>12</sup>Differences between median and mean average values shown in Table 4.25 are most pronounced in the per-vessel pounds and cost statistics; this primarily reflects the relative concentration of high-volume quota leasing activity by a small number of vessels within each quota type category (particularly in the case of pooled results for CVO-B Share and CPO IFQ allocation, where the latter is leased by a small subset of vessels.

<sup>13</sup>For the 2009/10 crab season, the Inter-Cooperative Exchange (ICE) harvest cooperative was formed. As of the 2012/13 season, 65 percent of crab IFQ was issued to ICE, with the remaining IFQ issued to eight other cooperatives; among other effects of formation of the ICE, administrative requirements related to IFQ transfer applications were largely obviated, facilitating assignment of 100 percent of issued IFQ to harvest cooperatives. See the Crab Cooperative Permits and Information section of NMFS AKRO Crab Rationalization webpage for more information: <http://www.alaskafisheries.noaa.gov/sustainablefisheries/crab/rat/ram/permits.htm#crab>.



first year, with 113 in total, declining to 16 by 2007/08, and four in 2011/12, the last year such transfers occurred.

#### *2.4.2 Quota Share Sales and Average Prices*

Permanent sale transfer of CR Program QS and PQS is permitted under a framework of rules intended to prevent excessive share consolidation and, in the case of PQS, maintain regional and community level processing capacity and employment associated with crab processing histories of individual processing plants (as discussed previously). As such, the frequency and volume of QS and PQS sales discussed below are strongly influenced by regulation of the respective markets. The total number of QS sales reported over the course of the program has ranged from 199 during the first year of the CR program, to a high of 290-330 during 2006/07 to 2007/08, and a low of 126 during 2011/12 (Table 4.25). During the most recent season, 215 QS sales were registered with RAM, on par with general frequency of activity in this market since the 2008/09 season. PQS lease transfers have ranged between 25-40 per year, with 30 registered for 2013/14. Sales of PQS increased from 7 during the first two years of the CR program, to 42 during 2008/09, substantially higher than any other year. Four PQS sales occurred for 2013/14.

During the first two years of the CR program, sales of catcher vessel crew share (CVC QS) represented a large proportion of individual sale transfers, with 79 and 102 sales in 2005/06 and 2006/07, respectively, 56 percent of the total 141 sales in 2005/06, and 47 percent of 210 sales in 2006/07, although the quantity of shares transferred as CVC was much less than the quantity of CVO shares. (Table 4.27 and Figure 3.9). Subsequently, the relative proportion of CVC QS sales have diminished, with catcher vessel owner (CVO) QS sales becoming the predominant type. During 2014/15, 37 sales of CVC QS were completed across all fisheries, including 10 sales accounting for 484 thousand QS units in the BBR sharepool, and 12 sales accounting for 418 thousand QS units in the BSS sharepool (both representing approximately 4 percent of the total CVC QS units in the respective share pools). In contrast, 18 sales of BBR CVO QS were completed for 2014/15, totaling 8.9 million QS units (2.3 percent of the pool), and 23 sales totaling 22.3 million QS units (2.3 percent of the pool) in the BSS fishery.

Median prices for CVC QS units in the BBR fishery have previously ranged from \$0.71 per QS unit in 2010/11 and 2012/13, down from a high of \$1.15/unit in 2005/06; 2013/14 price increased from the previous year to \$0.80 per unit. BBR QS price per unit has increased in recent years, reaching \$0.95/unit for CVC in 2012/13 from \$0.83 the previous year well within the range of \$0.69 - \$1.46 per QS unit observed previously; median price per unit for BSS CVO QS reached a historical high of \$1.09 per unit for 2013/14, substantially higher than the previous range of \$0.34 - \$0.95 per unit observed previously, while CVC share price has recently varied from \$.73/unit to the peak value of \$0.95/unit observed 2013, but remained substantially higher than previous range of \$0.25 - \$0.49 per unit.

PQS sales have been infrequent through the duration of the CR program, with the largest number occurring in 2008/09 at 27 over all, including 4 sales in the BBR fishery totaling 32.2 million PQS units (7.8 percent of the PQS pool), 5 in the each of the EBT and WBT fisheries totaling 12.2 million units (6 percent of each pool), and 8 in the WAG fishery totaling 18.9 million units (47 percent of the pool). Prices at each of these points have averaged \$0.10 for BBR PQS, \$0.05 for EBT PQS, and \$0.07 for WAG PQS. Following the 2008/09 season, too few PQS sales have been completed in any year to enable publication of aggregate statistics.

### 2.4.3 IFQ and QS Price Comparison

Comparison of IFQ lease prices to QS sales prices provides an important indicator of economic performance in IFQ fisheries, particularly regarding QS holders' expectations for fishery performance and product market prices and demand in the future<sup>14</sup>. In principal, in a well-functioning competitive market, price per pound of IFQ reflects QS holders and fishermen's expectations regarding the surplus to be produced from fishing the leased quota during the current season, taking account of uncertainty regarding factors that influence fishing costs and ex-vessel revenue. Similarly, QS sale prices reflect holder's expectations for the surplus value of the fishery over time, defined as the present value of the stream of annual lease earnings for the indefinite future, where distant future expected lease revenues are ascribed a lower value (discounted) relative to near-term expected earnings. Implicit in the ratio of IFQ price to QS price is the average discount rate,  $r$ , such that

$$QS_{\text{price}} = \left(\frac{1}{r}\right) * IFQ_{\text{lease price}}$$

In this relation, the index  $r = \frac{IFQ_{\text{lease price}}}{QS_{\text{price}}}$  reflects QS holders' expected rate of return for holding QS, which in principal can provide an indicator of QS holders' collective expectations regarding the rate of return for holding QS. Changes over time in this index can suggest changing expectations of future value of the fishery, e.g. a negative change in over time would indicate a reduced perceived risk of declining stock productivity, product prices, or other adverse management or market conditions. As a capital asset, the expected rate of return on QS is comparable to that of other investments of comparable risk, e.g. bond yields. As such, if is lower than the market rate, the holder could expect to earn more over time by selling the QS and investing in alternative assets. Table 4.28 provides information used by NMFS to determine the conversion of QS units to pounds of IFQ by type and fishery for the 2012/13 through 2014/15 CR fisheries. Using the conversion ratio values, and average IFQ lease- and QS sale prices, the calculated IFQ:QS price ratio for 2013 through 2015 are shown in Table 4.29. As a result of increasing BBR QS prices over the last three years noted above, concurrent with declining lease price, the IFQ:QS ratio values for BBR CVO quota dropped from 0.12 to 0.08, and the BBR CVC quota value ratio dropped from 0.14 to 0.11. The ratio for BSS CVO quota declined more steeply, from 0.15 to 0.05, while CVC has remained at 0.08. The number of reported observations is small for lease and sale prices in other quota pools, including the 2013 BSS CVC pool; in addition to preventing public reporting of some values, it is uncertain to what extent the price ratio results based on a small number of observations represent market equilibria useful as indicators of perceived risk. Results shown for BBR and BSS CVO QS shares, however, are derived from a larger set of data points (46 and 113 BBR and BSS CVO sales, respectively) and are likely more robust as indices of the expected rate of return. While the recent decline in rates provides limited information, it is an indication that the relative value of retaining QS shares and the associated stream of royalty revenue has been declining in comparison with the benefit of selling, when considered against comparable yield rates for alternative investments, where yield rates over the period 2008-2013 on bonds of different risk and maturity have generally varied between 3 percent and 9 percent, with only high risk (C-rated) investment bonds reaching yield rates as high as 15 percent (Federal Reserve Economic Data, 2013). Due to the eligibility requirements for receiving transferred crab QS and other constraints affecting the market for QS, including the status of QS as a revocable privilege rather than a private asset, the high value of this index at any one point in time relative to investment market rates is not necessarily indicative of comparative risk regarding the financial value of QS. Rather, the utility of the index as an indicator of relative

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changes in expectations for risk and rate of return over time may be realized only as more data points accumulate.

#### 2.4.4 QS/PQS Holding

Quota share and PQS were initially issued to qualifying U.S. individuals and companies or other non-individual business entities based on historical participation in the CR fisheries. Over time, attrition of initial QS/PQS recipients and consolidation of quota holdings within a smaller pool of holders is anticipated as initial recipients exit the fishery and divest their financial interests in quota share and associated assets. Changes in the demographics of the quotaholder population over time, concentration of quota shares, and/or other distributional outcomes, are important dimensions of the economic status of the fishery. In addition to monitoring attrition of initial recipients generally, of particular interest are the role of Western Alaska Community Development Quota (CDQ) groups in acquiring control of IFQ and IPQ program quota shares, and the degree to which individuals active in the fishery as on-board crew successfully acquire quota shares, either as new entrants, or by adding to existing holdings. Information on various dimensions of these processes is presented in Tables 4.31 to 4.37 of the report, and summarized in Figure 3.10 below. CR program rules limit the consolidation of vessel owner QS to a maximum share proportion of the quota share pool held by any single entity to 1 percent in BBR, BSS, EBT, and WBT fisheries, 2 percent in PIK and SMB, and 20 percent in EAG, WAG, and WAI fisheries, with “grandfathering” exceptions for initial issuees, and higher caps for crew share QS, CDQ groups, and non-individual PQS holders (see table below; use caps and related regulations are found at 50 CFR Part 680, at SS680.42). Under the rule, use of IFQ to catch and land crab by any one entity is subject to the similar caps, but an exemption for members of harvest cooperatives eliminates limitations on the consolidation of catch on vessels harvesting exclusively IFQ held by a cooperative.

#### **QS Use Caps As % Of Initial Quota Share Pool, by Holder Category and QS Type**

Fishery	CDQ Group CVO/CPO	Non- individual PQS holder CVO/CPO	CVC/CPC	All other transferees CVO/CPO QS
BBR	5%	5%	2%	1%
BSS	5%	5%	2%	1%
EBT	5%	5%	2%	1%
WBT	5%	5%	2%	1%
PIK	10%	5%	4%	2%
SMB	10%	5%	4%	2%
EAG	20%	5%	20%	10%
WAG	20%	5%	20%	10%
WAI	20%	5%	20%	10%

Source: NMFS Alaska Region

The period of active transition of quota share holdings that occurred in the initial years of the program has subsided, and with few exceptions, the overall distribution of QS ownership has been largely stable in the CR program over the most recent two seasons. Across all share pools and fisheries for both QS and PQS holdings, marginal reductions occurred between 2013/14 and 2014/15

in the size of the share holder population across CR fisheries, but there was not enough change in concentration of share holdings within the population to register as a change in the median percentage of shares held (CVC quota in the WAG fishery is one exception, where the number of QS holders increased from 8 to 9, and the median holding declined from 7.45 percent to 6.3 percent ). Relative to initial issuance, share holding distribution has changed most significantly in BBR and BSS fisheries, in which the total number of unique QS share holders has consolidated from an initial pool of 433 (BBR) and 396 (BSS) to the current pool of 377 and 382 individuals, respectively (aggregating Owner and Crew QS holders shown in Figure 3.10 and Table 4.31). As noted previously, most of this occurred within the CVC pool. Despite a modest increase in the number entities holding CVO QS in the BBR and BSS fisheries since the initial allocation in 2005, from 252 to 258, and 241 to 261 as of 2012, respectively, consolidation in both CVC and CVO QS appears to have increased across all CR fisheries in 2013 with the exception of BSS, where share holdings statistics were virtually unchanged from 2012, and in the EAG fishery, where the count of distinct CVO QS share holder entities went from 16 to 24, and the median share holding decreased from 4.92 percent to 1.85 percent of the share pool. With the latter exception, which follows the 2012 exit from the EAG and WAG fisheries of the largest single recipient of QS in the initial CR program allocation, and subsequent conversion of CPO shares to the CVO pool and associated transfers, the most recent changes in QS share ownership appear to be toward marginally greater consolidation.

Across all fisheries, consolidation of crew share QS holdings during the first four years of the CR program produced a relatively large (-8%) initial decline from the total 218 individual CVC "Crew share" QS holders (Table 4.32), aggregated across all CR fisheries. Subsequent changes in the number of individuals moderated to a net value of 1-2 entries or exits per year, with a total of 198 as of the start of the 2013/14 crab season. With respect to individual CFEC-permitted crab vessel operators active on-board crab vessels<sup>15</sup>, however, a gradual decline has continued in the numbers individuals holding CVC and CPC shares, as well as in the percentages of the share pools held by them.<sup>16</sup> CVC QS holders active as gear operators in one or more crab fishery as of the 2014/15 season have declined from 94 during the 2005/06 season to 65, representing 32 percent of the 198 individual CVC QS holders, and 42 percent of the aggregate pool of CVC shares across all fisheries.

In contrast, QS and PQS holdings among CDQ groups (Table 4.35) have continued to increase substantially through more recent years in nearly all cases, with one additional CDQ group entering the BBR CP QS pool and a new entrant in the PQS pool, and acquisition of significant portions of the CPO QS and PQS pools across all fisheries, and acquisition of approximately 2 percent of the CVO QS pool in the BBR and BSS fisheries).

Tables 4.36 and 4.37 illustrate the progress of attrition of initial issuees and entry of new share holder entities in each of the respective CR fishery Owner (CPO and CVO) QS, Crew (CPC and CVC) QS, and PQS pools. Over all fisheries and sectors, 130 out of 532 (24 percent ) initial issuees have exited from holding QS in one or more fisheries since 2005, of which 13 occurred prior to the 2014/15 season. Within individual quota pools, higher proportional rates of attrition have occurred, including approximately 35 percent of initial QS issuees exiting from each of the BBR, BSS, and

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<sup>15</sup>Except for CFEC-permitted crab vessel operators identifiable in crab landings reports, no data are currently available to identify active participation status of crab fishing crew generally.

<sup>16</sup>Note that CVC shares are also held to some degree by active crab vessel crew members that do not hold CFEC gear operator permits. Most deck crew members hold ADF&G commercial crew licenses rather than CFEC permits, but only the CFEC permit of the vessel operator is recorded on landing reports. With currently available data, it is not possible to associate QS ownership with on-board crew status for individuals other than crab vessel masters.

SMB fisheries (148, 134, and 69 exits as of 2015, respectively). Table 4.37 provides statistics on new entrants to respective QS/PQS pools in each fishery as of the end of the 2012/13 season, relative to initial issuance and to the previous season (2011/12). The table provides counts of new entrants and total share of the quota pool acquired, and differentiates entrants that were new to CR program holdings in general ("New crab entrant"), or only to the respective quota pool (i.e., where the entrant previously held quota in another fishery or sector ("New in fishery"). The number of individuals new entering the fishery between the 2013/14 and 2014/15 by either measure was small for Crew QS and PQS. In the BBR fishery, four new crab Crew QS entrants acquired a total of 4 percent of the Crew QS pool, and one additional entrant from a different crab fishery acquired an additional 1 percent. In the BSS fishery, seven new Crew QS entrants (none of whom previously held CR shares in another pool) acquired a total of 4 percent of the pool, compared to a total of 25 new crab entrants since initial issuance, or 31 including individuals who previously held QS in another fishery. This contrasts with the exit of 67 of 160 original BSS CVC and CPC crew share issues since 2005, and 9 since the 2013/14 season, shown in Table 4.36. Entry to the Owner QS pools during 2014/15 was more limited, with 5-7 new entrants in the BBR, BSS, and EBT Owner QS pools, but less than 0.5 percent of the QS pool being acquired in each case. Relative to initial issuance, new entrants to the owner QS pools have more substantially offset the number of initial issues that have exited than is the case in the Crew QS pools, with 91 new entrants to the BSS owner QS pool compared to 74 initial issues exited to date, and entrants have been predominantly new to crab share holding pools, rather than only to the respective pool. This may suggest that "new entrant" in the current context may to some degree include new corporate entities owned by or affiliated with entities with earlier QS holdings, and statistics on new entrants, particularly in the owner QS pools, should be interpreted with caution.

#### 2.4.5 Concentration of Catch Volume

The exemption from the use cap limitations on concentration of IFQ for vessels exclusively fishing IFQ held by CR program cooperatives is a critical element of the program that enables cooperatives to respond to resource and market conditions and shift the deployment and operation of vessels toward maximizing operating efficiency and economic surplus. The movement toward consolidation of 100 percent of IFQ landings within crab harvesting cooperatives, while consistent with the intention of the CR program, also obviates any structural limitation on concentration of IFQ landings within the fleet. To provide an index of concentration, the Gini coefficient is presented in Table 4.39, showing changes in concentration of IFQ landings across active vessels within the crab fleet, and the equivalent for crab purchasing across the set of active Registered Crab Receivers (crab buyers). As calculated<sup>17</sup>, the coefficient measures the relative evenness of the distribution of vessel-level total IFQ landings (or buyer-level total crab purchases) across the set of active vessels and buyers in a given crab fishery season. The index varies between 0 and 1, where 0 indicates equal quantity of pounds landed or purchased across all vessels/buyers, and 1 indicates complete concentration, with one vessel (buyer) landing (purchasing) all landed pounds.

<sup>17</sup>The index is calculated as  $\frac{\sum_{i=1}^n (2P_i - n - 1)x_i}{n^2 u}$  where  $P_i$  is the landings rank of vessel  $i$ , with landings of  $x_i$  pounds, such that the vessel with the highest landings is ranked 1 and the lowest is ranked  $n$ . Note that the number of active vessels  $n$  is generally decreasing over time, such that index values as calculated represent relative concentration among the set of active vessels in each crab fishery for each year. If calculated over a larger population that included inactive vessels with zero catch (not performed for this report), the index would indicate increasing concentration consistent with the overall consolidation of catch.

With a heterogeneous fleet and highly variable operating environment, (hypothetical) perfectly even distribution of catch would not necessarily be economically optimal, *a priori*. However, a progression toward a more even distribution of catch may indicate incremental improvement in efficient utilization of vessel capital at the fleet level, whether achieved by means of capital improvements amongst a consistent set of active vessels, or consolidation and retirement of less efficient vessels. Table 4.39 displays Gini coefficient index values by calendar year for 1998-2014, with number of active vessels, total pounds landed and sold, average (median) pounds landed per vessel, and median percentage of total pounds landed, by fishery. In the BBR fishery, the index has varied between 0.24 and 0.37, with the concentration of catch highest in the first rationalized season (2005). The BSS fishery shows the same pattern, with slightly lower index values prior to rationalization, and then a peak in concentration (0.37) during the first season under rationalization (2006). Despite the clear break in number of vessels and median landings, there does not appear to be an equally large change in the degree of concentration of catch between the pre-and post-rationalization periods generally. However, in both fisheries, the period following rationalization does appear to be a gradual progression from a maximal degree of concentration toward a more evenly distributed catch, which may be attributable to improved coordination of vessel effort and more efficient utilization the active vessels. Results for the SMB fishery appear to be consistent with the pattern, noting that the time series is limited to only four data points; also note that results for AIG reflect the pooling of two distinct fisheries with small but largely distinct fleets (EAG and WAG, necessary to preserve confidentiality), such that the index doesn't have a clear interpretation in this case.

For purchasing of live-landed crab in the BBR fishery prior to the CR program (Table 4.40), concentration index values varied between 0.58 - 0.66, with the number of active buyers averaging 25 per year; following program implementation, index values have varied within a slightly lower range (0.54 - 0.61) , with substantially fewer buyers (17 per season on average). In the BSS fishery, index values ranged 0.48 - 0.63 prior to 2006, and 0.42 - 0.50 subsequently, with the average number of buyers per season decreasing from 29 to 16. In both fisheries, there is some indication of less concentration of crab purchasing among the remaining pool of buyers following rationalization, but no discernible pattern of change in the period following rationalization analogous to that shown results for the harvesting sector. Note, however, that the counts of buyers shown in (Table 4.40) includes those actively processing crab in their own plant as well as those that did not operate a plant at which they processed their own crab (i.e., buyers that solely contracted for custom processing of their purchased crab at one or more plants operated by other crab processors). As such, in contrast to the landings per vessel data shown in Table 4.39, the linkage to physical processing capacity is indirect in these results and possible inferences for relative efficiency in the processing sector are less clear.

## 2.5. Fishing Capacity, Effort, and Efficiency

General metrics of the gross capacity of physical and labor resources actively deployed in BSAI fisheries over the 1998-2014 period have been noted in a variety of contexts in the preceding discussion, including changes in size and composition of the active fleet (Table 4.3), as well as the number of individual crab vessel captains identified by CFEC permit number in crab landings records, and distinct crab buyers in the processing sector (Table 4.2). The substantial consolidation of fishing capacity following rationalization is clearly depicted in fleet composition (Figure 3.11), particularly in BBR and BSS fisheries where the total number of vessels operating in the BBR fishery ranged from a high of 274 vessels in 1998, to 89 during the first year of the CR program,

and 241 vessels in the 1999 BSS fishery to 78 in 2006 (noting that 24 vessels were retired from the fishery in the capacity reduction program implemented in 2004).

In addition to general measures of deployed capacity, more granular indicators of applied fishing effort and productivity are provided in this report, including vessel trips, vessel days-at-sea (both days fishing and total days at sea) and, as a measure of effort at the gear level, potlifts (analogous to hauls, in the case of groundfish trawl fisheries). Pro-rata indexing of ex-vessel volume and revenue by each of these provide additional indicators productivity by season, and changes in efficiency over time.

Table 4.20<sup>18</sup> depicts the total number of days during which vessels in the crab fleet were active at sea, which varies in response to a variety of conditions, including the quantity of allowable catch, but also weather and sea ice conditions affecting fishing. Most variation has occurred in the BBR and BSS fisheries, where there were an average 2,670 (2,611 for CV's and 52 for CPs) vessel days per season in the BBR fishery during the baseline reference years (1998, 2001, and 2004), and 947 vessel days during 2013; the largest shift in vessel days occurred between 2010 and 2011, when the total went from 2,023 days to 910, concurrent with reduction in the TAC from 14.8 million pounds to 7.83 million pounds. Active days in the BSS fishery have ranged from 6,570 averaged over pre-rationalization reference years (239 days for CPs and 6331 days for CVs), to 3,032 in 2010 (as reported in EDR data; CIF data indicate 2,812 days active during 2010, but both sources indicate a median of 41-42 active days per vessel). Days active in the 2014 BSS fishery declined from an estimated 5,665 in 2012 to 4,581 in 2013 (with median days decreasing from 79 to 58).

Table 4.41 provides a summary of trip statistics, including the total number of vessel-trips by fishery and season, average (mean and sd) of trips per vessel, and average volume of landings per trip.<sup>19</sup> Crab vessels often make deliveries to multiple processors following a single fishing trip, and Table 4.41 provides the total number of deliveries per season, average deliveries per trip, and average landings volume per delivery. Statistics for vessel trips (total and mean per vessel) in the BBR fishery during the last seven seasons have ranged from 237 total trips (3.0 per vessel) during the 2008/09 season to a low of 99 total trips (1.8 per vessel) during the 2012/13 season. In the BSS fishery, as discussed previously, total catch has been considerably more volatile and vessel-trips counts have varied more widely, from 215 total trips (3.1 per vessel) in 2006/07, the lowest TAC year (37 million pounds), to 626 total trips (8.7 per vessel) in 2011/12 when the TAC was 89 million pounds. Over this period, average landings per trip have varied between a high of 175,000 pounds per trip in 2010/11 to a low of 142,000 pounds per trip in 2011/12, moderating at 157 thousand pounds per trip in 2013/14.

As a well-known result of rationalization, season lengths in the CR program fisheries increased sharply as management shifted from derby fishing conditions, with BBR season openings lasting as few as 4 days during the 2004/05 season, and 6 days in the 2005 BSS season, to quota-based management under which season lengths have expanded to the full regulatory seasons during which

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<sup>18</sup>See notes for the table describing data sources available for calculating vessel activity days during different periods, which introduces a degree of discontinuity in counts of vessel activity days over the pre- and post 2008 period, and in statistics calculated using these data to estimate daily pro-rata rates for various indicators. Table 4.20 and Figure 3.12 display results using eLandings and ADFG Crab observer program data to estimate vessel activity days; see the 2013 edition of the economic status report for a comparison of alternative data sources.

<sup>19</sup>Note that trip-based metrics are available only for the 2006/07 crab season and later, with limited information available for EAG and WAG fisheries. Also note that BST results shown include landings of BST crab that are caught as bycatch in the BSS fishery and do not solely reflect directed fishing, and effort statistics shown should be interpreted accordingly.

the stocks can legally be targeted, as defined by State of Alaska; including 93 days for BBR, 229 days for BSS, 274 for EAG/WAG, and 110 days for SMB. Details for seasons 1998 through 2014/15 are displayed in Table 4.42, including season lengths in days, and the date-span of active seasons subsequent to rationalization, including dates of first and last vessel landings, length of the active season in days, and percentage of the open season during which vessels actively prosecuted the fishery. Active seasons since CR program implementation have ranged in length in the BBR fishery from 26 days (38 percent of the available open season) during 2013/14, to 92 (99 percent of the open season) during the 2008/09 and 2009/10 seasons. The longest season in the BSS fishery occurred during 2011/12 at 231 days (94 percent of the open season), with the shortest at 116 days (51 percent of the open season) in 2009/10. The WAG fishery occurs over the longest season, the shortest at 189 days occurred in 2010/11, and the most recent (2014/15) season spanning 254 days, 2 less than the longest season since 2005. Table 4.42 provides additional detail for season length at the vessel-level, showing vessel averages for season length (days between first and last landing), and the minimum-maximum range, by fishery and season between 2005/06 and 2013/14 seasons.

Information on active season lengths as discussed above is shown for the BBR and BSS fisheries with additional detail in Tables 4.44 and 4.45 (summarized in Figure 3.13), depicting the length of fishing seasons (in terms of the period over which vessels delivered landings to processors), intensity of effort (number of vessels making landings in a week), and the cumulative proportion of total quota allocation landed by date, by allocation type (CVO A Class IFQ, CVO B Class and crew share IFQ, and all quota types combined). The 2012 BBR fishery was the shortest since 2005, with all crab being landed between October 15 and November 12. As depicted in the figure, the 2011/12 BSS season was unique in both the length of the season and discontinuity of vessel effort during the late part of the season. This occurred as a result of sea ice conditions that inhibited vessels from accessing northern district fishing grounds, requiring an extension of the fishing season by ADF&G from May 31 to June 15. During the 2013/14 and 2014/15 BSS seasons, active fishing by several vessels began in early December, nearly a full month before the earliest significant landings occurred in previous years. As indicated by the lines showing cumulative proportion of fishing quota allocations landed over the course of the fishing season by type of quota, a consistent phenomenon across fisheries and seasons is that CVO A share quota (dotted line) is fished and landed somewhat earlier in the season than quota types that are not subject to share matching with processors holding IPQ (CVO B- and crew share IFQ, shown as the dashed line). This difference is most in evidence during the 2011/12 season, 20 percent of A-type IFQ remained to be landed as of the 28<sup>th</sup> week of the 35-week 2011/12 season, compared to 63 percent of B- and C-type IFQ, and the same relative distribution of landings by share type as of the first week of the 2012/13 season. During the 2014/15 BSS season, 16 percent of CVO B- and crew share IFQ remained to catch as late as April 29.

Finally, summary statistics for harvesting sector operating effort, measured as potlifts per vessel are provided in Table 4.46 for all CR fishery seasons from 1998 to current, with derived productivity per-unit-effort metrics calculated as retained catch- and revenue-per potlift. Statistics reported include total (aggregated over all vessels) and mean (sd) for potlifts, and mean(sd) and weighted average per vessel for catch per unit effort (CPUE), and revenue per unit effort (RPUE). In the BBR fishery, total potlifts are estimated at 38 thousand for 2013/14, the lowest number on record in the available time series; 58.5 thousand potlifts during the most recent season were near the historical low. Potlifts per vessel prior to rationalization ranged from 300-600, increasing to 700-2000 per vessel after 2004 in response to fleet consolidation, but declining to 600-700 per vessel during the most recent two seasons. Vessel average CPUE in the BBR fishery ranged from 11.9 to 22.9 crabs per pot over the period 1998-2005, with an average over the period of 17.2 legal crab per pot; over



the period 2005/06 to 2014/15, CPUE has ranged from 18.6 - 33.3, averaging 25.9 over the period, an increase of 51 percent over the pre-CR fishery average CPUE. Vessel average RPUE in the BBR fishery ranged from \$368 to \$1043 per potlift during the pre-rationalization period, compared to \$699 - \$1,920 subsequently. In the BSS fishery, total potlifts have ranged from a high of 945,000 (3,900 per vessel) in 1999, to a low of 73,000 (400 per vessel) during the 2005 season, both occurring prior to CR implementation, with potlifts per vessel averaging 1,300 over the period. Following rationalization, total potlifts have ranged from 85 - 270 thousand, and per vessel have ranged from 1,200 to 3,700 and averaged 2,100 per vessel, a 62 percent increase. CPUE has increased from a range of 76-246 and an average of 145 legal crab per pot over the period 1998-2004, to 212-354 crabs per pot, increasing 91 percent to an average of 277 over the period 2005/06 to 2013/14, but declining somewhat over the most recent seasons. Vessel average RPUE ranged from \$174 to \$731 per potlift during the pre-rationalization period, compared to \$462 - \$974 subsequently.

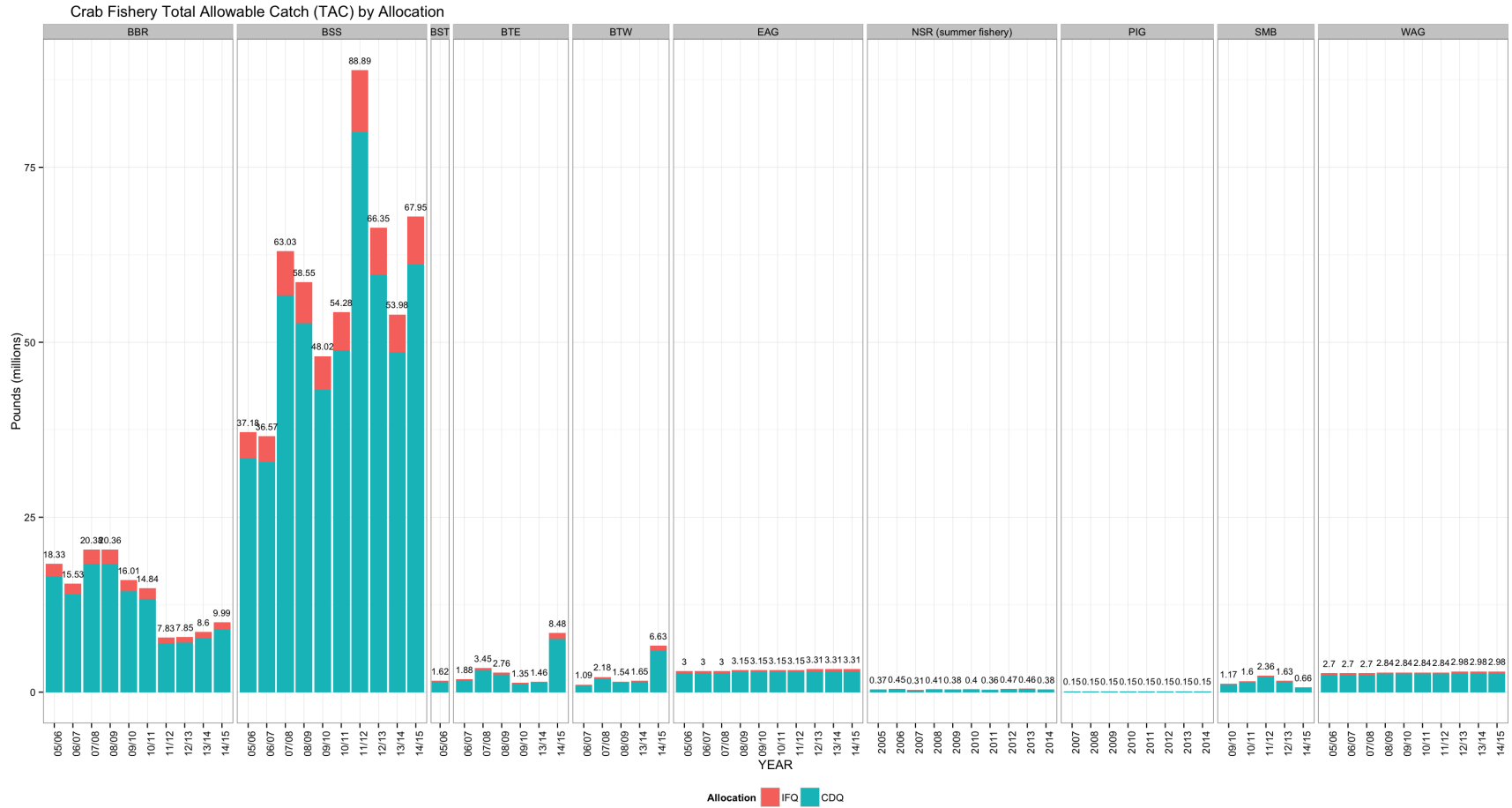
## 2.6. International Trade in Crab Commodities

U.S. foreign trade statistics for frozen, processed king and snow crab are summarized for the period 1991-2014 in Table 4.47 and depicted graphically in Figure 3.14. For most of the last two decades, the U.S. has been a net importer of both king and snow crab product, with a negative trade gap beginning in 1995 for king crab and 1998 for snow crab. Over the last 10 years, U.S. frozen king crab exports by volume have varied from a high of 4,330 *t* in 2006 to a low of 1,780 metric tons (*t*) in 2013, and in value terms between \$88.6 million in 2010 to a low of \$44.26 million in 2013. Imports over the same period have been more variable, surging to 30,000 *t* at a value of \$405 million in 2007, from which point they have tapered on an annual basis to the lowest recent amount in 2011 of 8.5 thousand *t* and \$180 million, with imports increasing from that level during 2012 - 2014. U.S. exports of frozen snow crab product since 2003 has varied from a low in 2007 of 2,120 *t* with a value of \$16.7 million, to the recent peak in 2012 of 12,720 *t* with a value of \$133 million; the most recent figures show a decline from 2012 export levels to 7,200 *t*, and \$86.4 million. Snow crab imports have been somewhat less volatile in volume terms than those of king crab, varying between a 41 - 52 thousand *t*; total value has varied more widely, between a low of \$345 million in 2006 to a high of \$559 million in 2013. In 2012, the net trade deficit in snow crab product reached its lowest level since 2000, falling to 28,960 *t* and \$315 million in negative net exports.

**3. FIGURES REPORTING ECONOMIC STATISTICS FOR THE KING  
AND TANNER CRAB FISHERIES OF THE BERING SEA AND  
ALEUTIAN ISLANDS REGIONS**

Figure 3.1: TACs/GHLs and Management Program Allocations, BSAI Crab Fisheries

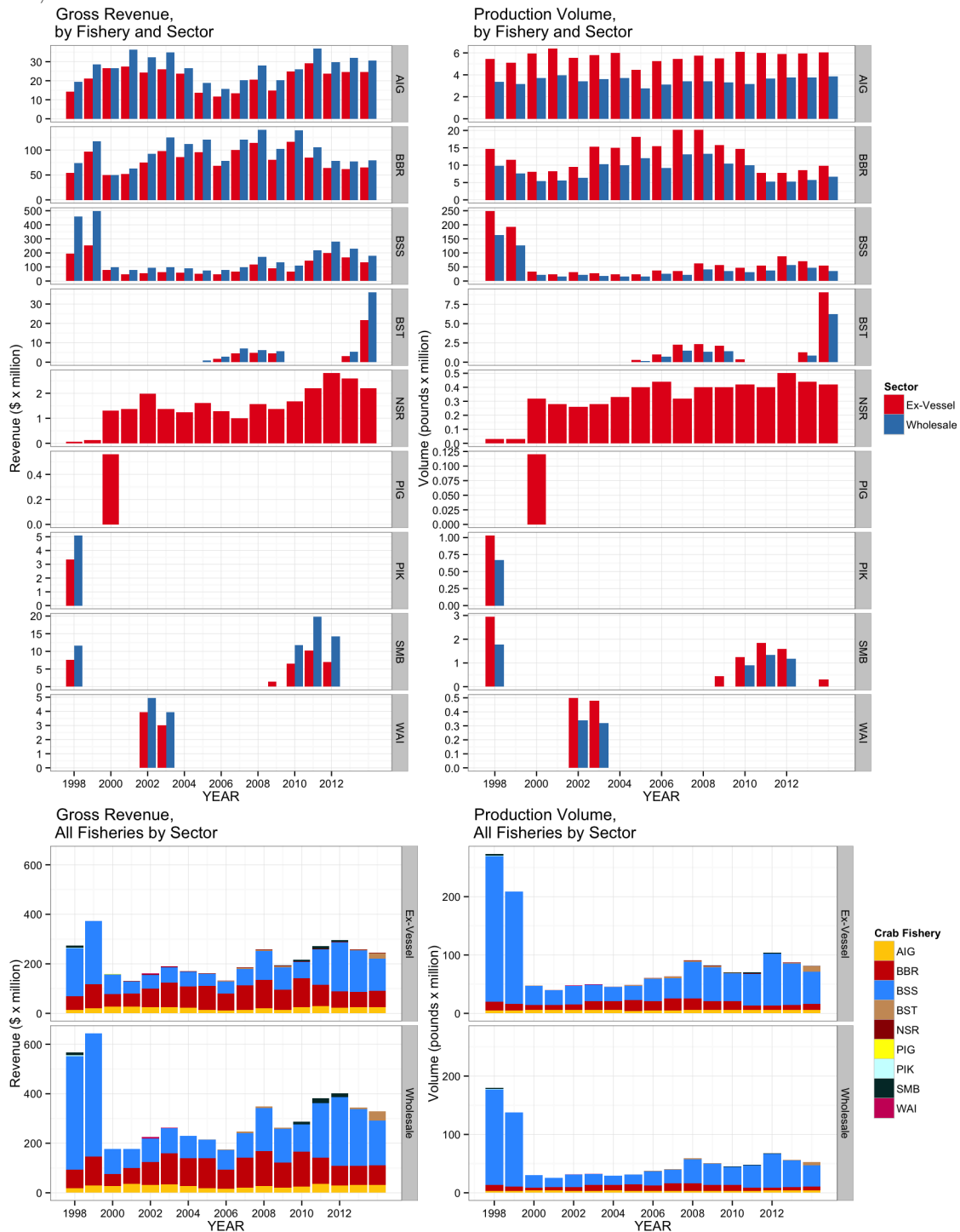
13



Source: ADF&G. Tabular data available in Table 4.1.

Numeric values above bars indicate total quantity (in million pounds) of TAC/GHL allocations to directed fishing, 10% of which is allocated to CDQ/Adak Community Allocation.

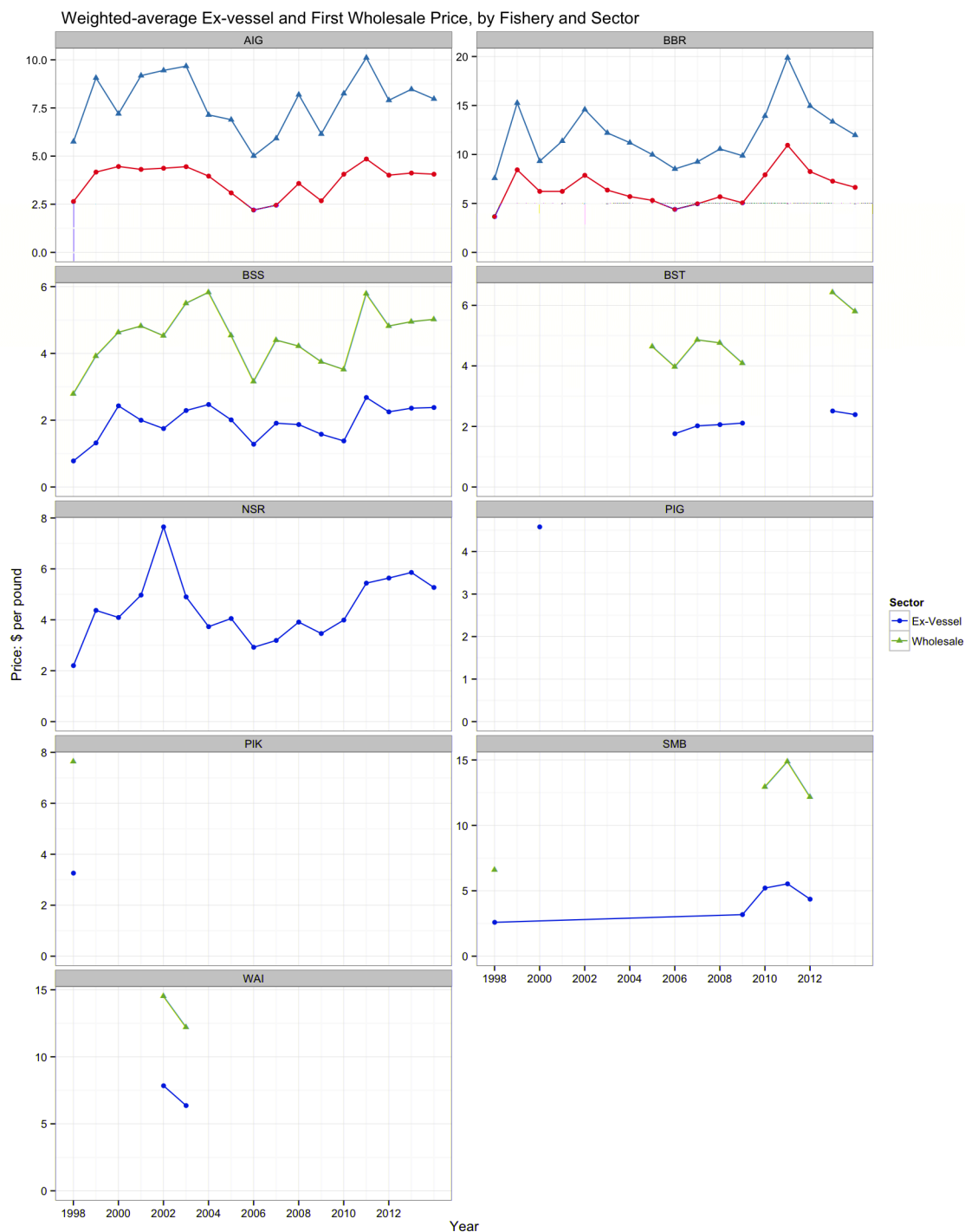
Figure 3.2: Ex-Vessel and First Wholesale Gross Revenue and Production Volume, by Calendar Year, Selected Fisheries



Source: ADF&G fish tickets, eLandings, CFEC pricing based on COAR buying reports. Data shown by calendar year. Tabular results are shown in Tables 4.5 and 4.9.

Includes commercial harvest from general, IFQ, and CDQ management programs and commercial pounds harvested by catcher/processors.

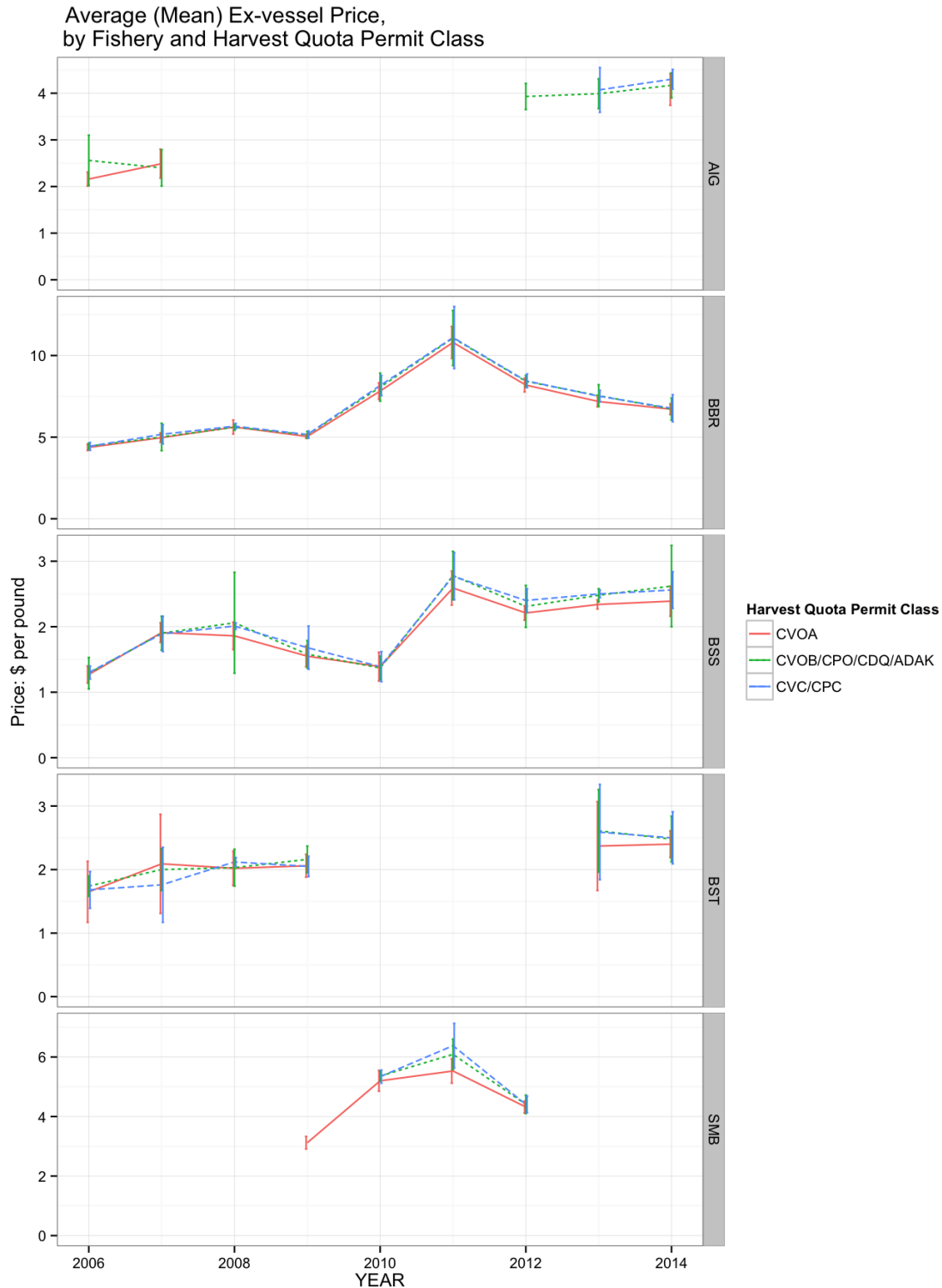
Figure 3.3: Ex-Vessel and First Wholesale Prices, Selected Fisheries



Source: ADF&G fish tickets, eLandings, CFEC pricing based on COAR buying reports. Data shown by calendar year. Tabular results are shown in Tables 4.5 and 4.9.

Includes commercial harvest from general, IFQ, and CDQ management programs and commercial pounds harvested by catcher/processors.

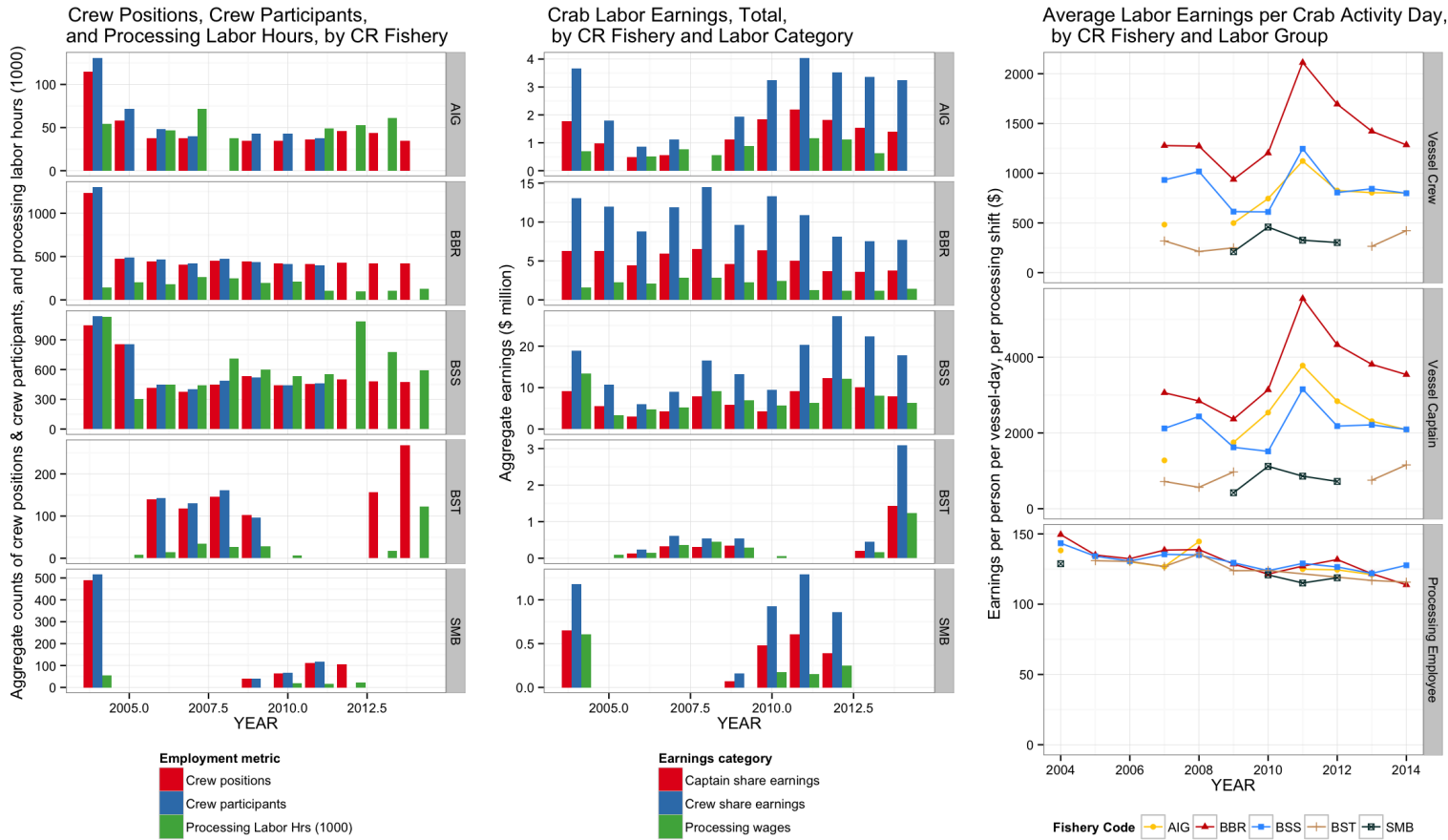
Figure 3.4: Ex-Vessel Price by Quota Type, Selected Fisheries



Source: NMFS AFSC BSAI Crab Economic Data. Data shown by calendar year. Tabular data available in Table 4.8.

CVC/CPC=catcher vessel and catcher/processor C share quota, CVOA=catcher vessel owner A share quota, CVOB=catcher vessel owner B share quota, CPO=catcher/processor owner quota. 2005 ex-vessel revenue data was reported over all quota types. 2005 BSS data includes revenue earned prior to and after rationalization. Error bars show one standard deviation from mean. Selected data for AIG and BST suppressed for confidentiality.

Figure 3.5: Harvest and Processing Employment and Compensation, Selected Crab Fisheries



**Source:** NMFS AFSC BSAI Crab Economic Data. Data shown by calendar year. Tabular data available in Tables 4.18, 4.14- 4.12, and 4.20.

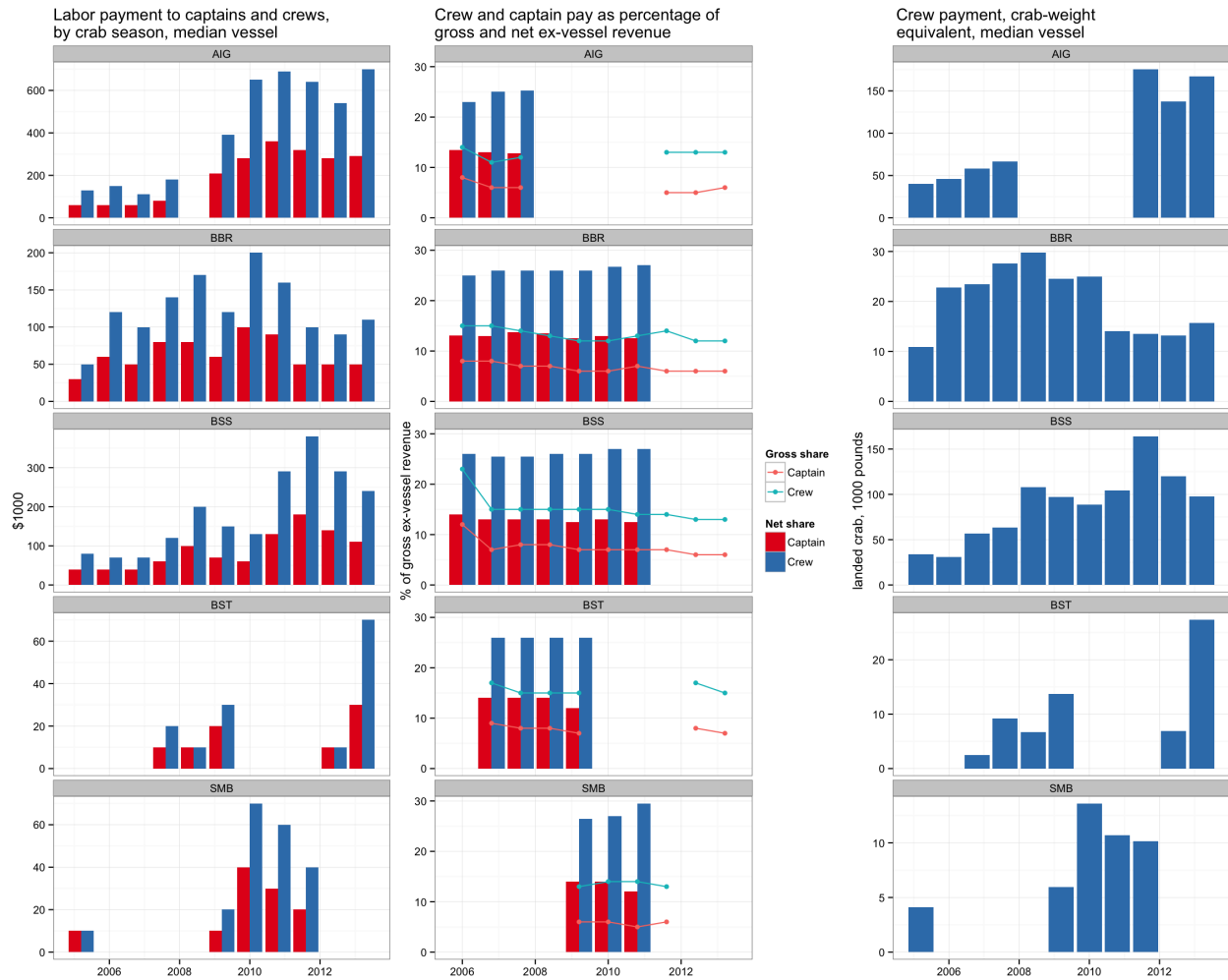
Values shown for 98/01/04 represent the annual average over the three-year series. Data for BST, PIK, and WAI fisheries are not shown. 2008 data for AIG are suppressed for confidentiality.

Labor earnings per activity day represent aggregate crew and captain pay per vessel, pro-rated over vessel activity days; processing pay per day represents aggregate processing labor payments divided by number of 12-hour FTE shifts (aggregate processing labor-hours/12).

(a) 1998-2008 shows CV positions and participants only; 2009 shows data aggregated over CV and CP sectors 2005 and later crew positions data from ADF&G fish tickets. BSS crew position data were not collected in 2005.

(b) 1998-2008 data show total and median CV and SFP payments only; 2009 data show total and median crew payments over CV and CP sectors combined and processing employee payments over CP and SFP combined.

Figure 3.6: Crew Earnings Metrics, Selected Crab Fisheries



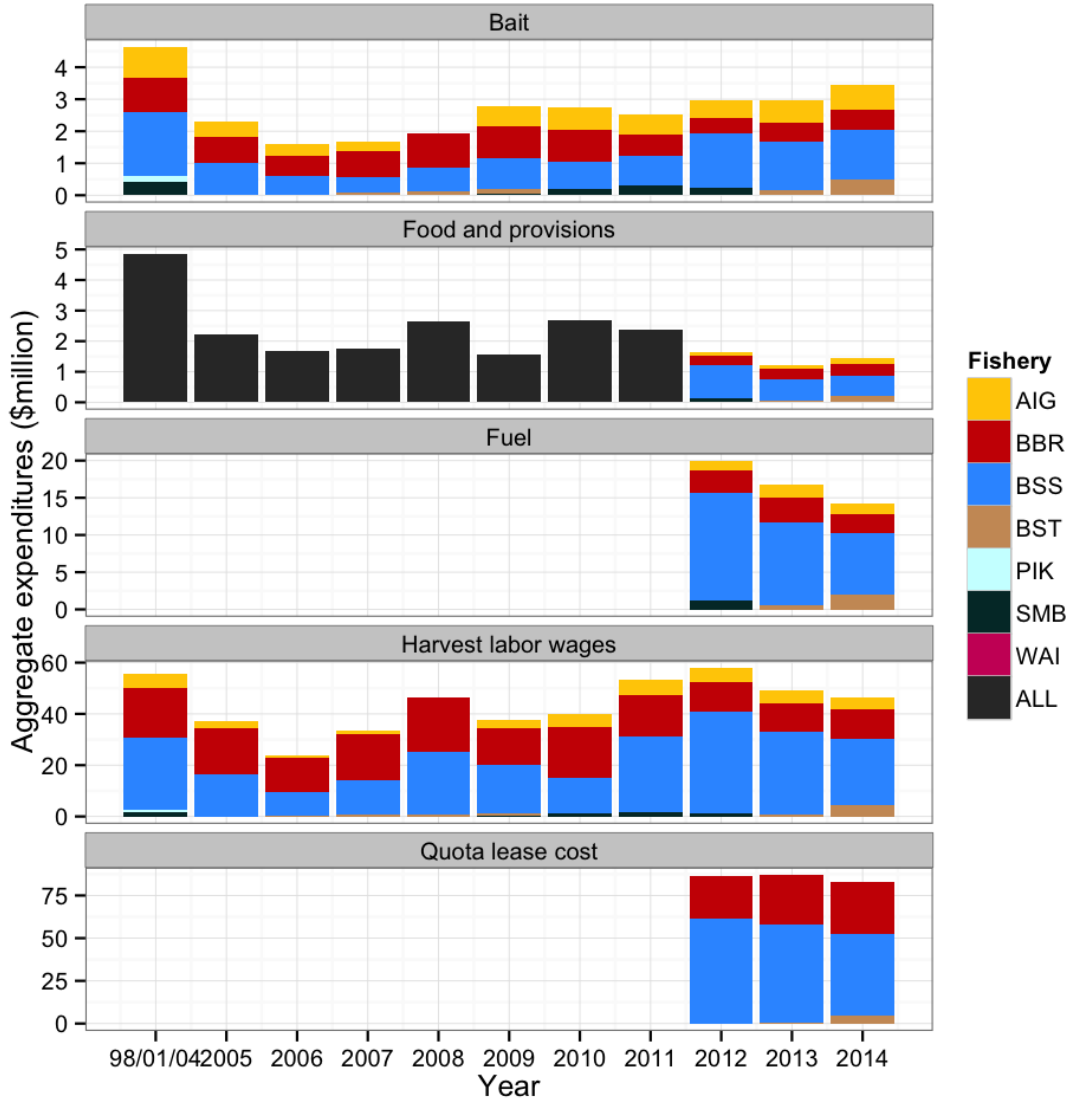
Source: NMFS AFSC BSAI Crab Economic Data. Data shown by calendar year. Tabular data available in Tables 4.18 and 4.19.

Values shown for 98/01/04 represent the annual average over the three-year series.

Median pay in dollars shown for CV sector only for 1998-2008 and for CV and CP sectors combined for 2009 and later. Median crab-equivalent crew pay is shown for CV sector only for all years. Crab equivalent pay is denominated in pounds and is calculated by dividing vessel crew share payment by ex-vessel price per pound; this represents the quantity of crab landed by the vessel in a given year that is converted to crew payment. Crew and captain pay as percentage share of net ex-vessel revenue is reported by annually by vessel owners in EDR, but reflects variation in the types and amounts of deductions for shared vessel operating expenses in determining crew settlements between different owners/crews. Percentage share of gross ex-vessel revenue is the median value over vessel-level observations of the calculated ratio of reported crew and captain labor payment to gross ex-vessel revenue. Selected data for AIG and BST fisheries suppressed for confidentiality.

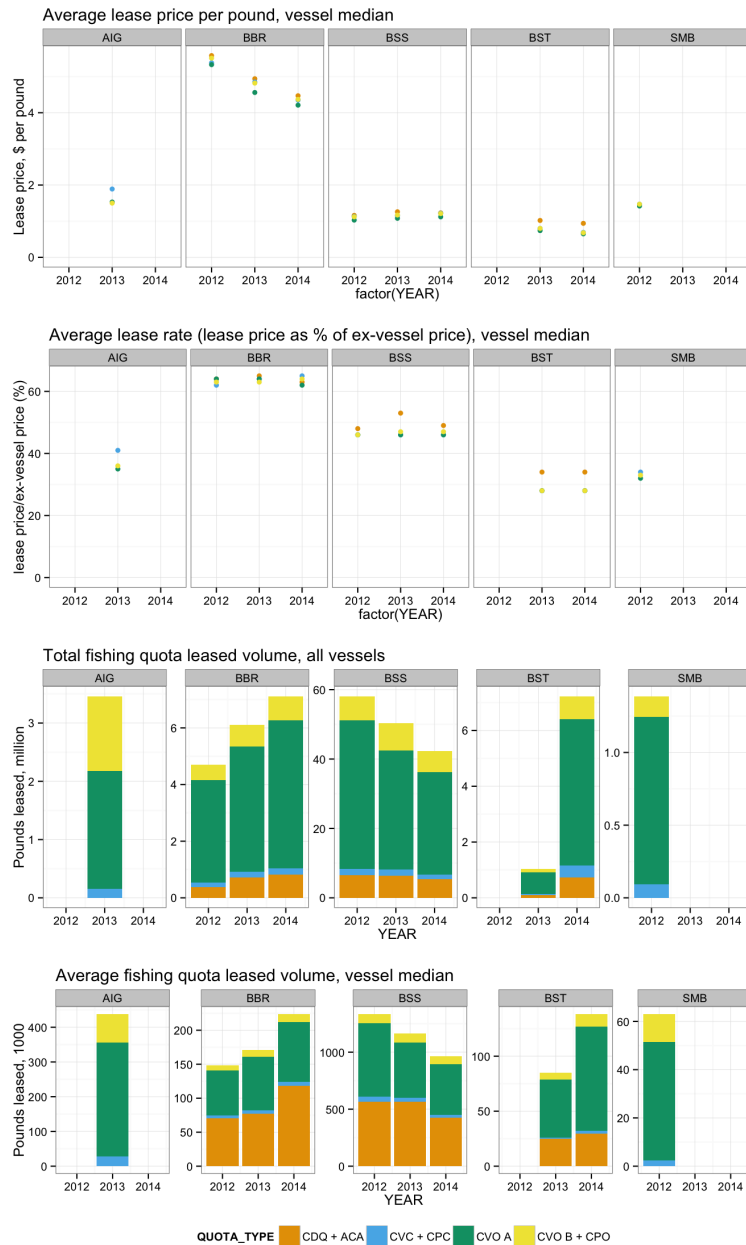


Figure 3.7: Aggregate Crab Vessel Operating Costs, by Cost Item and Fishery



*Source: NMFS AFSC BSAI Crab Economic Data.* Tabular data available in Tables 4.22- 4.23 and 4.25. Values shown represent total annual expenditures by cost item for calendar years 1998-2012, aggregated over all vessel entities reporting except where data are suppressed for confidentiality. Cost data shown include all cost items for which data are available, but do not represent a comprehensive accounting of operating expenditures. Change in data collection protocols implemented beginning 2012 discontinued reporting for several expenditure items and disaggregated expenditures for food and provisions by crab fishery. Data for fuel and quota lease expenses collected prior to 2012 are not shown in figures due to data quality limitations. Values for 98/01/04 represent the annual average of results pooled over the three years.

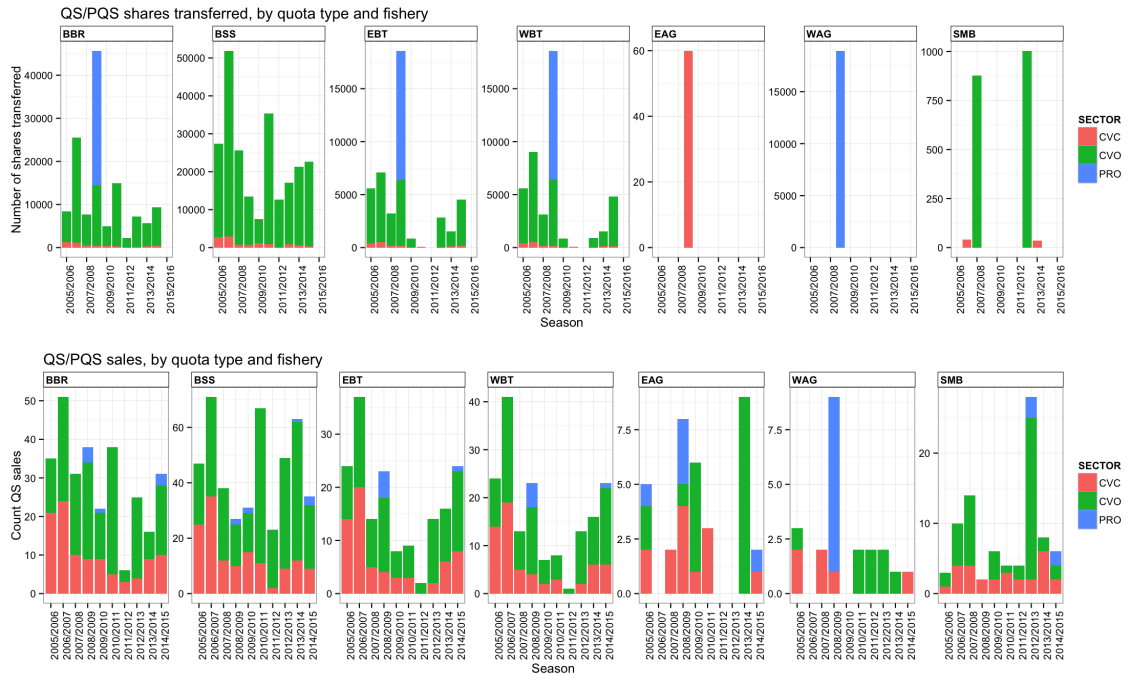
Figure 3.8: Crab Harvest Quota Lease Activity; Lease Volume, Price, and Rate, Selected CR Fisheries, 2012-2013



**Source:** NMFS AFSC BSAI Crab Economic Data. Tabular data available in Table ???. Lease data shown represent arm’s length lease transactions reported for active crab fishing vessels in the 2012 and 2013 Crab EDR; data collected for earlier years is not reported due to data quality limitations.

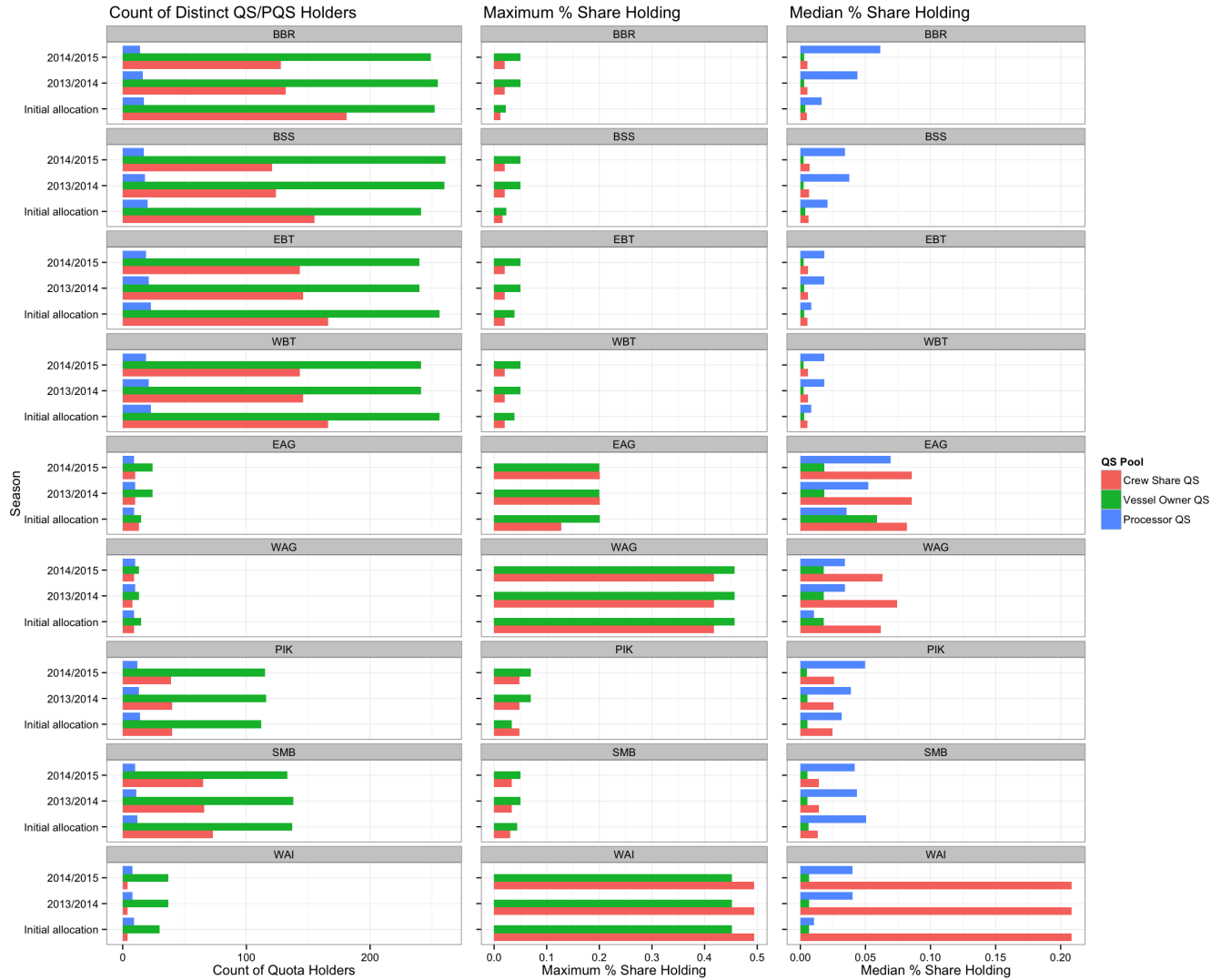
Harvest quota types are categorized in this report as the following: CVO A – catcher vessel owner Class A IFQ; CVO B + CPO - catcher vessel owner Class B IFQ and catcher/processor owner IFQ; CVC + CPC – catcher vessel crew IFQ and catcher/processor crew IFQ. Statistics reported represent results pooled over all quota types and/or regional designations within each category.

Figure 3.9: QS and PQS Sales



Source: Source: NMFS AKRO RAM division, Quota share transfer data. Tabular data resented in Table 4.27.

Figure 3.10: CR Program Harvest and Processing Quota Share Holdings, Initial Allocation, 2012/2013, and 2013/2014 Seasons

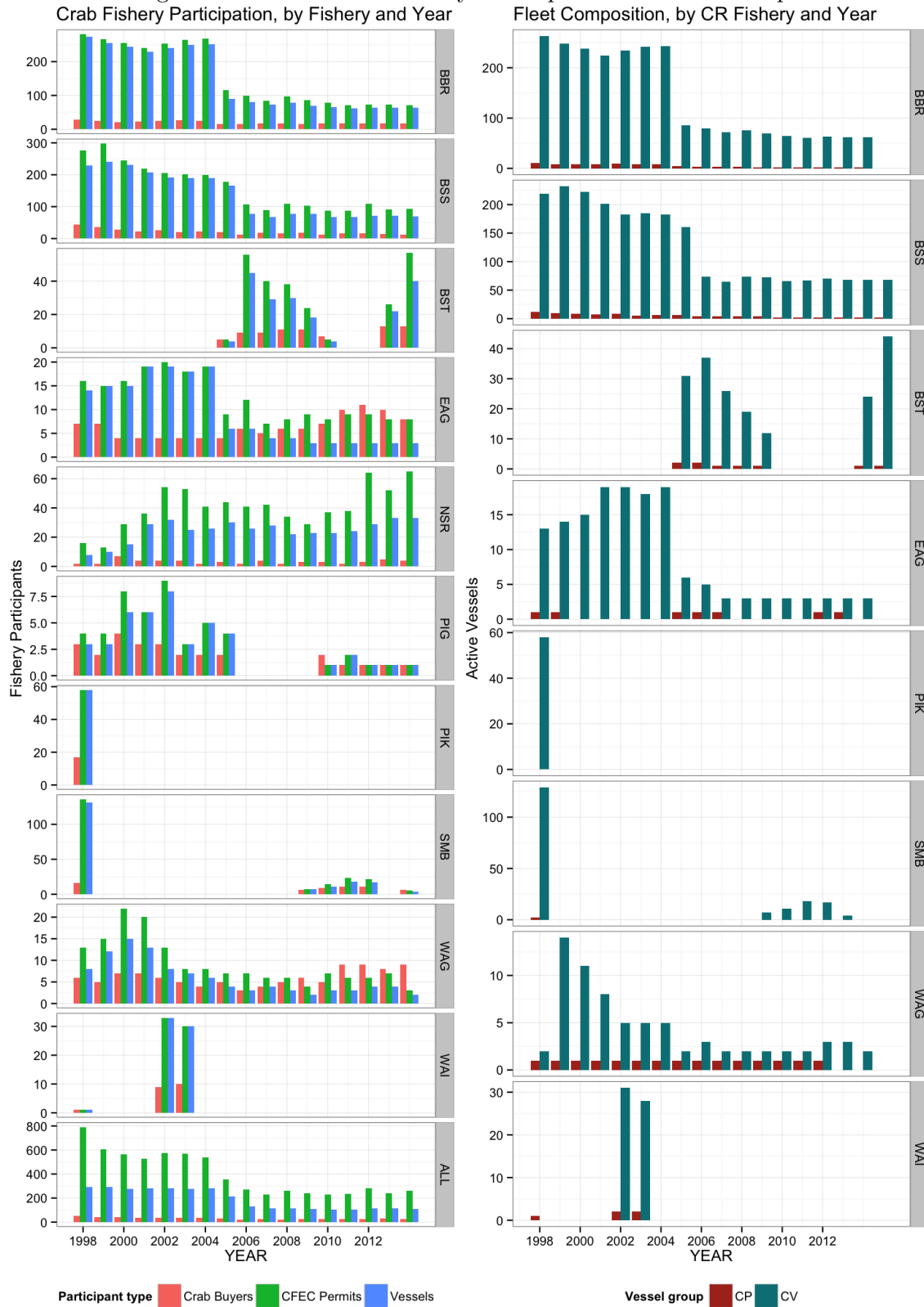


40

Source: NMFS AKRO RAM Division, quota share holders files.

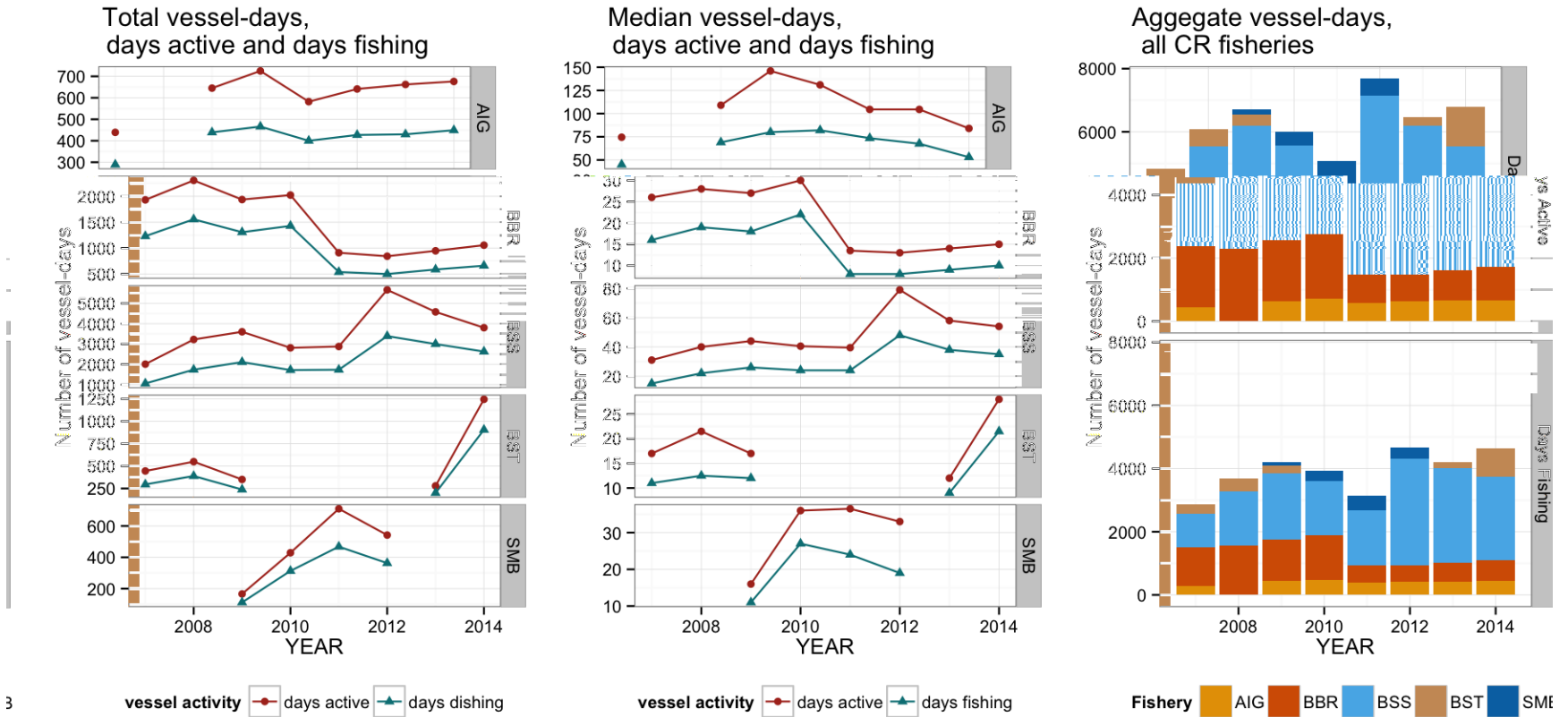
Tabular data available in Tables 4.31 and 4.34.

Figure 3.11: BSAI Crab Fishery Participation and Fleet Composition



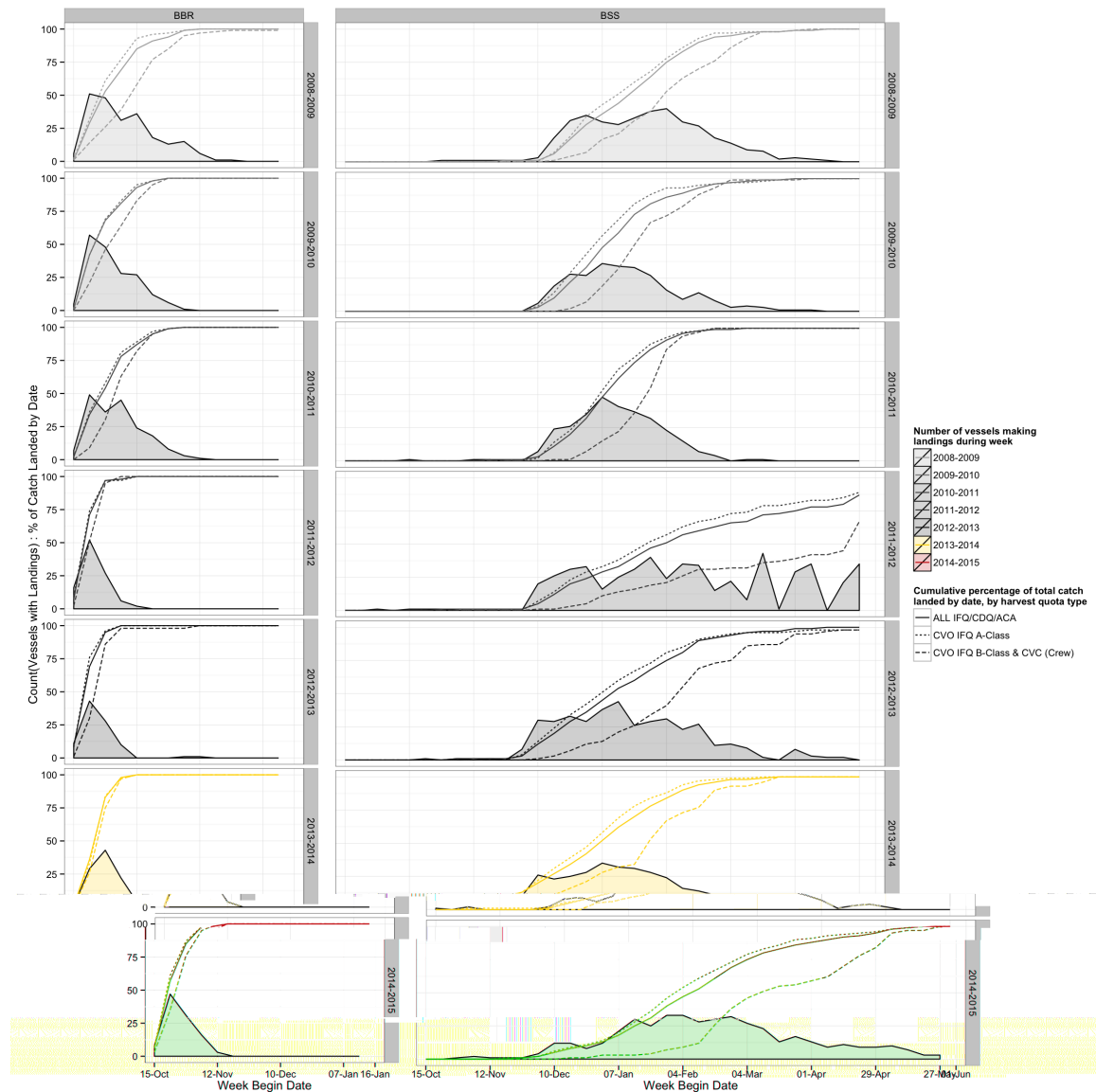
Source: ADF&G fish tickets, eLandings. Tabular data available in Tables 4.2 and 4.3. Gaps in time series for BST, PIG, PIK, SMB, and WAI indicate fishery closure years.

Figure 3.12: Harvest Vessel Activity Days, Selected Fisheries



Source: ADF&G Shellfish Observer Program, Confidential Interview Form Data. Tabular data is presented in Table 4.20. Data for PIK, SMB, and WAI fisheries not shown; gaps in time-series for AIG are suppressed for confidentiality, and gaps in BST time series reflect fishery closure years. 1998-2008 shows CV activity only; 2009 shows activity aggregated over CV and CP sectors. Total days active is calculated using days at sea reported in the 1998-2004 EDR and the sum of days fishing and days travelling and offloading in 2005 and later data. Median days are calculated over vessels participating in the fishery rather than all vessels in the BSAI crab fleet. Note that the 1998-2004 and 2005 and later figures for both total and median days active are not directly comparable, as the pre-2005 data do not include days spent queuing and offloading at processors. BST fishery was closed in 2001; reported days active in this fishery may reflect reporting error or days attributed to incidental catch of BST in another target fishery.

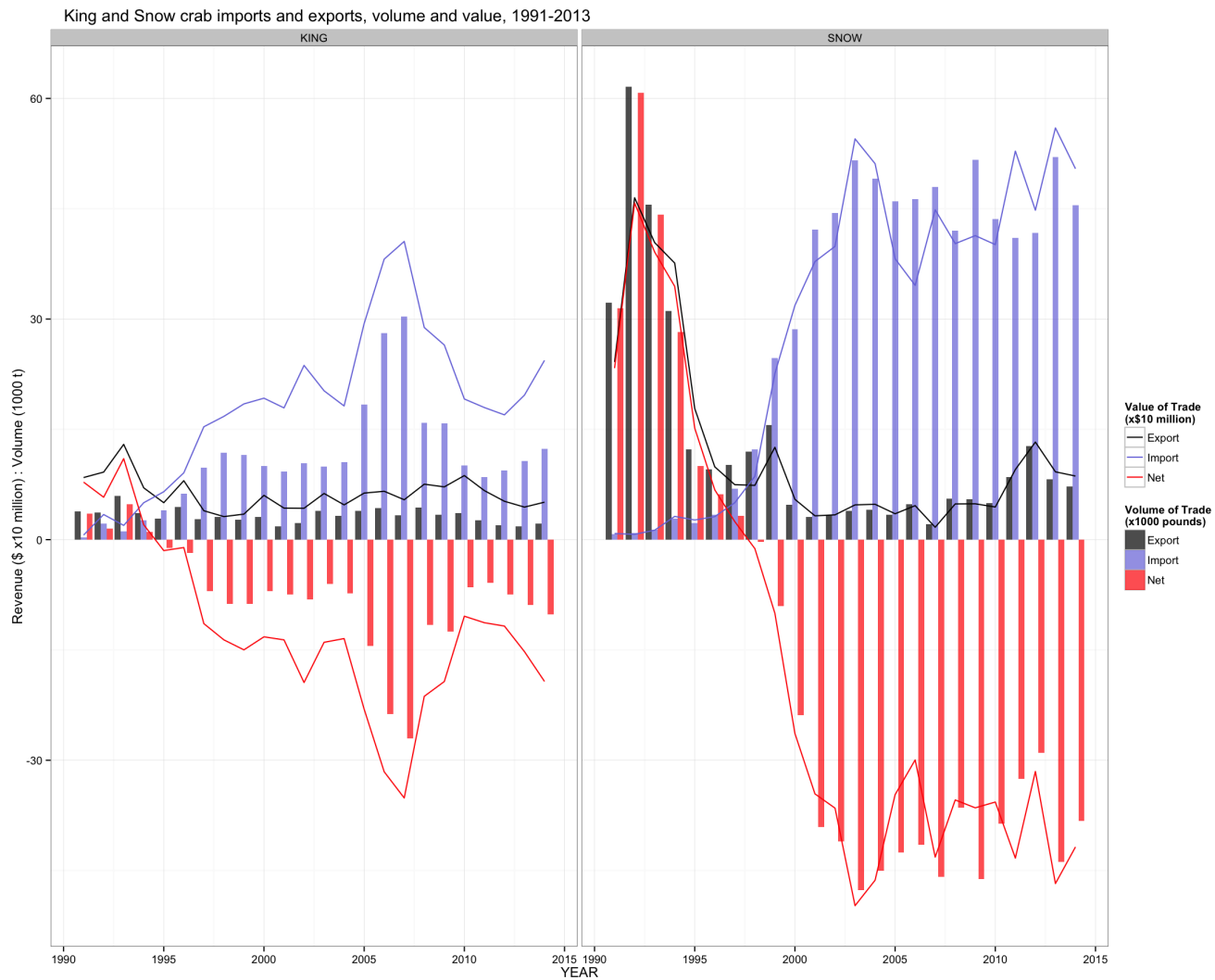
Figure 3.13: Crab Vessel Landing Activity and Cumulative Catch, by Quota Share Class and Week of Season: Bristol Bay Red King and Bering Sea Snow Crab



Source: ADF&G fish tickets via eLandings; NMFS RAM Division, IFQ accounting database. Tabular data available in Tables 4.44 and 4.45.

The vertical axis indicates both count of vessels and percentage of quota share, and horizontal axis shows the ending date of each week during the Bristol Bay red king (BBR) and Bering Seas snow (BSS) crab fishing season. The filled area in the graph indicates the count of vessels making landings each week. Plotted lines show the cumulative percentage of fishing quota expended on landings over the course of the season: ALL IFQ/CDQ/ACA (solid line) includes all IFQ and CDQ programs quota landed by catcher vessels and catcher/processors; IFQ A-Class (dotted line) includes CVO Class A IFQ quota permits only; CVO IFQ B-Class & CVC (Crew) (dashed line) includes CVO B Class IFQ and CVC (crew) IFQ. CDQ landings are not shown separately due to confidentiality restrictions. BSS seasons normally open October 15 and close May 31 of the next calendar year; the 2011/12 BSS season was extended until June 15 due to an extended period of sea ice cover which substantially delayed prosecution of the fishery.

Figure 3.14: King and Snow Crab Exports and Imports by Calendar Year



Source: U.S. Foreign Census Bureau Foreign Trade Division, via NMFS Fisheries Statistics Division, U.S. Foreign Trade Database. Data available at <http://www.st.nmfs.noaa.gov/st1/trade/>; Tabular data shown in figure available in Table 4.47. Revenues are inflation-adjusted to 2012 equivalent dollars using the Producer Price Index for unprocessed and packaged fish. Imports and exports shown for TSUSA product codes 306144010 (frozen king crab) and 306144020 (frozen snow crab).



**4. TABLES REPORTING ECONOMIC DATA FOR THE KING AND  
TANNER CRAB FISHERIES OF THE BERING SEA AND ALEUTIAN  
ISLANDS REGIONS**

Table 4.1: TACs/GHLs, BSAI Crab Fishery Management Program Allocations and Usage

	Year	IFQ / general allocation (million lbs)	CDQ/ACA allocation (million lbs)	TAC/GHL (million lbs)	Percent IFQ/general allocation landed	Percent CDQ allocation landed
EAG	05/06	2.70	0.30	3.00	95%	*
	06/07	2.70	0.30	3.00	100%	*
	07/08	2.70	0.30	3.00	100%	100%
	08/09	2.84	0.32	3.15	100%	100%
	09/10	2.84	0.32	3.15	*	*
	10/11	2.84	0.32	3.15	*	*
	11/12	2.84	0.32	3.15	*	100%
	12/13	2.98	0.33	3.31	*	100%
	13/14	2.98	0.33	3.31	*	100%
	14/15	2.98	0.33	3.31	*	100%
WAG	05/06	2.43	0.27	2.70	98%	*
	06/07	2.43	0.27	2.70	82%	*
	07/08	2.43	0.27	2.70	92%	*
	08/09	2.55	0.28	2.84	88%	*
	09/10	2.55	0.28	2.84	*	*
	10/11	2.55	0.28	2.84	*	*
	11/12	2.55	0.28	2.84	*	*
	12/13	2.68	0.30	2.98	*	*
	13/14	2.68	0.30	2.98	*	*
	14/15	2.68	0.30	2.98	*	*
BBR	05/06	16.50	1.83	18.33	100%	100%
	06/07	13.97	1.55	15.53	99%	100%
	07/08	18.34	2.04	20.38	100%	100%
	08/09	18.33	2.04	20.36	100%	100%
	09/10	14.41	1.60	16.01	100%	100%
	10/11	13.36	1.48	14.84	100%	100%
	11/12	7.05	0.78	7.83	100%	100%
	12/13	7.07	0.79	7.85	100%	100%
	13/14	7.74	0.86	8.60	100%	100%
	14/15	8.99	1.00	9.99	100%	100%
BSS	05/06	33.47	3.72	37.18	99%	100%
	06/07	32.91	3.66	36.57	99%	100%
	07/08	56.73	6.30	63.03	100%	100%
	08/09	52.70	5.86	58.55	100%	100%
	09/10	43.22	4.80	48.02	100%	100%
	10/11	48.85	5.43	54.28	100%	100%
	11/12	80.00	8.89	88.89	100%	100%
	12/13	59.72	6.64	66.35	100%	100%
	13/14	48.58	5.40	53.98	100%	100%
	14/15	61.16	6.80	67.95	100%	100%

Continued on next page.

Table 4.1: Continued

	Year	IFQ / general allocation (million lbs)	CDQ/ACA allocation (million lbs)	TAC/GHL (million lbs)	Percent IFQ/general allocation landed	Percent CDQ allocation landed
BTE	06/07	1.69	0.19	1.88	75%	72%
	07/08	3.10	0.34	3.45	46%	42%
	08/09	2.49	0.28	2.76	62%	100%
	09/10	1.22	0.14	1.35	98%	100%
	13/14	1.32	0.15	1.46	99%	100%
	14/15	7.63	0.85	8.48	100%	100%
BTW	06/07	0.98	0.11	1.09	64%	79%
	07/08	1.96	0.22	2.18	24%	26%
	08/09	1.38	0.15	1.54	8%	-
	13/14	1.48	0.16	1.65	81%	73%
	14/15	5.96	0.66	6.63	78%	93%
NSR (summer fishery)	2005	0.34	0.03	0.37	108%	100%
	2006	0.42	0.03	0.45	100%	96%
	2007	0.29	0.02	0.31	99%	100%
	2008	0.38	0.03	0.41	96%	100%
	2009	0.35	0.03	0.38	107%	100%
	2010	0.37	0.03	0.40	106%	98%
	2011	0.33	0.03	0.36	113%	100%
	2012	0.43	0.03	0.47	102%	100%
	2013	0.46	0.04	0.46	81%	50%
	2014	0.35	0.03	0.38	102%	98%
PIG	2007	0.15	-	0.15	0%	-
	2008	0.15	-	0.15	0%	-
	2009	0.15	-	0.15	0%	-
	2010	0.15	-	0.15	*	-
	2011	0.15	-	0.15	*	-
	2012	0.15	-	0.15	*	-
	2013	0.15	-	0.15	*	-
	2014	0.15	-	0.15	*	-
SMB	09/10	1.05	0.12	1.17	44%	0%
	10/11	1.44	0.16	1.60	77%	98%
	11/12	2.12	0.24	2.36	80%	77%
	12/13	1.47	0.16	1.63	99%	100%
	14/15	0.59	0.07	0.66	*	*

**Notes:** Adak Community Allocation (ACA) applies to Western Aleutian Islands golden king crab fishery only. General allocations and GHL apply to non-rationalized stocks (NSR and PIG). Data for PIK fishery (closed since 1999) and WAI fishery (closed since 2004/2005) are not shown. NSR winter commercial fishery is not shown, as this fishery is not managed with a GHL or TAC.

**Source:** ADF&G (TAC and allocation amounts for all fisheries, usage for Norton Sound red king crab, Pribilof Islands golden king crab and CDQ/ACA fisheries), and NMFS AKRO RAM division (IFQ usage).

Table 4.2: BSAI Crab Fishery Participation by Calendar Year

	Type	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
ALL	CFEC permits fished	791	607	562	529	576	570	538	355	272	232	262	242	232	235	284	238	261
	Vessels	294	293	277	280	280	278	281	212	128	114	116	112	102	102	113	115	109
	Fish buyers/processors	54	43	39	36	37	37	34	30	20	27	23	27	24	27	26	29	26
EAG	CFEC permits fished	16	15	16	19	20	18	19	9	12	7	8	9	8	9	9	8	8
	Vessels	14	15	15	19	19	18	19	6	6	4	4	3	3	3	3	3	3
	Fish buyers/processors	7	7	4	4	4	4	4	4	6	5	6	6	7	10	11	10	8
WAG	CFEC permits fished	13	15	22	20	13	8	8	7	7	6	6	4	7	6	6	7	3
	Vessels	8	12	15	13	8	7	6	4	3	4	3	2	3	3	4	4	2
	Fish buyers/processors	6	5	7	7	6	5	4	5	3	4	5	6	5	9	9	8	9
BBR	CFEC permits fished	281	266	255	240	253	264	268	115	100	85	98	86	79	71	74	73	72
	Vessels	274	256	244	230	241	250	251	89	81	73	79	70	65	62	64	63	63
	Fish buyers/processors	28	24	22	23	24	26	25	16	15	18	17	16	17	18	17	17	17
BSS	CFEC permits fished	276	298	244	219	205	202	200	178	106	89	108	103	87	88	109	92	94
	Vessels	230	241	231	207	191	190	189	167	78	68	78	77	68	68	72	71	70
	Fish buyers/processors	44	37	28	23	26	21	23	20	13	18	17	18	13	16	16	15	13
BST	CFEC permits fished	-	-	-	-	-	-	-	5	56	40	38	24	5	-	-	26	57
	Vessels	-	-	-	-	-	-	-	4	45	29	30	18	4	-	-	22	40
	Fish buyers/processors	-	-	-	-	-	-	-	5	9	9	11	11	7	-	-	13	13

Continued on next page.

Table 4.2: Continued

	Type	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
NSR	CFEC permits fished	16	13	29	36	54	53	41	44	41	42	34	29	37	38	64	52	65
	Vessels	8	10	15	29	32	25	26	30	26	28	22	23	23	24	29	33	33
	Fish buyers/processors	2	2	7	4	4	4	2	3	2	4	2	3	3	2	3	5	4
PIG	CFEC permits fished	4	4	8	6	9	3	5	4	-	-	-	-	1	2	1	1	1
	Vessels	3	3	6	6	8	3	5	4	-	-	-	-	1	2	1	1	1
	Fish buyers/processors	3	2	4	3	3	2	2	2	-	-	-	-	2	1	1	1	1
PIK	CFEC permits fished	58	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Vessels	58	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Fish buyers/processors	17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SMB	CFEC permits fished	136	-	-	-	-	-	-	-	-	-	-	7	14	23	22	-	5
	Vessels	131	-	-	-	-	-	-	-	-	-	-	7	11	18	17	-	4
	Fish buyers/processors	16	-	-	-	-	-	-	-	-	-	-	6	9	11	11	-	6
WAI	CFEC permits fished	1	0	-	-	33	30	0	-	-	-	-	-	-	-	-	-	-
	Vessels	1	0	-	-	33	30	0	-	-	-	-	-	-	-	-	-	-
	Fish buyers/processors	1	0	-	-	9	10	0	-	-	-	-	-	-	-	-	-	-

**Notes:** Data shown by calendar year. Shaded cells indicate fishery closure years. CFEC permits fished counts unique permits reported on ADF&F fish ticket crab landing reports; includes permits held by distinct crab vessel operators and additional permits required to fish CDQ/ACA allocation.

<sup>a</sup> Data for Norton Sound red king crab are aggregated over the summer and winter commercial fisheries; as no vessels are used in the winter commercial fishery, the number of CFEC permits fished is a better measure of participation and effort for the combined fisheries.

<sup>b</sup> Count of fish buyers/processors for Norton Sound red king crab excludes catcher seller operations.

<sup>c</sup> Excludes participation in 2000/2001 and 2001/2002 Western Aleutian Islands red king crab Petrel Bank test fishery.

**Source:** ADF&G fish ticket data, and eLandings

Table 4.3: Fleet Composition by Season, CR Program Fisheries

	Season	Total vessels	Catcher vessels	Catcher/processors
EAG	1998	14	13	1
	1999	15	14	1
	2000	15	15	0
	2001	19	19	0
	2002	19	19	0
	2003	18	18	0
	2004	19	19	0
	2005-2006	7	6	1
	2006-2007	6	5	1
	2007-2008	4	3	1
	2008-2009	3	3	0
	2009-2010	3	3	0
	2010-2011	3	3	0
	2011-2012	3	3	0
	2012-2013	3	3	1
	2013-2014	3	3	1
	2014-2015	3	3	0
WAG	1998-1999	3	2	1
	1999-2000	15	14	1
	2000-2001	12	11	1
	2001-2002	9	8	1
	2002-2003	6	5	1
	2003-2004	6	5	1
	2004-2005	6	5	1
	2005-2006	3	2	1
	2006-2007	4	3	1
	2007-2008	3	2	1
	2008-2009	3	2	1
	2009-2010	3	2	1
	2010-2011	3	2	1
	2011-2012	3	2	1
	2012-2013	4	3	1
	2013-2014	3	3	0
2014-2015	2	2	0	
BBR	1998	274	263	11
	1999	256	248	8
	2000	244	238	8
	2001	230	224	8
	2002	241	234	9
	2003	250	242	8
	2004	251	243	8
	2005-2006	89	86	4
	2006-2007	81	79	3
	2007-2008	74	72	3
	2008-2009	78	76	3
	2009-2010	70	69	2
	2010-2011	65	64	2
	2011-2012	62	61	2
	2012-2013	64	63	2
2013-2014	63	62	2	
2014-2015	63	62	2	

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Table 4.3: Continued

	Season	Total vessels	Catcher vessels	Catcher/processors
BSS	1998	230	219	12
	1999	241	232	10
	2000	231	222	9
	2001	207	201	8
	2002	191	183	9
	2003	190	185	5
	2004	189	183	6
	2005	167	161	6
	2005-2006	78	74	4
	2006-2007	69	65	4
	2007-2008	78	74	4
	2008-2009	77	73	4
	2009-2010	68	66	2
	2010-2011	68	67	2
	2011-2012	72	70	2
	2012-2013	70	68	2
2013-2014	70	68	2	
2014-2015	70	68	2	
BST	2005-2006	33	31	2
	2006-2007	39	37	2
	2007-2008	27	26	1
	2008-2009	20	19	1
	2009-2010	13	12	1
	2013-2014	25	24	1
	2014-2015	45	44	1
PIK	1998	58	58	0
SMB	1998	131	129	2
	2009-2010	7	7	0
	2010-2011	11	11	0
	2011-2012	18	18	0
	2012-2013	17	17	0
	2014-2015	4	4	0
WAI	1998-1999	1	0	1
	2002-2003	33	31	2
	2003-2004	30	28	2

**Notes:** Data shown for all BSAI crab fisheries by calendar year. All dollar values are adjusted for inflation to 2014-equivalent value. Information suppressed for confidentiality where indicated by “\*”, and data not available where indicated by “-”.

<sup>a</sup> Excludes participation in 2000/2001 and 2001/2002 Western Aleutian Islands red king crab Petrel Bank test fishery.

**Source:** NMFS AFSC BSAI Crab Economic Data Report (EDR) database eLandings .

Table 4.4: Deadloss by Quota Type– Catcher Vessels, CR Program Fisheries

	Type	Vessels with deadloss	Deadloss (1,000lb)	Percent of fishery- year sold (lb)	Mean deadloss (1,000lb)
AIG	CVOA	6	45.64	1.48%	7.61
	CVC/CPC	3	0.91	0.74%	0.30
	CVOB/CPO/CDQ/ADAK	4	19.26	0.94%	4.82
	CVOA	4	30.64	1.04%	7.66
	CVC/CPC	1	*	*	*
	CVOB/CPO/CDQ/ADAK	5	5.22	0.22%	1.04
	CVOA	4	45.37	1.46%	11.34
	CVC/CPC	3	1.37	0.76%	0.46
	CVOB/CPO/CDQ/ADAK	3	6.11	0.25%	2.04
	CVOA	4	50.62	1.57%	12.66
	CVC/CPC	2	*	*	*
	CVOB/CPO/CDQ/ADAK	4	7.95	0.37%	1.99
	CVOA	4	84.19	2.26%	21.05
	CVC/CPC	4	20.23	16.33%	5.06
	CVOB/CPO/CDQ/ADAK	4	13.76	0.62%	3.44
	CVOA	4	53.74	1.54%	13.44
	CVC/CPC	2	*	*	*
	CVOB/CPO/CDQ/ADAK	4	13.29	0.58%	3.32
	CVOA	4	42.26	1.21%	10.57
	CVC/CPC	3	2.80	1.79%	0.93
	CVOB/CPO/CDQ/ADAK	5	79.54	3.47%	15.91
	CVOA	5	60.05	1.63%	12.01
	CVC/CPC	4	0.86	0.61%	0.21
	CVOB/CPO/CDQ/ADAK	6	50.09	2.36%	8.35
CVOA	5	64.51	1.56%	12.90	
CVC/CPC	3	0.94	0.65%	0.31	
CVOB/CPO/CDQ/ADAK	5	36.35	2.04%	7.27	

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Table 4.4: Continued

	Type	Vessels with deadloss	Deadloss (1,000lb)	Percent of fishery- year sold (lb)	Mean deadloss (1,000lb)
BBR	CVOA	75	90.23	0.78%	1.20
	CVC/CPC	17	1.45	0.36%	0.09
	CVOB/CPO/CDQ/ADAK	33	26.05	0.76%	0.79
	CVOA	70	115.53	0.76%	1.65
	CVC/CPC	19	4.51	0.84%	0.24
	CVOB/CPO/CDQ/ADAK	39	20.35	0.45%	0.52
	CVOA	74	150.26	0.99%	2.03
	CVC/CPC	22	2.02	0.39%	0.09
	CVOB/CPO/CDQ/ADAK	42	20.78	0.46%	0.49
	CVOA	67	98.69	0.84%	1.47
	CVC/CPC	16	1.31	0.30%	0.08
	CVOB/CPO/CDQ/ADAK	34	21.74	0.61%	0.64
	CVOA	64	94.13	0.85%	1.47
	CVC/CPC	9	0.90	0.23%	0.10
	CVOB/CPO/CDQ/ADAK	30	12.35	0.38%	0.41
	CVOA	59	28.42	0.49%	0.48
	CVC/CPC	6	0.14	0.07%	0.02
	CVOB/CPO/CDQ/ADAK	20	3.51	0.20%	0.18
	CVOA	59	27.02	0.46%	0.46
	CVC/CPC	5	0.36	0.18%	0.07
	CVOB/CPO/CDQ/ADAK	18	2.67	0.15%	0.15
	CVOA	58	56.18	0.88%	0.97
	CVC/CPC	6	0.40	0.19%	0.07
	CVOB/CPO/CDQ/ADAK	17	6.18	0.32%	0.36
CVOA	62	87.27	1.18%	1.41	
CVC/CPC	8	0.76	0.29%	0.09	
CVOB/CPO/CDQ/ADAK	16	13.22	0.60%	0.83	

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Table 4.4: Continued

	Type	Vessels with deadloss	Deadloss (1,000lb)	Percent of fishery- year sold (lb)	Mean deadloss (1,000lb)
BSS	CVOA	73	292.59	1.11%	4.01
	CVC/CPC	22	9.01	0.94%	0.41
	CVOB/CPO/CDQ/ADAK	45	69.43	0.65%	1.54
	CVOA	62	291.26	1.15%	4.70
	CVC/CPC	18	7.25	0.78%	0.40
	CVOB/CPO/CDQ/ADAK	42	101.10	1.19%	2.41
	CVOA	74	447.35	1.00%	6.05
	CVC/CPC	32	10.71	0.63%	0.33
	CVOB/CPO/CDQ/ADAK	51	93.30	0.58%	1.83
	CVOA	73	341.12	0.83%	4.67
	CVC/CPC	29	11.21	0.71%	0.39
	CVOB/CPO/CDQ/ADAK	52	82.89	0.56%	1.59
	CVOA	66	367.88	1.08%	5.57
	CVC/CPC	17	5.32	0.41%	0.31
	CVOB/CPO/CDQ/ADAK	41	163.49	1.30%	3.99
	CVOA	64	275.35	0.72%	4.30
	CVC/CPC	16	4.61	0.32%	0.29
	CVOB/CPO/CDQ/ADAK	30	72.08	0.51%	2.40
	CVOA	68	489.60	0.78%	7.20
	CVC/CPC	15	15.08	0.63%	1.01
	CVOB/CPO/CDQ/ADAK	55	132.23	0.58%	2.40
	CVOA	68	402.17	0.79%	5.91
	CVC/CPC	12	5.22	0.29%	0.44
	CVOB/CPO/CDQ/ADAK	30	86.07	0.48%	2.87
CVOA	67	320.83	0.81%	4.79	
CVC/CPC	12	5.79	0.40%	0.48	
CVOB/CPO/CDQ/ADAK	26	81.35	0.58%	3.13	

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Table 4.4: Continued

	Type	Vessels with deadloss	Deadloss (1,000lb)	Percent of fishery- year sold (lb)	Mean deadloss (1,000lb)
BST	CVOA	35	4.16	0.64%	0.12
	2006 CVC/CPC	5	0.11	0.62%	0.02
	CVOB/CPO/CDQ/ADAK	13	1.85	0.57%	0.14
	CVOA	36	27.44	1.53%	0.76
	2007 CVC/CPC	8	0.21	0.60%	0.03
	CVOB/CPO/CDQ/ADAK	15	1.89	0.44%	0.13
	CVOA	31	17.56	1.02%	0.57
	2008 CVC/CPC	7	1.16	1.98%	0.17
	CVOB/CPO/CDQ/ADAK	14	3.79	0.68%	0.27
	CVOA	24	12.86	0.82%	0.54
	2009 CVC/CPC	7	0.44	0.97%	0.06
	CVOB/CPO/CDQ/ADAK	17	4.13	0.77%	0.24
	CVOA	12	2.62	0.89%	0.22
	2010 CVC/CPC	4	0.20	1.60%	0.05
	CVOB/CPO/CDQ/ADAK	8	0.73	1.07%	0.09
	CVC/CPC	1	*	-	*
	2011 CVOB/CPO/CDQ/ADAK	11	0.86	-	0.08
	CVOA	1	*	-	*
	2012 CVC/CPC	11	0.42	-	0.04
	CVOB/CPO/CDQ/ADAK	8	0.45	-	0.06
	CVOA	32	5.58	0.58%	0.17
	2013 CVC/CPC	10	0.37	1.45%	0.04
	CVOB/CPO/CDQ/ADAK	12	0.91	0.35%	0.08
	CVOA	61	101.81	1.55%	1.67
	2014 CVC/CPC	5	0.88	0.42%	0.18
	CVOB/CPO/CDQ/ADAK	20	16.33	0.71%	0.82

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Table 4.4: Continued

	Type	Vessels with deadloss	Deadloss (1,000lb)	Percent of fishery- year sold (lb)	Mean deadloss (1,000lb)
SMB	CVOA	7	10.17	2.37%	1.45
	2009 CVC/CPC	1	*	*	*
	CVOB/CPO/CDQ/ADAK	1	*	*	*
	CVOA	11	9.18	0.92%	0.83
	2010 CVC/CPC	1	*	*	*
	CVOB/CPO/CDQ/ADAK	3	1.02	0.43%	0.34
	CVOA	18	24.72	1.68%	1.37
	2011 CVC/CPC	3	0.02	0.06%	0.01
	CVOB/CPO/CDQ/ADAK	9	1.86	0.52%	0.21
	CVOA	16	19.57	1.59%	1.22
	2012 CVC/CPC	2	*	*	*
	CVOB/CPO/CDQ/ADAK	7	1.48	0.45%	0.21
	CVOA	4	5.53	2.13%	1.38
	2014 CVC/CPC	0	*	*	*
	CVOB/CPO/CDQ/ADAK	1	*	*	*

**Notes:** Data shown for all BSAI crab fisheries by calendar year. All dollar values are adjusted for inflation to 2014-equivalent value. Information suppressed for confidentiality where indicated by “\*”, and data not available where indicated by “.”.

<sup>a</sup> 2005 and later crew positions information from eLandings.

<sup>b</sup> Landings and ex-vessel revenue suppressed in years where CDQ fishery landings are confidential.

<sup>c</sup> Landings and ex-vessel revenue suppressed in years where CDQ fishery landings are confidential.

**Source:** eLandings

Table 4.5: Ex-Vessel Volume, Gross Revenue Value, and Average Price: Harvesting Sector Total, BSAI Crab Fisheries

	Year	Sold weight (million lbs)	Ex-vessel value (\$million)	Weighted average, price (\$/lb)	Mean(sd), price (\$/lb)
AIG	1998	5.44	\$14.37	\$2.64	\$2.68(0.19)
	1999	5.10	\$21.29	\$4.17	-
	2000	5.95	\$26.51	\$4.46	-
	2001	6.38	\$27.53	\$4.31	\$4.36(0.48)
	2002	5.54	\$24.18	\$4.37	-
	2003	5.82	\$25.93	\$4.45	-
	2004	6.02	\$23.85	\$3.96	\$3.95(0.09)
	2005	4.44	\$13.70	\$3.09	\$3.06(0.27)
	2006	5.24	\$11.55	\$2.20	\$2.35(0.38)
	2007	5.44	\$13.33	\$2.45	\$2.48(0.33)
	2008	5.73	\$20.47	\$3.58	*
	2009	5.51	\$14.78	\$2.68	*
	2010	6.09	\$24.76	\$4.06	*
	2011	6.00	\$29.05	\$4.85	*
	2012	5.92	\$23.73	\$4.01	\$3.96(0.35)
2013	5.94	\$24.49	\$4.12	\$4.11(0.36)	
2014	6.07	\$24.63	\$4.06	\$4.19	
BBR	1998	14.70	\$53.73	\$3.65	\$3.68(0.67)
	1999	11.53	\$97.17	\$8.43	-
	2000	8.07	\$50.27	\$6.23	-
	2001	8.30	\$51.68	\$6.23	\$6.23(0.52)
	2002	9.48	\$74.61	\$7.87	-
	2003	15.39	\$97.87	\$6.36	-
	2004	15.02	\$85.63	\$5.70	\$5.73(0.28)
	2005	18.14	\$96.25	\$5.31	\$5.27(0.16)
	2006	15.55	\$68.18	\$4.39	\$4.41(0.21)
	2007	20.17	\$100.07	\$4.96	\$5.03(0.59)
	2008	20.13	\$114.39	\$5.68	\$5.63(0.32)
	2009	15.78	\$79.89	\$5.06	\$5.10(0.18)
	2010	14.73	\$116.67	\$7.92	\$7.98(0.69)
	2011	7.79	\$85.19	\$10.94	\$11.01(1.46)
	2012	7.80	\$64.42	\$8.25	\$8.33(0.41)
2013	8.52	\$61.90	\$7.27	\$7.38(0.51)	
2014	9.87	\$65.52	\$6.64	\$6.73(0.60)	

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Table 4.5: Continued

	Year	Sold weight (million lbs)	Ex-vessel value (\$million)	Weighted average, price (\$/lb)	Mean(sd), price (\$/lb)
BSS	1998	249.05	\$193.90	\$0.78	\$0.78(0.05)
	1999	192.41	\$254.43	\$1.32	-
	2000	32.81	\$79.74	\$2.43	-
	2001	24.78	\$49.53	\$2.00	\$2.01(0.12)
	2002	31.94	\$55.95	\$1.75	-
	2003	27.51	\$62.91	\$2.29	-
	2004	23.69	\$58.61	\$2.47	\$2.48(0.10)
	2005	24.86	\$50.02	\$2.01	\$2.12(0.21)
	2006	38.02	\$48.58	\$1.28	\$1.29(0.17)
	2007	34.76	\$66.52	\$1.91	\$1.90(0.23)
	2008	62.23	\$116.60	\$1.87	\$1.96(0.49)
	2009	57.68	\$90.93	\$1.58	\$1.59(0.23)
	2010	47.84	\$66.01	\$1.38	\$1.39(0.21)
	2011	54.05	\$144.90	\$2.68	\$2.70(0.34)
	2012	88.23	\$198.65	\$2.25	\$2.29(0.23)
2013	70.69	\$166.96	\$2.36	\$2.42(0.11)	
2014	55.19	\$131.56	\$2.38	\$2.51(0.42)	
BST	2005	0.26	*	*	*
	2006	0.99	\$1.75	\$1.76	\$1.68(0.40)
	2007	2.25	\$4.54	\$2.02	\$2.00(0.65)
	2008	2.33	\$4.81	\$2.06	\$2.03(0.26)
	2009	2.14	\$4.51	\$2.11	\$2.08(0.19)
	2010	0.37	*	*	*
	2013	1.25	\$3.14	\$2.51	\$2.51(0.69)
	2014	9.09	\$21.73	\$2.39	\$2.45(0.32)
NSR	1998	0.03	\$0.06	\$2.20	-
	1999	0.03	\$0.13	\$4.37	-
	2000	0.32	\$1.31	\$4.09	-
	2001	0.28	\$1.38	\$4.97	-
	2002	0.26	\$1.98	\$7.65	-
	2003	0.28	\$1.38	\$4.90	-
	2004	0.33	\$1.25	\$3.73	-
	2005	0.40	\$1.61	\$4.05	-
	2006	0.44	\$1.29	\$2.92	-
	2007	0.32	\$1.00	\$3.19	-
	2008	0.40	\$1.56	\$3.91	-
	2009	0.40	\$1.37	\$3.46	-
	2010	0.42	\$1.68	\$3.99	-
	2011	0.40	\$2.20	\$5.44	-
	2012	0.50	\$2.80	\$5.64	-
2013	0.44	\$2.60	\$5.86	-	
2014	0.42	\$2.20	\$5.27	-	

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Table 4.5: Continued

	Year	Sold weight (million lbs)	Ex-vessel value (\$million)	Weighted average, price (\$/lb)	Mean(sd), price (\$/lb)
PIG	1998	*	*	*	-
	1999	*	*	*	-
	2000	0.12	\$0.56	\$4.58	-
	2001	*	*	*	-
	2002	*	*	*	-
	2003	*	*	*	-
	2004	*	*	*	-
	2005	*	*	*	-
	2010	*	*	*	-
	2011	*	*	*	-
	2012	*	*	*	-
	2013	*	*	*	-
	2014	*	*	*	-
	PIK	1998	1.03	\$3.35	\$3.26
SMB	1998	2.95	\$7.65	\$2.59	\$2.62(0.20)
	2009	0.45	\$1.43	\$3.18	\$3.23(0.27)
	2010	1.25	\$6.52	\$5.21	\$5.29(0.28)
	2011	1.85	\$10.24	\$5.53	\$5.91(0.63)
	2012	1.59	\$6.95	\$4.36	\$4.38(0.26)
	2014	0.30	*	*	*
WAI	1998	*	*	*	*
	2002	0.50	\$3.94	\$7.84	-
	2003	0.48	\$3.02	\$6.36	-

**Notes:** Data shown for all BSAI crab fisheries by calendar year. Except where noted, data reflect total commercial volume and value across all management programs (LLP/open access, IFQ, CDQ, ACA) inclusive of all harvesting sector production (CV, CP, and catcher-sellers); approximation of ex-vessel sale value of CP and catcher-seller volume is incorporated in revenue total by using weighted average ex-vessel sale price. Price results are sourced from CV sector EDR data were collected (1998, 2001, 2004, and 2005-2011 for CR program fisheries) and secondarily from CFEC gross earnings estimates (1999-2000, 2002-2003 for CR fisheries; all years for non-CR fisheries).

Weighted average price is calculated as the ratio of aggregate sales revenue to aggregate sold volume, and thus does not include a measure of distributional variation. Mean price results as shown are calculated as the arithmetic mean over price observations by vessel or processor (i.e., each price observation is weighted equally), with standard deviation (sd) reported to indicate relative variability over vessel-level observations, noting that large standard deviations are likely indicative of a non-symmetrical distribution.

<sup>a</sup> Landings and ex-vessel revenue suppressed in years where CDQ fishery landings are confidential.

<sup>b</sup> Excludes landings in Petrel Bank test fishery in 2001.

<sup>c</sup> Data for Norton Sound red king crab are aggregated over the summer and winter commercial fisheries.

**Source:** ADF&G fish ticket data, eLandings, CFEC ex-vessel pricing, ADF&G Commercial Operator's Annual Report, NMFS AFSC BSAI Crab Economic Data Report (EDR) database

Table 4.6: Ex-vessel Price and Share of Fishery-Year Landings by Owner or Leaseholder State of Residence, Catcher Vessels–CR Program Fisheries

	State	Vessels	Share of ex-vessel volume	Share of ex-vessel revenue	Weighted average price (\$/lb)	Mean(sd) price (\$/lb)	
AIG	AK	3(2)	-	-	*	*	
	98/01/04 WA	43(18)	-	-	\$3.70	\$3.77(0.80)	
	Other	6(2)	-	-	*	*	
	2005	WA	8	80%	80%	\$3.11	\$3.02(0.24)
		Other	2	*	*	*	*
	2006	WA	5	80%	80%	\$2.20	\$2.29(0.19)
		Other	1	*	*	*	*
	2007	AK	1	*	*	*	*
		WA	4	*	*	*	*
		Other	1	*	*	*	*
	2008	AK	1	*	*	*	*
		WA	2	*	*	*	*
		Other	1	*	*	*	*
	2009	AK	1	*	*	*	*
		WA	2	*	*	*	*
		Other	1	*	*	*	*
	2010	AK	1	*	*	*	*
		WA	2	*	*	*	*
		Other	1	*	*	*	*
	2011	AK	1	*	*	*	*
		WA	2	*	*	*	*
		Other	1	*	*	*	*
	2012	AK	3	*	*	*	*
		WA	2	*	*	*	*
Other		1	*	*	*	*	
2013	AK	3	*	*	*	*	
	WA	2	*	*	*	*	
	Other	1	*	*	*	*	
2014	AK	2	*	*	*	*	
	WA	2	*	*	*	*	
	Other	1	*	*	*	*	

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Table 4.6: Continued

	State	Vessels	Share of ex-vessel volume	Share of ex-vessel revenue	Weighted average price (\$/lb)	Mean(sd) price (\$/lb)	
BSS	AK	100(41)	-	-	\$1.03	\$1.74(0.75)	
	98/01/04 WA	354(143)	-	-	\$1.04	\$1.76(0.72)	
	Other	70(30)	-	-	\$1.04	\$1.73(0.72)	
	2005	AK	29	16%	17%	\$2.14	\$2.14(0.04)
		WA	103	73%	71%	\$1.96	\$2.11(0.25)
		Other	18	11%	12%	\$2.15	\$2.16(0.10)
	2006	AK	17	20%	20%	\$1.25	\$1.27(0.08)
		WA	48	67%	67%	\$1.28	\$1.29(0.19)
		Other	9	13%	13%	\$1.30	\$1.30(0.16)
	2007	AK	14	23%	23%	\$1.89	\$1.91(0.21)
		WA	43	66%	66%	\$1.93	\$1.91(0.24)
		Other	7	11%	11%	\$1.89	\$1.84(0.14)
	2008	AK	15	22%	21%	\$1.82	\$1.86(0.29)
		WA	50	66%	69%	\$1.93	\$2.01(0.53)
		Other	9	12%	11%	\$1.63	\$1.83(0.45)
	2009	AK	19	32%	33%	\$1.60	\$1.64(0.34)
		WA	45	59%	59%	\$1.57	\$1.58(0.17)
		Other	9	9%	9%	\$1.52	\$1.56(0.22)
	2010	AK	14	23%	23%	\$1.38	\$1.40(0.08)
		WA	40	65%	65%	\$1.38	\$1.39(0.25)
		Other	12	11%	11%	\$1.35	\$1.36(0.11)
	2011	AK	15	24%	24%	\$2.68	\$2.73(0.16)
		WA	40	62%	63%	\$2.69	\$2.68(0.41)
		Other	11	14%	13%	\$2.66	\$2.75(0.20)
	2012	AK	22	29%	29%	\$2.22	\$2.25(0.34)
		WA	43	61%	62%	\$2.27	\$2.31(0.16)
		Other	6	9%	9%	\$2.22	\$2.30(0.15)
2013	AK	22	30%	30%	\$2.35	\$2.43(0.11)	
	WA	41	62%	62%	\$2.37	\$2.42(0.11)	
	Other	6	8%	8%	\$2.35	\$2.42(0.09)	
2014	AK	23	34%	35%	\$2.42	\$2.52(0.32)	
	WA	38	57%	56%	\$2.37	\$2.47(0.31)	
	Other	7	9%	9%	\$2.31	\$2.74(1.08)	

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Table 4.6: Continued

	State	Vessels	Share of ex-vessel volume	Share of ex-vessel revenue	Weighted average price (\$/lb)	Mean(sd) price (\$/lb)	
BBR	AK	122(49)	-	-	\$5.17	\$5.20(1.21)	
	98/01/04 WA	429(174)	-	-	\$5.09	\$5.22(1.21)	
	Other	82(33)	-	-	\$4.98	\$5.27(1.15)	
	2005	AK	19	16%	16%	\$5.27	\$5.23(0.19)
		WA	53	69%	70%	\$5.32	\$5.29(0.14)
		Other	13	14%	14%	\$5.31	\$5.26(0.19)
	2006	AK	24	24%	23%	\$4.36	\$4.38(0.22)
		WA	48	66%	67%	\$4.40	\$4.43(0.20)
		Other	8	10%	10%	\$4.34	\$4.34(0.19)
	2007	AK	17	22%	23%	\$4.98	\$5.06(1.10)
		WA	44	67%	68%	\$4.96	\$5.03(0.38)
		Other	9	10%	10%	\$4.80	\$5.00(0.22)
	2008	AK	17	20%	20%	\$5.85	\$5.72(0.57)
		WA	51	71%	71%	\$5.64	\$5.60(0.19)
		Other	8	9%	9%	\$5.68	\$5.62(0.13)
	2009	AK	19	28%	28%	\$5.02	\$5.07(0.15)
		WA	40	62%	62%	\$5.09	\$5.12(0.15)
		Other	9	10%	10%	\$5.01	\$5.10(0.33)
	2010	AK	12	25%	24%	\$7.79	\$7.84(0.76)
		WA	38	62%	63%	\$8.02	\$8.11(0.63)
		Other	13	14%	13%	\$7.70	\$7.72(0.68)
	2011	AK	12	23%	22%	\$10.40	\$10.69(1.18)
		WA	36	60%	61%	\$11.22	\$11.24(1.25)
		Other	11	17%	17%	\$10.70	\$10.39(2.12)
	2012	AK	18	32%	33%	\$8.34	\$8.38(0.44)
		WA	39	61%	61%	\$8.24	\$8.31(0.38)
		Other	6	7%	7%	\$8.01	\$8.18(0.65)
2013	AK	19	37%	37%	\$7.25	\$7.29(0.35)	
	WA	35	55%	55%	\$7.29	\$7.48(0.58)	
	Other	7	9%	8%	\$7.17	\$7.09(0.39)	
2014	AK	18	34%	32%	\$6.38	\$6.65(0.47)	
	WA	35	58%	59%	\$6.78	\$6.78(0.58)	
	Other	7	8%	9%	\$6.71	\$6.61(1.07)	

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Table 4.6: Continued

	State	Vessels	Share of ex-vessel volume	Share of ex-vessel revenue	Weighted average price (\$/lb)	Mean(sd) price (\$/lb)	
BST	2005	AK	1	*	*	*	*
		WA	3	*	*	*	*
	2006	AK	6	11%	12%	\$1.81	\$1.66(0.30)
		WA	30	81%	81%	\$1.76	\$1.72(0.42)
		Other	5	7%	7%	\$1.69	\$1.39(0.23)
	2007	AK	7	26%	25%	\$1.95	\$1.94(0.27)
		WA	17	55%	57%	\$2.12	\$2.03(0.79)
		Other	3	*	*	*	*
	2008	AK	6	5%	4%	\$1.82	\$1.70(0.47)
		WA	19	61%	61%	\$2.05	\$2.07(0.16)
		Other	4	*	*	*	*
	2009	AK	5	17%	17%	\$2.12	\$2.11(0.12)
		WA	10	43%	41%	\$2.02	\$2.06(0.20)
		Other	2	*	*	*	*
	2010	AK	1	*	*	*	*
		WA	1	*	*	*	*
		Other	2	*	*	*	*
	2013	AK	7	29%	24%	\$2.06	\$2.15(0.97)
		WA	9	45%	47%	\$2.61	\$2.61(0.37)
		Other	3	*	*	*	*
2014	AK	12	20%	20%	\$2.43	\$2.48(0.29)	
	WA	20	55%	53%	\$2.34	\$2.40(0.33)	
	Other	6	25%	26%	\$2.46	\$2.58(0.36)	

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Table 4.6: Continued

	State	Vessels	Share of ex-vessel volume	Share of ex-vessel revenue	Weighted average price (\$/lb)	Mean(sd) price (\$/lb)
PIK	98/01/04 AK	12(12)	-	-	\$3.32	\$3.49(0.73)
	98/01/04 WA	28(28)	-	-	\$3.53	\$3.39(0.66)
	98/01/04 Other	5(5)	-	-	\$3.16	\$3.17(0.06)
	98/01/04 AK	20(20)	-	-	\$2.56	\$2.57(0.08)
	98/01/04 WA	61(61)	-	-	\$2.61	\$2.65(0.24)
	98/01/04 Other	14(14)	-	-	\$2.57	\$2.58(0.10)
	2009 AK	1	*	*	*	*
	2009 WA	5	71%	72%	\$3.23	\$3.28(0.29)
	2009 Other	1	*	*	*	*
SMB	2010 AK	3	*	*	*	*
	2010 WA	5	47%	49%	\$5.40	\$5.40(0.07)
	2010 Other	2	*	*	*	*
	2011 AK	6	25%	26%	\$5.81	\$6.05(0.66)
	2011 WA	9	50%	50%	\$5.54	\$5.91(0.57)
	2011 Other	3	*	*	*	*
	2012 AK	6	30%	31%	\$4.40	\$4.37(0.24)
	2012 WA	9	50%	50%	\$4.29	\$4.34(0.29)
	2012 Other	2	*	*	*	*
	2014 WA	3	*	*	*	*
	2014 Other	1	*	*	*	*
WAI	98/01/04 WA	2(2)	-	-	*	*
	98/01/04 Other	1(1)	-	-	*	*

**Notes:** See footnote on previous table regarding weighted and mean price. Data shown by calendar year for EDR reporting years 2005-present, and as three-year average over pre-rationalization reporting years (1998, 2001, and 2004, shown as '98/01/04'). Except where noted, data reflect total catcher-vessel sector commercial volume and revenue value across all management programs (LLP/open access, IFQ, CDQ, ACA). Beginning in 2012, data include ex-vessel sales reported by catcher/processor sector.

<sup>a</sup> Landings in 2001 Petrel Bank test fishery; 1998 fishery data unavailable.

<sup>b</sup> Vessels column shows total count of vessel-level observations for fishery-year; for 98/01/04, count of unique vessels represented over all observations in the 3-year data series is shown in parentheses. In a limited number of observations where there is missing data for either revenue or volume, average price for the fishery/year is used to impute the missing value.

**Source:** NMFS AFSC BSAI Crab Economic Data Report (EDR) database .

Table 4.7: Ex-vessel Price and Share of Fishery-Year Landings by Vessel Length, CR Program Fisheries

	Length	Vessels	Share of ex-vessel volume	Share of ex-vessel revenue	Weighted average price (\$/lb)	Mean(sd) price (\$/lb)
98/01/04	85'-99'	12(5)	0%	0%	\$3.53	\$3.62(0.73)
	100'-124'	16(7)	0%	0%	\$3.92	\$4.02(0.87)
	125' and over	24(10)	0%	0%	\$3.71	\$3.68(0.69)
2005	85'-99'	1	*	*	*	*
	100'-124'	3	*	*	*	*
	125' and over	6	0.57%	0.57%	\$3.09	\$3.11(0.29)
2006	100'-124'	2	*	*	*	*
	125' and over	4	*	*	*	*
2007	100'-124'	4	*	*	*	*
	125' and over	2	*	*	*	*
AIG 2008	100'-124'	3	*	*	*	*
	125' and over	1	*	*	*	*
2009	100'-124'	3	*	*	*	*
	125' and over	1	*	*	*	*
2010	100'-124'	3	*	*	*	*
	125' and over	1	*	*	*	*
2011	100'-124'	3	*	*	*	*
	125' and over	1	*	*	*	*
2012	85'-99'	1	*	*	*	*
	100'-124'	4	*	*	*	*
	125' and over	1	*	*	*	*
2013	85'-99'	1	*	*	*	*
	100'-124'	4	*	*	*	*
	125' and over	1	*	*	*	*
2014	85'-99'	1	*	*	*	*
	100'-124'	4	*	*	*	*

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Table 4.7: Continued

	Length	Vessels	Share of ex-vessel volume	Share of ex-vessel revenue	Weighted average price (\$/lb)	Mean(sd) price (\$/lb)
98/01/04	Under 85'	44(23)	0%	0%	\$5.00	\$5.17(1.16)
	85'-99'	129(59)	0%	0%	\$5.16	\$5.22(1.22)
	100'-124'	298(118)	0%	0%	\$5.06	\$5.25(1.19)
	125' and over	162(69)	0%	0%	\$5.10	\$5.19(1.23)
2005	Under 85'	3	*	*	*	*
	85'-99'	12	0.11%	0.10%	\$5.29	\$5.24(0.16)
	100'-124'	46	0.44%	0.44%	\$5.29	\$5.27(0.19)
	125' and over	24	0.42%	0.42%	\$5.32	\$5.30(0.10)
2006	Under 85'	3	*	*	*	*
	85'-99'	12	0.10%	0.10%	\$4.38	\$4.49(0.18)
	100'-124'	44	0.46%	0.46%	\$4.37	\$4.39(0.22)
	125' and over	21	0.41%	0.42%	\$4.41	\$4.42(0.19)
2007	Under 85'	1	*	*	*	*
	85'-99'	9	0.10%	0.10%	\$4.89	\$4.78(1.08)
	100'-124'	40	0.49%	0.49%	\$4.94	\$5.06(0.47)
	125' and over	20	0.39%	0.39%	\$4.97	\$5.09(0.52)
2008	Under 85'	2	*	*	*	*
	85'-99'	10	0.09%	0.10%	\$6.04	\$5.54(0.28)
	100'-124'	43	0.50%	0.50%	\$5.68	\$5.67(0.38)
	125' and over	21	0.37%	0.37%	\$5.61	\$5.60(0.13)
2009	Under 85'	3	*	*	*	*
	85'-99'	9	0.11%	0.11%	\$5.03	\$5.04(0.20)
	100'-124'	35	0.46%	0.46%	\$5.07	\$5.13(0.17)
	125' and over	21	0.39%	0.39%	\$5.06	\$5.10(0.18)
2010	Under 85'	1	*	*	*	*
	85'-99'	8	0.09%	0.09%	\$7.69	\$7.89(0.59)
	100'-124'	33	0.45%	0.45%	\$7.88	\$7.92(0.81)
	125' and over	21	0.44%	0.44%	\$8.00	\$8.10(0.49)
2011	Under 85'	1	*	*	*	*
	85'-99'	8	0.12%	0.10%	\$9.84	\$10.51(1.06)
	100'-124'	29	0.39%	0.39%	\$11.08	\$11.06(1.39)
	125' and over	21	0.48%	0.48%	\$11.07	\$11.01(1.79)
2012	Under 85'	3	*	*	*	*
	85'-99'	22	0.30%	0.29%	\$8.16	\$8.28(0.50)
	100'-124'	32	0.59%	0.59%	\$8.33	\$8.38(0.36)
	125' and over	6	0.09%	0.09%	\$8.04	\$8.17(0.41)
2013	Under 85'	2	*	*	*	*
	85'-99'	21	0.26%	0.26%	\$7.19	\$7.34(0.43)
	100'-124'	34	0.62%	0.62%	\$7.29	\$7.40(0.59)
	125' and over	4	*	*	*	*
2014	Under 85'	2	*	*	*	*
	85'-99'	21	0.29%	0.30%	\$6.70	\$6.69(0.74)
	100'-124'	33	0.59%	0.59%	\$6.59	\$6.75(0.52)
	125' and over	4	*	*	*	*

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Table 4.7: Continued

	Length	Vessels	Share of ex-vessel volume	Share of ex-vessel revenue	Weighted average price (\$/lb)	Mean(sd) price (\$/lb)
98/01/04	Under 85'	25(14)	0%	0%	\$1.00	\$1.78(0.75)
	85'-99'	103(51)	0%	0%	\$0.97	\$1.67(0.74)
	100'-124'	245(98)	0%	0%	\$1.05	\$1.76(0.71)
	125' and over	151(63)	0%	0%	\$1.06	\$1.79(0.74)
2005	Under 85'	5	0.02%	0.02%	\$2.13	\$2.13(0.00)
	85'-99'	25	0.20%	0.15%	\$1.56	\$2.06(0.39)
	100'-124'	77	0.48%	0.51%	\$2.13	\$2.14(0.18)
	125' and over	43	0.30%	0.32%	\$2.12	\$2.12(0.06)
2006	Under 85'	2	*	*	*	*
	85'-99'	8	0.08%	0.07%	\$1.24	\$1.27(0.40)
	100'-124'	39	0.41%	0.41%	\$1.29	\$1.29(0.10)
	125' and over	25	0.49%	0.49%	\$1.27	\$1.28(0.14)
2007	Under 85'	2	*	*	*	*
	85'-99'	7	0.09%	0.08%	\$1.86	\$1.80(0.17)
	100'-124'	35	0.44%	0.43%	\$1.89	\$1.89(0.23)
	125' and over	20	0.45%	0.46%	\$1.94	\$1.94(0.24)
2008	Under 85'	1	*	*	*	*
	85'-99'	9	0.09%	0.09%	\$1.86	\$2.22(1.31)
	100'-124'	43	0.51%	0.51%	\$1.89	\$1.93(0.19)
	125' and over	21	0.39%	0.38%	\$1.85	\$1.91(0.28)
2009	Under 85'	2	*	*	*	*
	85'-99'	8	0.09%	0.09%	\$1.53	\$1.58(0.08)
	100'-124'	40	0.46%	0.45%	\$1.55	\$1.57(0.19)
	125' and over	23	0.43%	0.44%	\$1.61	\$1.63(0.33)
2010	Under 85'	2	*	*	*	*
	85'-99'	9	0.08%	0.08%	\$1.37	\$1.40(0.08)
	100'-124'	33	0.43%	0.44%	\$1.39	\$1.39(0.27)
	125' and over	22	0.47%	0.47%	\$1.37	\$1.37(0.13)
2011	Under 85'	1	*	*	*	*
	85'-99'	9	0.08%	0.10%	\$3.27	\$2.78(0.14)
	100'-124'	33	0.44%	0.43%	\$2.62	\$2.68(0.41)
	125' and over	23	0.46%	0.45%	\$2.64	\$2.70(0.29)
2012	Under 85'	2	*	*	*	*
	85'-99'	26	0.32%	0.31%	\$2.18	\$2.23(0.32)
	100'-124'	36	0.54%	0.55%	\$2.29	\$2.34(0.13)
	125' and over	7	0.13%	0.13%	\$2.27	\$2.31(0.14)
2013	Under 85'	2	*	*	*	*
	85'-99'	26	0.30%	0.30%	\$2.38	\$2.44(0.10)
	100'-124'	34	0.57%	0.57%	\$2.35	\$2.41(0.11)
	125' and over	7	0.12%	0.12%	\$2.35	\$2.42(0.08)
2014	Under 85'	2	*	*	*	*
	85'-99'	25	0.28%	0.28%	\$2.42	\$2.46(0.33)
	100'-124'	36	0.60%	0.60%	\$2.38	\$2.54(0.51)
	125' and over	5	0.12%	0.11%	\$2.33	\$2.52(0.21)

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Table 4.7: Continued

	Length	Vessels	Share of ex-vessel volume	Share of ex-vessel revenue	Weighted average price (\$/lb)	Mean(sd) price (\$/lb)
2005	85'-99'	1	*	*	*	*
	100'-124'	1	*	*	*	*
	125' and over	2	*	*	*	*
2006	Under 85'	2	*	*	*	*
	85'-99'	5	0.12%	0.12%	\$1.73	\$1.63(0.25)
	100'-124'	22	0.70%	0.69%	\$1.75	\$1.64(0.26)
	125' and over	12	0.16%	0.16%	\$1.77	\$1.62(0.29)
2007	Under 85'	2	*	*	*	*
	85'-99'	2	*	*	*	*
	100'-124'	16	0.52%	0.49%	\$1.90	\$1.92(0.31)
	125' and over	7	0.33%	0.34%	\$2.06	\$1.86(0.49)
BST 2008	Under 85'	3	*	*	*	*
	85'-99'	4	*	*	*	*
	100'-124'	17	0.60%	0.60%	\$2.06	\$2.02(0.23)
	125' and over	5	0.13%	0.13%	\$2.02	\$2.10(0.19)
2009	Under 85'	2	*	*	*	*
	85'-99'	1	*	*	*	*
	100'-124'	11	0.77%	0.80%	\$2.16	\$2.14(0.19)
	125' and over	3	*	*	*	*
2010	Under 85'	1	*	*	*	*
	100'-124'	3	*	*	*	*
2013	85'-99'	7	0.37%	0.41%	\$2.77	\$2.75(0.33)
	100'-124'	11	0.56%	0.53%	\$2.35	\$2.36(0.82)
	125' and over	1	*	*	*	*
2014	85'-99'	15	0.38%	0.39%	\$2.46	\$2.53(0.32)
	100'-124'	21	0.52%	0.51%	\$2.37	\$2.41(0.33)
	125' and over	2	*	*	*	*

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Table 4.7: Continued

	Length	Vessels	Share of ex-vessel volume	Share of ex-vessel revenue	Weighted average price (\$/lb)	Mean(sd) price (\$/lb)	
PIK	98/01/04	Under 85'	9(9)	0%	0%	\$3.57	\$3.71(0.94)
		85'-99'	12(12)	0%	0%	\$3.32	\$3.29(0.28)
		100'-124'	17(17)	0%	0%	\$3.27	\$3.25(0.39)
		125' and over	7(7)	0%	0%	\$3.79	\$3.52(1.00)
	98/01/04	Under 85'	2(2)	0%	0%	*	*
		85'-99'	17(17)	0%	0%	\$2.61	\$2.63(0.26)
		100'-124'	48(48)	0%	0%	\$2.57	\$2.61(0.21)
		125' and over	28(28)	0%	0%	\$2.62	\$2.64(0.15)
2009		100'-124'	5	0.90%	0.90%	\$3.18	\$3.26(0.24)
		125' and over	2	*	*	*	*
SMB	2010	100'-124'	8	0.89%	0.88%	\$5.18	\$5.26(0.30)
		125' and over	2	*	*	*	*
	2011	Under 85'	1	*	*	*	*
		85'-99'	1	*	*	*	*
		100'-124'	9	0.71%	0.69%	\$5.42	\$5.76(0.70)
		125' and over	7	0.24%	0.26%	\$5.86	\$6.14(0.49)
2012		85'-99'	5	0.36%	0.36%	\$4.38	\$4.42(0.19)
		100'-124'	11	0.59%	0.59%	\$4.37	\$4.39(0.29)
		125' and over	1	*	*	*	*
2014		85'-99'	1	*	*	*	*
		100'-124'	3	*	*	*	*
WAI	98/01/04	100'-124'	1(1)	0%	0%	*	*
		125' and over	2(2)	0%	0%	*	*

**Notes:** See footnote on previous table regarding weighted and mean price. Data shown by calendar year for EDR reporting years 2005-present, and as three-year average over pre-rationalization reporting years (1998, 2001, and 2004, shown as '98/01/04'). Except where noted, data reflect total catcher-vessel sector commercial volume and revenue value across all management programs (LLP/open access, IFQ, CDQ, ACA). Beginning in 2012, data include ex-vessel sales reported by catcher/processor sector.

<sup>a</sup> Landings in 2001 Petrel Bank test fishery; 1998 fishery data unavailable.

<sup>b</sup> Vessels column shows total count of vessel-level observations for fishery-year; for 98/01/04, count of unique vessels represented over all observations in the 3-year data series is shown in parentheses. In a limited number of observations where there is missing data for either revenue or volume, average price for the fishery/year is used to impute the missing value.

**Source:** NMFS AFSC BSAI Crab Economic Data Report (EDR) database .

Table 4.8: Ex-vessel Price and Share of Fishery-Year Landings by Quota Type, Catcher Vessels, CR Program Fisheries

	Type	Vessels	Share of ex-vessel volume	Share of ex-vessel revenue	Weighted average price (\$/lb)	Mean(sd) price (\$/lb)
	1998 N/A	13	-	-	\$2.64	\$2.68(0.19)
	2001 N/A	19	-	-	\$4.31	\$4.36(0.48)
	2004 N/A	20	-	-	\$3.96	\$3.95(0.09)
	2005 ALL	10	-	-	\$3.09	\$3.06(0.27)
	2006 ALL	6	-	-	\$2.20	\$2.35(0.38)
	2006 CVC/CPC	3	*	*	*	*
	2006 CVOA	6	75%	72%	\$2.10	\$2.16(0.15)
	2006 CVOB/CPO/CDQ/ADAK	5	23%	27%	\$2.54	\$2.56(0.54)
	2007 ALL	6	-	-	\$2.45	\$2.48(0.33)
	2007 CVC/CPC	3	*	*	*	*
	2007 CVOA	5	81%	81%	\$2.46	\$2.49(0.31)
	2007 CVOB/CPO/CDQ/ADAK	6	17%	16%	\$2.37	\$2.40(0.39)
	2008 ALL	4	-	-	*	*
	2008 CVC/CPC	4	*	*	*	*
	2008 CVOA	4	*	*	*	*
	2008 CVOB/CPO/CDQ/ADAK	4	*	*	*	*
AIG	2009 ALL	4	-	-	*	*
	2009 CVC/CPC	4	*	*	*	*
	2009 CVOA	4	*	*	*	*
	2009 CVOB/CPO/CDQ/ADAK	4	*	*	*	*
	2010 ALL	4	-	-	*	*
	2010 CVC/CPC	4	*	*	*	*
	2010 CVOA	4	*	*	*	*
	2010 CVOB/CPO/CDQ/ADAK	4	*	*	*	*
	2011 ALL	4	-	-	*	*
	2011 CVC/CPC	4	*	*	*	*
	2011 CVOA	4	*	*	*	*
	2011 CVOB/CPO/CDQ/ADAK	4	*	*	*	*
	2012 ALL	6	-	-	\$4.01	\$3.96(0.35)
	2012 CVC/CPC	4	*	*	*	*
	2012 CVOA	4	*	*	*	*
	2012 CVOB/CPO/CDQ/ADAK	6	36%	35%	\$3.91	\$3.93(0.28)
	2013 ALL	6	-	-	\$4.12	\$4.11(0.36)
	2013 CVC/CPC	5	3%	3%	\$4.08	\$4.07(0.48)
	2013 CVOA	4	*	*	*	*
	2013 CVOB/CPO/CDQ/ADAK	6	41%	39%	\$3.91	\$3.99(0.32)
	2014 ALL	5	-	-	\$4.06	\$4.19
	2014 CVC/CPC	5	2%	2%	\$4.34	\$4.30(0.21)
	2014 CVOA	5	69%	69%	\$4.07	\$4.08(0.34)
	2014 CVOB/CPO/CDQ/ADAK	5	29%	28%	\$4.00	\$4.17(0.27)

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Table 4.8: Continued

	Type	Vessels	Share of ex-vessel volume	Share of ex-vessel revenue	Weighted average price (\$/lb)	Mean(sd) price (\$/lb)
	1998 N/A	206	-	-	\$3.65	\$3.68(0.67)
	2001 N/A	197	-	-	\$6.23	\$6.23(0.52)
	2004 N/A	230	-	-	\$5.70	\$5.73(0.28)
	2005 ALL	85	-	-	\$5.31	\$5.27(0.16)
	2006 ALL	80	-	-	\$4.39	\$4.41(0.21)
	2006 CVC/CPC	49	4%	3%	\$4.34	\$4.43(0.24)
	2006 CVOA	77	77%	77%	\$4.37	\$4.37(0.19)
	2006 CVOB/CPO/CDQ/ADAK	65	19%	19%	\$4.44	\$4.44(0.20)
	2007 ALL	70	-	-	\$4.96	\$5.03(0.59)
	2007 CVC/CPC	41	3%	3%	\$4.85	\$5.17(0.59)
	2007 CVOA	69	78%	78%	\$4.95	\$4.97(0.29)
	2007 CVOB/CPO/CDQ/ADAK	53	19%	19%	\$4.95	\$5.01(0.84)
	2008 ALL	76	-	-	\$5.68	\$5.63(0.32)
	2008 CVC/CPC	38	2%	2%	\$5.67	\$5.67(0.17)
	2008 CVOA	73	76%	76%	\$5.70	\$5.62(0.43)
	2008 CVOB/CPO/CDQ/ADAK	56	22%	22%	\$5.64	\$5.61(0.19)
BBR	2009 ALL	68	-	-	\$5.06	\$5.10(0.18)
	2009 CVC/CPC	39	3%	3%	\$5.13	\$5.16(0.22)
	2009 CVOA	68	77%	77%	\$5.05	\$5.04(0.11)
	2009 CVOB/CPO/CDQ/ADAK	53	20%	20%	\$5.11	\$5.14(0.21)
	2010 ALL	63	-	-	\$7.92	\$7.98(0.69)
	2010 CVC/CPC	33	4%	4%	\$7.81	\$8.16(0.62)
	2010 CVOA	63	76%	76%	\$7.84	\$7.82(0.51)
	2010 CVOB/CPO/CDQ/ADAK	52	20%	21%	\$8.22	\$8.06(0.86)
	2011 ALL	59	-	-	\$10.94	\$11.01(1.46)
	2011 CVC/CPC	34	2%	2%	\$10.41	\$11.10(1.90)
	2011 CVOA	58	79%	78%	\$10.84	\$10.80(0.98)
	2011 CVOB/CPO/CDQ/ADAK	48	19%	20%	\$11.39	\$11.07(1.69)
	2012 ALL	63	-	-	\$8.25	\$8.33(0.41)
	2012 CVC/CPC	33	3%	3%	\$8.49	\$8.45(0.42)
	2012 CVOA	61	77%	76%	\$8.19	\$8.19(0.42)
	2012 CVOB/CPO/CDQ/ADAK	47	21%	21%	\$8.47	\$8.42(0.36)
	2013 ALL	61	-	-	\$7.27	\$7.38(0.51)
	2013 CVC/CPC	30	2%	3%	\$7.47	\$7.51(0.36)
	2013 CVOA	58	76%	76%	\$7.19	\$7.18(0.32)
	2013 CVOB/CPO/CDQ/ADAK	51	21%	22%	\$7.50	\$7.54(0.67)
2014 ALL	60	-	-	\$6.64	\$6.73(0.60)	
2014 CVC/CPC	32	3%	3%	\$6.73	\$6.77(0.83)	
2014 CVOA	59	75%	75%	\$6.70	\$6.71(0.33)	
2014 CVOB/CPO/CDQ/ADAK	48	23%	22%	\$6.41	\$6.72(0.68)	

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Table 4.8: Continued

	Type	Vessels	Share of ex-vessel volume	Share of ex-vessel revenue	Weighted average price (\$/lb)	Mean(sd) price (\$/lb)
	1998 N/A	176	-	-	\$0.78	\$0.78(0.05)
	2001 N/A	173	-	-	\$2.00	\$2.01(0.12)
	2004 N/A	175	-	-	\$2.47	\$2.48(0.10)
	2005 N/A	150	-	-	\$2.01	\$2.12(0.21)
	2006 ALL	74	-	-	\$1.28	\$1.29(0.17)
	2006 CVC/CPC	52	3%	3%	\$1.31	\$1.30(0.10)
	2006 CVOA	73	80%	79%	\$1.27	\$1.27(0.13)
	2006 CVOB/CPO/CDQ/ADAK	63	18%	18%	\$1.29	\$1.29(0.24)
	2007 ALL	64	-	-	\$1.91	\$1.90(0.23)
	2007 CVC/CPC	41	3%	3%	\$1.85	\$1.89(0.27)
	2007 CVOA	62	80%	80%	\$1.91	\$1.91(0.15)
	2007 CVOB/CPO/CDQ/ADAK	53	17%	18%	\$1.95	\$1.90(0.26)
	2008 ALL	74	-	-	\$1.87	\$1.96(0.49)
	2008 CVC/CPC	42	3%	3%	\$2.03	\$2.01(0.05)
	2008 CVOA	73	75%	75%	\$1.88	\$1.86(0.21)
	2008 CVOB/CPO/CDQ/ADAK	62	22%	22%	\$1.83	\$2.06(0.77)
BSS	2009 ALL	73	-	-	\$1.58	\$1.59(0.23)
	2009 CVC/CPC	40	2%	3%	\$1.71	\$1.68(0.33)
	2009 CVOA	73	78%	78%	\$1.57	\$1.55(0.16)
	2009 CVOB/CPO/CDQ/ADAK	59	19%	19%	\$1.58	\$1.58(0.21)
	2010 ALL	66	-	-	\$1.38	\$1.39(0.21)
	2010 CVC/CPC	38	3%	3%	\$1.28	\$1.39(0.23)
	2010 CVOA	66	73%	73%	\$1.38	\$1.39(0.22)
	2010 CVOB/CPO/CDQ/ADAK	53	24%	24%	\$1.39	\$1.37(0.18)
	2011 ALL	66	-	-	\$2.68	\$2.70(0.34)
	2011 CVC/CPC	37	2%	2%	\$2.71	\$2.77(0.36)
	2011 CVOA	63	75%	74%	\$2.66	\$2.59(0.26)
	2011 CVOB/CPO/CDQ/ADAK	60	23%	23%	\$2.76	\$2.78(0.37)
	2012 ALL	71	-	-	\$2.25	\$2.29(0.23)
	2012 CVC/CPC	41	3%	4%	\$2.42	\$2.40(0.18)
	2012 CVOA	68	76%	75%	\$2.21	\$2.21(0.11)
	2012 CVOB/CPO/CDQ/ADAK	64	21%	22%	\$2.36	\$2.31(0.32)
	2013 ALL	69	-	-	\$2.36	\$2.42(0.11)
	2013 CVC/CPC	38	3%	3%	\$2.50	\$2.50(0.06)
	2013 CVOA	68	74%	73%	\$2.33	\$2.34(0.07)
	2013 CVOB/CPO/CDQ/ADAK	58	23%	24%	\$2.45	\$2.48(0.10)
	2014 ALL	68	-	-	\$2.38	\$2.51(0.42)
	2014 CVC/CPC	40	3%	3%	\$2.56	\$2.56(0.28)
	2014 CVOA	67	74%	73%	\$2.37	\$2.39(0.23)
	2014 CVOB/CPO/CDQ/ADAK	56	23%	24%	\$2.41	\$2.62(0.62)

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Table 4.8: Continued

	Type	Vessels	Share of ex-vessel volume	Share of ex-vessel revenue	Weighted average price (\$/lb)	Mean(sd) price (\$/lb)	
BST	2005	ALL	4	-	-	*	*
	2006	ALL	41	-	-	\$1.76	\$1.68(0.40)
		CVC/CPC	12	2%	2%	\$1.66	\$1.68(0.29)
		CVOA	39	75%	74%	\$1.74	\$1.65(0.48)
		CVOB/CPO/CDQ/ADAK	14	23%	24%	\$1.84	\$1.74(0.16)
	2007	ALL	27	-	-	\$2.02	\$2.00(0.65)
		CVC/CPC	9	1%	1%	\$1.90	\$1.76(0.59)
		CVOA	28	87%	87%	\$2.02	\$2.09(0.78)
		CVOB/CPO/CDQ/ADAK	14	12%	12%	\$2.04	\$2.00(0.33)
	2008	ALL	29	-	-	\$2.06	\$2.03(0.26)
		CVC/CPC	5	2%	2%	\$2.12	\$2.12(0.07)
		CVOA	26	73%	72%	\$2.03	\$2.02(0.27)
		CVOB/CPO/CDQ/ADAK	12	26%	27%	\$2.13	\$2.03(0.29)
	2009	ALL	17	-	-	\$2.11	\$2.08(0.19)
		CVC/CPC	9	3%	3%	\$2.01	\$2.05(0.16)
		CVOA	17	75%	74%	\$2.09	\$2.06(0.18)
		CVOB/CPO/CDQ/ADAK	9	22%	23%	\$2.19	\$2.16(0.21)
	2010	ALL	4	-	-	*	*
		CVC/CPC	2	*	*	*	*
		CVOA	4	*	*	*	*
CVOB/CPO/CDQ/ADAK		2	*	*	*	*	
2013	CVC/CPC	11	3%	4%	\$2.75	\$2.59(0.75)	
	CVOA	17	76%	76%	\$2.53	\$2.37(0.70)	
	CVOB/CPO/CDQ/ADAK	15	21%	20%	\$2.40	\$2.61(0.65)	
2014	CVC/CPC	23	3%	3%	\$2.55	\$2.50(0.41)	
	CVOA	36	76%	76%	\$2.38	\$2.40(0.21)	
	CVOB/CPO/CDQ/ADAK	28	21%	22%	\$2.41	\$2.48(0.36)	

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Table 4.8: Continued

	Type	Vessels	Share of ex-vessel volume	Share of ex-vessel revenue	Weighted average price (\$/lb)	Mean(sd) price (\$/lb)	
SMB	1998	N/A	95	-	-	\$2.59	\$2.62(0.20)
	2009	ALL	7	-	-	\$3.18	\$3.23(0.27)
		CVC/CPC	1	*	*	*	*
		CVOA	7	95%	95%	\$3.16	\$3.12(0.21)
		CVOB/CPO/CDQ/ADAK	1	*	*	*	*
	2010	ALL	10	-	-	\$5.21	\$5.29(0.28)
		CVC/CPC	5	2%	2%	\$5.25	\$5.34(0.22)
		CVOA	10	79%	78%	\$5.16	\$5.20(0.35)
		CVOB/CPO/CDQ/ADAK	8	19%	20%	\$5.37	\$5.36(0.17)
	2011	ALL	18	-	-	\$5.53	\$5.91(0.63)
		CVC/CPC	9	4%	4%	\$5.80	\$6.38(0.75)
		CVOA	18	79%	78%	\$5.41	\$5.53(0.41)
		CVOB/CPO/CDQ/ADAK	15	17%	19%	\$6.04	\$6.09(0.51)
	2012	ALL	17	-	-	\$4.36	\$4.38(0.26)
		CVC/CPC	12	2%	2%	\$4.38	\$4.41(0.28)
		CVOA	17	77%	77%	\$4.35	\$4.32(0.20)
		CVOB/CPO/CDQ/ADAK	14	21%	21%	\$4.41	\$4.41(0.31)
	2014	ALL	4	-	-	*	*
		CVC/CPC	1	*	*	*	*
		CVOA	4	*	*	*	*
CVOB/CPO/CDQ/ADAK		4	*	*	*	*	
WAI	2001	N/A	3	-	-	*	*

**Notes:** Except where noted, data reflect total catcher-vessel sector commercial volume and revenue value across all management programs (LLP/open access, IFQ, CDQ, ACA). Beginning in 2012, data include ex-vessel sales reported by catcher/processor sector. Weighted average price is calculated as the ratio of aggregate gross revenue value to sold volume, and thus does not include a measure of distributional variation. Mean price results as shown are calculated as the arithmetic mean over observations by vessel and quota share-type, with standard deviation (sd) reported to indicate relative variability over vessel-level observations.

<sup>a</sup> Landings in 2001 Petrel Bank test fishery; 1998 fishery data unavailable.

<sup>b</sup> Vessels column shows total count of vessel-level observations for fishery-year; in a limited number of observations where there is missing data for either revenue or volume, average price for the fishery/year is used to impute the missing value.

**Source:** NMFS AFSC BSAI Crab Economic Data Report (EDR) database .

Table 4.9: Estimated Finished Production, First Wholesale Value, and Price, CR Program Fisheries.

	Year	Processing operations	Finished weight (million lbs)	First wholesale value (\$million)	Weighted average price (\$/lb)	Mean(sd) price (\$/lb)
AIG	1998	7	3.37	\$19.40	\$5.75	\$5.88(0.48)
	1999	8	3.16	\$28.64	\$9.06	\$8.81(2.13)
	2000	6	3.69	\$26.54	\$7.20	\$8.04(2.75)
	2001	5	3.96	\$36.29	\$9.18	\$9.12(0.23)
	2002	5	3.43	\$32.43	\$9.45	\$9.25(0.96)
	2003	5	3.61	\$34.88	\$9.67	\$9.76(0.42)
	2004	5	3.73	\$26.63	\$7.14	\$7.70(1.34)
	2005	6	2.75	\$18.95	\$6.89	\$6.80(0.43)
	2006	6	3.13	\$15.69	\$5.01	\$4.74(0.42)
	2007	6	3.42	\$20.24	\$5.92	\$5.86(0.58)
	2008	7	3.41	\$27.94	\$8.19	\$7.95(0.68)
	2009	8	3.30	\$20.29	\$6.15	\$6.60(1.91)
	2010	8	3.17	\$26.12	\$8.25	\$8.73(1.48)
	2011	14	3.64	\$36.84	\$10.11	\$10.40(2.39)
	2012	13	3.76	\$29.69	\$7.90	\$8.69(2.57)
2013	12	3.77	\$31.95	\$8.47	\$7.66(2.84)	
2014	10	3.85	\$30.71	\$7.97	\$7.22(3.11)	
BBR	1998	22	9.79	\$74.23	\$7.58	\$7.42(1.20)
	1999	21	7.68	\$117.18	\$15.26	\$15.20(1.82)
	2000	20	5.38	\$50.14	\$9.32	\$11.40(2.11)
	2001	20	5.53	\$62.82	\$11.37	\$11.93(1.54)
	2002	20	6.32	\$92.14	\$14.59	\$14.60(1.93)
	2003	25	10.25	\$125.05	\$12.20	\$11.99(1.21)
	2004	23	10.01	\$112.03	\$11.20	\$11.35(0.63)
	2005	16	12.08	\$120.56	\$9.98	\$10.14(0.88)
	2006	15	9.17	\$78.08	\$8.52	\$8.22(1.02)
	2007	17	13.09	\$121.06	\$9.25	\$9.16(0.78)
	2008	16	13.31	\$140.48	\$10.56	\$10.03(2.71)
	2009	15	10.40	\$102.70	\$9.87	\$9.50(1.21)
	2010	16	10.03	\$139.68	\$13.93	\$13.89(1.79)
	2011	18	5.30	\$105.44	\$19.88	\$18.47(3.73)
	2012	16	5.27	\$78.77	\$14.95	\$15.14(4.40)
2013	17	5.75	\$76.80	\$13.35	\$13.18(3.94)	
2014	16	6.66	\$79.77	\$11.97	\$11.52(3.98)	

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Table 4.9: Continued

	Year	Processing operations	Finished weight (million lbs)	First wholesale value (\$million)	Weighted average price (\$/lb)	Mean(sd) price (\$/lb)
	1998	33	164.27	\$457.59	\$2.79	\$2.71(0.39)
	1999	31	126.92	\$498.07	\$3.92	\$3.77(0.77)
	2000	24	21.64	\$100.15	\$4.63	\$5.30(1.28)
	2001	21	16.34	\$78.81	\$4.82	\$4.76(0.37)
	2002	21	21.06	\$95.39	\$4.53	\$4.61(0.56)
	2003	19	18.15	\$99.77	\$5.50	\$5.49(0.29)
	2004	21	15.62	\$91.01	\$5.83	\$5.76(0.35)
	2005	20	16.40	\$74.41	\$4.54	\$4.31(0.59)
BSS	2006	13	24.92	\$78.75	\$3.16	\$3.15(0.22)
	2007	18	22.66	\$99.76	\$4.40	\$4.52(0.38)
	2008	16	41.02	\$173.29	\$4.22	\$4.12(1.17)
	2009	16	35.97	\$134.74	\$3.75	\$3.75(0.17)
	2010	12	31.41	\$110.60	\$3.52	\$3.60(0.31)
	2011	16	37.89	\$219.41	\$5.79	\$5.97(0.78)
	2012	15	57.79	\$278.56	\$4.82	\$4.56(1.57)
	2013	15	46.31	\$229.19	\$4.95	\$4.75(1.41)
	2014	12	36.15	\$181.43	\$5.02	\$4.75(1.52)
	2005	4	0.18	\$0.83	\$4.64	\$4.21(0.64)
	2006	9	0.72	\$2.86	\$3.97	\$3.85(0.32)
	2007	9	1.46	\$7.09	\$4.86	\$4.84(0.33)
BST	2008	10	1.34	\$6.36	\$4.76	\$4.77(0.25)
	2009	10	1.39	\$5.68	\$4.09	\$4.08(0.75)
	2010	7	*	*	*	*
	2013	12	0.86	\$5.50	\$6.43	\$6.86(1.39)
	2014	12	6.23	\$36.13	\$5.80	\$5.33(2.10)

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Table 4.9: Continued

	Year	Processing operations	Finished weight (million lbs)	First wholesale value (\$million)	Weighted average price (\$/lb)	Mean(sd) price (\$/lb)
PIK	1998	12	0.67	\$5.09	\$7.64	\$7.50(0.90)
	1998	13	1.77	\$11.66	\$6.60	\$6.69(0.26)
	2009	6	*	*	*	*
SMB	2010	8	0.91	\$11.83	\$12.94	\$11.20(3.13)
	2011	11	1.33	\$19.82	\$14.88	\$14.45(2.87)
	2012	10	1.18	\$14.30	\$12.17	\$11.29(4.41)
	2014	6	*	*	*	*
	1998	1	*	*	*	*
WAI	2002	9	0.34	\$4.96	\$14.53	\$14.18(2.82)
	2003	9	0.32	\$3.94	\$12.21	\$11.99(0.49)

**Notes:** Data shown by calendar year. Weighted average price is calculated as the ratio of aggregate sales revenue to aggregate sold volume, and thus does not include a measure of distributional variation. Mean price results as shown are calculated as the arithmetic mean over price observations by vessel or processor (i.e., each price observation is weighted equally), with standard deviation (sd) reported to indicate relative variability over vessel-level observations, noting that large standard deviations are likely indicative of a non-symmetrical distribution. For 1998-2005 wholesale value is estimated by multiplying the yearly estimated wholesale production volume with the annual weighted first wholesale value per lb., by species, derived from COAR production reports for processors reporting processing in the given fishery and year. Wholesale value and prices for 2006 and later are estimated by applying prices derived from EDR crab sales data to yearly estimates of wholesale production volume. Note that crab sales reported in the EDR may reflect sales from prior-year inventory.

For 1998-2005 and 2012 and later, wholesale production volume is estimated by multiplying the volume of ex-vessel commercial landings reported in fish tickets to the 1998-2005 or, for 2012 and later, 2007-2011 mean product recovery rate calculated from COAR production and buying reports for processors reporting landings  $\geq 1000$  lbs. in the relevant BSAI crab fishery. Annual production volume for 2006-2011 is sourced from EDR data.

<sup>a</sup>Excludes estimates of production from landings made in the 2000/2001 and 2001/2002 Western Aleutian Islands red king crab Petrel Bank test fishery.

**Source:** ADF&G fish ticket data, eLandings, ADF&G Commercial Operator's Annual Report, NMFS AFSC BSAI Crab Economic Data Report (EDR) database

Table 4.10: Statewide Crab Production, First Wholesale Value and Pricing for Selected Species

	Year	Processors	Finished weight (million lbs)	First wholesale value	Weighted average price (\$/lb)	Mean(sd) price (\$/lb)	
crab, blue king	1998	19	2.08	\$13.86	\$6.66	\$6.65(0.88)	
	1999	4	0.01	\$0.07	\$12.32	\$9.95	
	2000	2	*	*	*	*	
	2001	1	*	*	*	*	
	2002	1	*	*	*	*	
	2003	1	*	*	*	*	
	2005	1	*	*	*	*	
	2009	4	0.19	\$1.36	\$7.11	\$6.36	
	2010	7	0.67	\$8.45	\$12.68	\$11.21(3.22)	
	2011	12	1.25	\$18.05	\$14.50	\$13.48(5.19)	
	2012	11	1.12	\$14.46	\$12.97	\$11.14(3.12)	
	2014	6	0.22	\$2.06	\$9.40	\$9.00(2.99)	
	crab, golden (brown) king	1998	13	2.92	\$17.27	\$5.92	\$7.60(1.94)
		1999	16	3.44	\$31.09	\$9.03	\$8.47(3.51)
2000		16	4.92	\$37.46	\$7.62	\$9.05(3.15)	
2001		16	4.30	\$38.67	\$9.00	\$8.41(3.11)	
2002		16	3.82	\$36.34	\$9.52	\$10.58(4.12)	
2003		16	3.93	\$38.64	\$9.84	\$10.53(3.55)	
2004		13	4.65	\$34.39	\$7.39	\$9.04(3.23)	
2005		13	2.85	\$20.26	\$7.10	\$8.09(3.92)	
2006		14	3.65	\$19.55	\$5.36	\$7.11(3.78)	
2007		11	3.75	\$23.83	\$6.35	\$7.50(3.19)	
2008		13	3.89	\$29.53	\$7.59	\$8.06(2.78)	
2009		15	4.09	\$24.44	\$5.98	\$7.13(3.41)	
2010		17	5.13	\$42.21	\$8.23	\$8.54(2.92)	
2011		20	4.16	\$48.48	\$11.65	\$11.84(4.45)	
2012	21	3.95	\$36.42	\$9.23	\$11.60(5.12)		
2013	19	4.20	\$37.34	\$8.89	\$10.64(4.91)		
2014	15	3.45	\$33.05	\$9.58	\$11.72(4.36)		

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Table 4.10: Continued

	Year	Processors	Finished weight (million lbs)	First wholesale value	Weighted average price (\$/lb)	Mean(sd) price (\$/lb)
	1998	29	9.23	\$70.56	\$7.64	\$7.48(1.85)
	1999	31	7.05	\$108.38	\$15.37	\$14.12(3.83)
	2000	22	6.58	\$61.84	\$9.40	\$11.23(3.51)
	2001	30	6.35	\$72.79	\$11.47	\$10.65(3.69)
	2002	32	6.93	\$100.59	\$14.52	\$13.06(5.18)
	2003	38	10.50	\$128.50	\$12.24	\$11.09(3.95)
	2004	26	9.73	\$110.20	\$11.32	\$10.49(2.53)
	2005	23	12.50	\$125.15	\$10.01	\$9.74(3.95)
crab, red king	2006	16	10.40	\$89.38	\$8.59	\$7.73(3.16)
	2007	19	13.32	\$127.82	\$9.60	\$8.35(2.58)
	2008	17	13.18	\$141.30	\$10.72	\$9.42(2.72)
	2009	18	10.96	\$103.51	\$9.44	\$8.33(2.88)
	2010	18	9.27	\$136.36	\$14.71	\$12.82(4.40)
	2011	25	6.03	\$112.72	\$18.70	\$17.60(6.54)
	2012	19	5.25	\$81.40	\$15.50	\$13.88(4.27)
	2013	22	6.50	\$83.92	\$12.90	\$13.04(3.14)
	2014	20	7.07	\$82.62	\$11.69	\$11.60(3.04)
	1998	16	1.65	\$10.22	\$6.19	\$5.98(3.08)
	1999	11	1.48	\$7.98	\$5.41	\$5.90(2.61)
	2000	10	1.00	\$7.78	\$7.75	\$7.01(1.71)
	2001	17	1.27	\$8.32	\$6.57	\$6.03(1.47)
	2002	12	0.74	\$4.98	\$6.73	\$5.72(1.88)
	2003	13	0.81	\$6.24	\$7.75	\$6.76(2.54)
	2004	12	0.94	\$7.62	\$8.10	\$7.74(1.56)
crab, Tanner, bairdi	2005	19	2.22	\$11.35	\$5.11	\$5.92(3.23)
	2006	21	2.94	\$13.32	\$4.53	\$4.31(1.38)
	2007	18	2.49	\$12.39	\$4.97	\$5.64(3.34)
	2008	22	2.44	\$12.74	\$5.23	\$5.14(1.85)
	2009	17	2.25	\$9.48	\$4.21	\$4.66(2.03)
	2010	17	1.90	\$7.93	\$4.16	\$4.47(1.10)
	2011	15	3.88	\$27.10	\$6.98	\$7.18(1.62)
	2012	15	3.08	\$19.89	\$6.46	\$7.09(2.73)
	2013	20	1.89	\$11.99	\$6.33	\$7.06(2.63)
	2014	17	6.86	\$38.88	\$5.67	\$6.76(3.08)

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Table 4.10: Continued

	Year	Processors	Finished weight (million lbs)	First wholesale value	Weighted average price (\$/lb)	Mean(sd) price (\$/lb)
	1998	34	157.20	\$442.01	\$2.81	\$2.58(0.79)
	1999	31	116.91	\$462.83	\$3.96	\$3.28(1.22)
	2000	23	22.78	\$106.43	\$4.67	\$4.78(1.84)
	2001	20	15.15	\$73.59	\$4.86	\$4.35(1.45)
	2002	25	20.84	\$94.59	\$4.54	\$4.07(1.20)
	2003	19	17.38	\$96.38	\$5.54	\$5.60(2.48)
	2004	22	15.30	\$89.90	\$5.88	\$5.50(1.27)
crab, Tanner,	2005	20	16.29	\$74.52	\$4.58	\$4.22(0.97)
snow (opilio)	2006	13	27.89	\$92.89	\$3.33	\$3.29(0.87)
	2007	16	20.38	\$89.98	\$4.42	\$4.49(1.06)
	2008	16	31.35	\$139.96	\$4.46	\$4.25(1.00)
	2009	16	35.89	\$134.49	\$3.75	\$3.63(0.49)
	2010	12	29.91	\$105.79	\$3.54	\$3.52(1.10)
	2011	16	35.58	\$201.84	\$5.67	\$5.40(1.39)
	2012	15	59.05	\$290.11	\$4.91	\$4.66(1.15)
	2013	16	47.53	\$241.99	\$5.09	\$5.07(2.64)
	2014	14	37.28	\$196.38	\$5.27	\$6.07(5.28)

**Notes:** Data shown by calendar year. Includes processing of crab taken from stocks/fisheries other than those managed under the BSAI crab FMP. Processor counts in Table 13 and Table 14 identify number of entities reporting crab production in the Commercial Operators Annual Report, including purchasers of crab that had all crab custom processed for them by other processors; this is distinct from processor counts in other tables, which show the number of processing plants engaging in crab processing activity.

**Source:** ADF&G Commercial Operator's Annual Report

Table 4.11: Statewide Crab Production by Product for Selected Species

	Product	Processor	Finished weight (million lbs)	First wholesale value (\$ million)	Weighted average price (\$/lb)	Mean(sd) price (\$/lb)
King, blue	Other	1	*	*	*	*
	2009 Sections	4	0.19	1.33	7.17	7.36
	Whole crab	1	*	*	*	*
	Other	1	*	*	*	*
	2010 Sections	7	0.65	8.27	12.75	12.16(2.42)
	Whole crab	1	*	*	*	*
	Other	2	*	*	*	*
	2011 Sections	12	1.22	17.73	14.50	14.23(5.38)
	Whole crab	2	*	*	*	*
	Other	2	*	*	*	*
	2012 Sections	10	1.10	14.16	12.91	11.50(3.52)
	Whole crab	2	*	*	*	*
	Other	2	*	*	*	*
	2014 Sections	6	0.21	1.98	9.37	9.71(2.77)
	Whole crab	1	*	*	*	*
King, golden	Other	4	0.34	2.04	6.04	8.69
	2007 Sections	7	2.96	18.33	6.20	7.02(2.32)
	Whole crab	6	0.46	3.26	7.12	7.15(1.14)
	Other	4	0.42	3.06	7.32	8.78
	2008 Sections	8	2.96	22.52	7.60	8.60(1.92)
	Whole crab	8	0.51	3.70	7.21	6.83(1.19)
	Other	3	*	*	*	*
	2009 Sections	10	3.31	19.28	5.83	7.38(2.87)
	Whole crab	8	0.78	4.89	6.28	6.01(1.55)
	Other	3	*	*	*	*
	2010 Sections	11	4.04	35.02	8.67	9.69(1.36)
	Whole crab	12	1.08	6.76	6.24	7.13(1.46)
	Other	3	*	*	*	*
	2011 Sections	14	3.40	40.10	11.81	12.55(4.48)
	Whole crab	10	0.76	7.91	10.39	10.22(1.19)
Other	4	0.01	0.05	9.48	12.87	
2012 Sections	15	3.32	29.14	8.78	11.54(4.84)	
Whole crab	11	0.62	6.91	11.09	10.90(2.79)	
Other	6	0.01	0.04	7.95	10.82(7.15)	
2013 Sections	14	3.51	30.79	8.78	10.46(4.81)	
Whole crab	10	0.69	6.19	9.03	10.53(3.57)	
Other	2	*	*	*	*	
2014 Sections	11	3.28	30.28	9.22	9.60(3.57)	
Whole crab	8	0.16	2.48	15.20	13.79(3.54)	

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Table 4.11: Continued

	Product	Processor	Finished weight (million lbs)	First wholesale value (\$ million)	Weighted average price (\$/lb)	Mean(sd) price (\$/lb)
King, red	Other	8	0.10	0.32	3.32	3.38(1.20)
	2007 Sections	19	12.86	123.53	9.60	9.67(0.89)
	Whole crab	10	0.36	2.89	8.03	8.21(1.93)
	Other	7	0.16	0.71	4.52	4.31(1.48)
	2008 Sections	17	12.58	134.64	10.70	10.58(1.23)
	Whole crab	8	0.44	4.76	10.75	9.36(2.40)
	Other	8	0.12	0.44	3.79	4.00(1.70)
	2009 Sections	17	10.34	100.69	9.74	9.55(2.04)
	Whole crab	11	0.51	1.52	2.98	7.99(2.44)
	Other	8	0.14	0.61	4.42	6.01(2.68)
	2010 Sections	17	8.91	131.72	14.78	15.08(2.77)
	Whole crab	11	0.22	2.87	13.11	12.36(3.30)
	Other	11	0.08	0.49	6.22	11.76(10.82)
	2011 Sections	23	5.72	107.28	18.74	20.21(3.33)
	Whole crab	15	0.23	4.00	17.72	16.05(4.29)
	Other	6	0.03	0.21	7.06	6.75(2.41)
	2012 Sections	18	4.93	76.29	15.49	16.02(2.62)
	Whole crab	10	0.29	4.22	14.29	12.64(3.38)
	Other	7	0.04	0.41	10.23	10.47(2.84)
	2013 Sections	19	6.15	78.99	12.84	14.17(2.40)
	Whole crab	13	0.31	3.81	12.27	11.78(3.45)
	Other	7	0.05	0.42	8.22	8.91(4.04)
	2014 Sections	18	6.66	77.17	11.58	12.27(2.70)
	Whole crab	12	0.35	4.34	12.23	11.61(2.21)

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Table 4.11: Continued

	Product	Processor	Finished weight (million lbs)	First wholesale value (\$ million)	Weighted average price (\$/lb)	Mean(sd) price (\$/lb)
2007	Other	1	*	*	*	*
	Sections	18	2.46	12.16	4.95	5.36(1.00)
	Whole crab	4	0.01	0.02	3.59	6.86
2008	Other	4	0.04	0.17	3.81	5.61
	Sections	22	2.39	12.45	5.21	5.37(1.21)
	Whole crab	4	0.00	0.01	3.54	2.97
2009	Other	4	0.02	0.07	2.97	5.78
	Sections	16	2.20	9.30	4.23	4.67(1.32)
	Whole crab	3	*	*	*	*
Tanner, bairdi 2010	Other	1	*	*	*	*
	Sections	16	1.45	6.49	4.48	4.73(0.86)
	Whole crab	6	0.44	1.32	3.00	3.54(1.40)
2011	Other	4	0.10	0.59	6.18	8.09
	Sections	14	3.49	23.88	6.85	7.24(1.18)
	Whole crab	5	0.30	2.40	7.97	5.80(2.10)
2012	Other	1	*	*	*	*
	Sections	13	2.73	16.86	6.18	6.76(1.39)
	Whole crab	6	0.35	2.85	8.09	6.30(2.09)
2013	Other	4	0.00	0.06	13.32	11.20
	Sections	19	1.60	9.74	6.08	6.34(1.06)
	Whole crab	4	0.29	2.09	7.27	6.61
2014	Other	2	*	*	*	*
	Sections	15	6.78	37.89	5.59	6.18(1.54)
	Whole crab	4	0.08	0.60	7.23	5.95

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Table 4.11: Continued

	Product	Processor	Finished weight (million lbs)	First wholesale value (\$ million)	Weighted average price (\$/lb)	Mean(sd) price (\$/lb)
Tanner, opilio (snow)	Other	2	*	*	*	*
	2007 Sections	16	20.19	88.68	4.39	4.48(0.21)
	Whole crab	1	*	*	*	*
	Other	3	*	*	*	*
	2008 Sections	16	29.60	131.42	4.44	4.51(0.29)
	Whole crab	1	*	*	*	*
	Other	1	*	*	*	*
	2009 Sections	16	35.60	132.73	3.73	3.73(0.19)
	Other	1	*	*	*	*
	2010 Sections	12	29.80	104.57	3.51	3.58(1.09)
	Whole crab	1	*	*	*	*
	Other	1	*	*	*	*
	2011 Sections	16	35.30	198.76	5.63	5.32(1.43)
	Whole crab	1	*	*	*	*
	Other	1	*	*	*	*
	2012 Sections	15	58.86	287.41	4.88	4.73(0.90)
	Whole crab	2	*	*	*	*
	Other	1	*	*	*	*
	2013 Sections	16	47.50	239.95	5.05	4.85(1.66)
	Whole crab	1	*	*	*	*
	Other	1	*	*	*	*
	2014 Sections	14	36.98	193.46	5.23	5.88(5.31)
	Whole crab	2	*	*	*	*

**Notes:** Data shown by calendar year. Includes processing of crab taken from stocks/fisheries other than those managed under the BSAI crab FMP. Processor counts in Table 13 and Table 14 identify number of entities reporting crab production in the Commercial Operators Annual Report, including purchasers of crab that had all crab custom processed for them by other processors; this is distinct from processor counts in other tables, which show the number of processing plants engaging in crab processing activity.

**Source:** ADF&G Commercial Operator's Annual Report



Table 4.12: Processing Employment, CR Program Fisheries

	Year	Processors	Processing positions		Processing labor hours		
			Total	Median per plant	Total (1,000)	Median per plant (1,000)	Median per position
CP	98/01/04	4(2)	*	*	0	0	0
	2005	2	*	*	0	0	0
	2006	1	*	*	0	0	0
	2007	1	*	*	0	0	0
	2008	1	*	*	0	0	0
AIG SF	98/01/04	13(7)	376	97	54	13.99	188
	2005	4	*	*	*	*	*
	2006	6	289	35	47	0.97	45
	2007	5	404	60	72	4.28	145
	2008	6	296	45	38	2.76	156
SFCP	2009	5	383	35	*	*	*
	2010	4	*	*	*	*	*
	2011	7	758	80	49	4.79	33
	2012	8	0	0	53	2.60	0
	2013	6	0	0	61	5.96	0
	2014	4	0	0	*	*	0
CP	98/01/04	18(10)	69	10	0	0	0
	2005	4	*	*	0	0	0
	2006	3	*	*	0	0	0
	2007	3	*	*	0	0	0
	2008	3	*	*	0	0	0
BBR SF	98/01/04	40(20)	1,400	84	142	9.96	99
	2005	11	1,024	82	202	12.12	148
	2006	11	1,027	72	180	10.76	118
	2007	11	965	85	261	25.22	216
	2008	11	873	81	245	12.58	299
SFCP	2009	12	1,132	82	199	16.06	152
	2010	13	1,106	75	212	20.09	237
	2011	14	1,272	77	104	6.71	77
	2012	12	0	0	100	6.51	0
	2013	10	0	0	104	10.00	0
	2014	9	0	0	130	21.07	0

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Table 4.12: Continued

	Year	Processors	Processing positions		Processing labor hours			
			Total	Median per plant	Total (1,000)	Median per plant (1,000)	Median per position	
BSS	98/01/04	17(8)	82	15	0	0	0	
	CP	2005	6	62	10	0	0	
	2006	4	*	*	0	0	0	
	2007	4	*	*	0	0	0	
	2008	4	*	*	0	0	0	
	SF	98/01/04	50(24)	2,481	124	1,134	36.21	248
	2005	13	1,487	110	302	23.68	190	
	2006	10	1,061	72	445	49.45	269	
	2007	10	1,140	106	442	41.29	324	
	2008	12	1,170	85	712	30.52	539	
	SFCP	2009	14	1,302	83	600	58.41	413
	2010	11	1,189	85	534	50.90	390	
	2011	14	1,601	97	555	45.69	337	
	2012	13	0	0	1,087	77.94	0	
	2013	12	0	0	774	63.55	0	
2014	10	0	0	590	76.01	0		
BST	CP	2006	1	*	*	0	0	0
	2007	1	*	*	0	0	0	
	2008	1	*	*	0	0	0	
	SF	2005	7	401	53	8	0.40	8
	2006	8	668	86	14	1.25	18	
	2007	7	445	60	35	4.97	84	
	2008	8	647	85	27	2.93	48	
	SFCP	2009	8	807	98	29	4.27	24
	2010	5	477	80	6	0.70	14	
	2013	7	0	0	17	1.86	0	
	2014	8	0	0	122	8.51	0	

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Table 4.12: Continued

		Year	Processors	Processing positions		Processing labor hours			
				Total	Median per plant	Total (1,000)	Median per plant (1,000)	Median per position	
SMB	CP	98/01/04	1(1)	*	*	0	0	0	
		98/01/04	10(10)	820	79	55	3.08	53	
		2009	2	*	*	*	*	*	
	SF		2010	5	487	65	19	0.40	8
			2011	6	613	64	17	0.84	12
			2012	6	0	0	21	0.76	0
			2014	1	0	0	*	*	0
WAI	CP	98/01/04	2(1)	*	*	0	0	0	
	SF	98/01/04	1(1)	*	*	*	*	*	

**Notes:** Data shown by calendar year. Statistics shown for 98/01/04 are calculated as the annual average over the 1998, 2001, and 2004 calendar years; Processors column indicates count of processing operation-level observations (including catcher-processors) over the 3-year period; numbers in parentheses show count of unique processing operations participating within the three years. Starting in 2009, data are summarized over all processing sectors (SFCP) to preserve confidentiality.

Processing positions reporting discontinued beginning in 2012.

Total processing positions statistics exclude salaried workers employed in the processing sectors (see Table 24).

Processing labor hours reflect shoreside and floating processor sectors only.

<sup>a</sup> Data for EAG and WAG fisheries are summarized together as the 'AIG' fishery. Where a submitter reported processing employment in both EAG and WAG fisheries, the maximum reported number of processing positions, rather than the sum of processing positions, is used to calculate total and mean processing positions.

<sup>b</sup> No catcher/processor operations reported fishing activity in the SMB fishery from 2009 to 2012.

**Source:** NMFS AFSC BSAI Crab Economic Data Report (EDR) database .

Table 4.13: Shoreside and Floating Processor Employee Residence, CR Program Fisheries

Year	Processors	Alaska	Washington- Oregon- Idaho	U.S. Other	Non-U.S.	Total
2005	17	605	987	1,243	37	2,872
2006	13	898	882	878	2	2,660
2007	14	738	970	1,477	7	3,192
2008	13	927	960	2,018	4	3,909
2009	12	800	774	1,515	23	3,112
2010	12	767	868	1,321	367	3,323
2011	13	800	815	1,193	8	2,816
2012	13	647	1,087	1,545	12	3,291
2013	15	932	938	1,259	4	3,133
2014	9	780	708	876	6	2,370

**Source:** NMFS AFSC BSAI Crab Economic Data Report (EDR) database .

Table 4.14: Processing Labor Payments, CR Program Fisheries

	Year	Processors	Labor Payments (\$1,000)		Processing wages, median		
			Total	Median per plant	per position	per hour	per finished pound
CP	98/01/04	4(2)	*	*	*	\$0	*
	2005	2	*	*	*	\$0	*
	2006	1	*	*	*	\$0	*
	2007	1	*	*	*	\$0	*
	2008	1	*	*	*	\$0	*
AIG SF	98/01/04	13(7)	\$701	\$145	\$1,385	\$11.52	\$0.23
	2005	4	*	*	*	*	*
	2006	6	\$511	\$19	\$1,123	\$10.84	\$0.14
	2007	5	\$767	\$61	\$1,351	\$10.56	\$0.18
	2008	6	\$569	\$98	*	\$12.05	\$0.23
SFCP	2009	5	\$891	\$139	\$1,156	*	*
	2010	4	*	*	*	*	*
	2011	7	\$1,156	\$78	\$366	\$10.41	\$0.19
	2012	8	\$1,125	\$60	\$0	\$10.37	\$0
	2013	6	\$617	\$62	\$0	\$10.09	\$0
2014	4	*	*	\$0	*	\$0	
CP	98/01/04	18(10)	\$275	\$43	\$3,747	\$0	\$0.48
	2005	4	*	*	*	\$0	*
	2006	3	*	*	*	\$0	*
	2007	3	*	*	*	\$0	*
	2008	3	*	*	*	\$0	*
BBR SF	98/01/04	40(20)	\$1,619	\$105	\$1,203	\$12.46	\$0.23
	2005	11	\$2,304	\$207	\$1,872	\$11.25	\$0.21
	2006	11	\$2,064	\$166	\$1,474	\$11.03	\$0.23
	2007	11	\$2,855	\$234	\$2,015	\$11.54	\$0.22
	2008	11	\$2,885	\$293	\$2,813	\$11.57	\$0.25
SFCP	2009	12	\$2,284	\$132	\$2,399	\$10.71	\$0.23
	2010	13	\$2,445	\$198	\$2,441	\$10.12	\$0.22
	2011	14	\$1,265	\$77	\$1,022	\$10.59	\$0.21
	2012	12	\$1,195	\$69	\$0	\$10.98	\$0
	2013	10	\$1,200	\$95	\$0	\$10.14	\$0
2014	9	\$1,406	\$76	\$0	\$9.48	\$0	

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Table 4.14: Continued

		Processors	Labor Payments (\$1,000)		Processing wages, median		
Year	Total		Median per plant	per position	per hour	per finished pound	
CP	98/01/04	17(8)	\$721	\$112	\$8,375	\$0	\$0.29
	2005	6	\$282	\$35	\$4,198	\$0	\$0.25
	2006	4	*	*	*	\$0	*
	2007	4	*	*	*	\$0	*
	2008	4	*	*	*	\$0	*
BSS SF	98/01/04	50(24)	\$13,443	\$427	\$2,633	\$11.95	\$0.25
	2005	13	\$3,393	\$278	\$1,558	\$11.18	\$0.23
	2006	10	\$4,745	\$537	\$3,088	\$10.89	\$0.22
	2007	10	\$5,146	\$473	\$3,583	\$11.29	\$0.27
	2008	12	\$9,179	\$526	\$4,260	\$11.25	\$0.24
SFCP	2009	14	\$7,022	\$322	\$7,792	\$10.79	\$0.21
	2010	11	\$5,739	\$379	\$4,885	\$10.32	\$0.22
	2011	14	\$6,264	\$363	\$4,088	\$10.75	\$0.23
	2012	13	\$12,148	\$620	\$0	\$10.54	\$0
	2013	12	\$8,086	\$488	\$0	\$10.16	\$0
	2014	10	\$6,351	\$459	\$0	\$10.64	\$0
CP	2006	1	*	*	*	\$0	*
	2007	1	*	*	*	\$0	*
	2008	1	*	*	*	\$0	*
BST SF	2005	7	\$89	\$5	\$92	\$10.91	\$0.27
	2006	8	\$149	\$14	\$201	\$10.87	\$0.21
	2007	7	\$364	\$46	\$782	\$10.57	\$0.23
	2008	8	\$452	\$48	\$583	\$11.31	\$0.29
SFCP	2009	8	\$298	\$34	\$256	\$10.32	\$0.21
	2010	5	\$65	\$7	\$144	\$10.33	*
	2013	7	\$164	\$16	\$0	\$9.74	\$0
	2014	8	\$1,230	\$80	\$0	\$9.64	\$0

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Table 4.14: Continued

	Year	Processors	Labor Payments (\$1,000)		Processing wages, median			
			Total	Median per plant	per position	per hour	per finished pound	
SMB	CP	98/01/04	1(1)	*	*	*	\$0	*
		98/01/04	10(10)	\$604	\$33	\$533	\$10.73	\$0.23
		2009	2	*	*	*	*	*
	SF	2010	5	\$175	\$4	\$73	\$10.07	\$0.21
		2011	6	\$153	\$8	\$127	\$9.59	\$0.20
		2012	6	\$246	\$7	\$0	\$9.90	\$0
	2014	1	*	*	\$0	*	\$0	
WAI	CP	98/01/04	2(1)	*	*	*	\$0	*
	SF	98/01/04	1(1)	*	*	*	*	*

**Notes:** Data shown by calendar year; statistics shown for 98/01/04 are calculated as the annual average over the 1998, 2001, and 2004 calendar years; Processors column indicates count of processing operation-level observations (including catcher-processors) over the 3-year period, with count of distinct operations in the three-year series in parentheses. Starting in 2009, data are summarized over all processing sectors (SF/CP) to preserve confidentiality.

Processing labor payments exclude benefits and indirect expenses paid on behalf of processing workers and payments to salaried workers employed by processors (see Table 24). Where applicable, these figures include bonuses and deductions to labor payments for shared expenses such as food and provisions.

Number of observations for pro-rata statistics (pay per plant, worker, and finished pounds) may differ from the number of observations for total labor payments due to missing observations for the denominator variable (i.e., mean number of processing positions, processing labor hours, and finished production pounds) in the fishery-year of interest.

Per position and per finished pound pro rata statistics discontinued beginning in 2012 due to discontinuation of processing positions and finished pounds reporting in the EDR.

Median pay per hour values are representative of the shoreside and floating processor sectors only.

<sup>a</sup> Data for EAG and WAG fisheries are summarized together as the 'AIG' fishery. Where a submitter reported separate labor payments and processing positions in the two fisheries, the maximum reported number of processing positions, rather than the sum of processing positions over the two fisheries, is used to calculate pay per worker statistics. All other variables used in pro-rata statistics for the AIG fisheries are treated cumulatively.

**Source:** NMFS AFSC BSAI Crab Economic Data Report (EDR) database .

Table 4.15: Harvesting Sector Employment, CR Program Fisheries

	Year	Vessels	Crew positions		Crew participants	
			Total	Mean per vessel (sd)	Total	Mean per vessel (sd)
CP	98/01/04	4(2)	-	-	*	*
	2005	1	*	*	*	*
	2006	1	*	*	*	*
	2007	1	*	*	*	*
	2008	1	*	*	*	*
AIG CV	98/01/04	52(22)	115	6.65(0.99)	131	7.56(2.09)
	2005	10	58	5.80(1.14)	72	7.20(2.58)
	2006	6	38	6.33(0.52)	48	7.92(2.58)
	2007	6	38	6.33	40	6.67
	2008	4	*	*	*	*
CVCP	2009	5	35	7.00	43	8.60
	2010	5	35	7.00	43	8.50
	2011	5	36	7.20	38	7.60
	2012	6	46	7.67(1.21)	-	-
	2013	6	44	7.33(1.03)	-	-
	2014	5	35	7.00	-	-
CP	98/01/04	20(9)	-	-	70	10.49(2.11)
	2005	3	*	*	*	*
	2006	3	*	*	*	*
	2007	3	*	*	*	*
	2008	3	*	*	*	*
BBR CV	98/01/04	633(250)	1,233	5.85(0.92)	1,304	6.18(1.16)
	2005	84	472	5.61(0.82)	493	5.87(1.04)
	2006	79	445	5.63(0.83)	465	5.89(1.06)
	2007	70	407	5.81(0.79)	419	5.99(0.86)
	2008	76	452	5.95(0.91)	473	6.22(1.11)
CVCP	2009	70	443	6.33(2.41)	435	6.21(1.01)
	2010	65	422	6.48(2.93)	412	6.34(1.22)
	2011	62	413	6.66(3.23)	401	6.47(1.24)
	2012	64	428	6.68(2.69)	-	-
	2013	63	418	6.63(2.53)	-	-
	2014	63	422	6.70(2.49)	-	-

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Table 4.15: Continued

		Vessels	Crew positions		Crew participants		
Year			Total	Mean per vessel (sd)	Total	Mean per vessel (sd)	
BSS	CP	98/01/04	18(8)	-	-	78	12.93(5.31)
		2005	6	69	11.50(4.81)	59	9.83(1.47)
		2006	4	*	*	*	*
		2007	4	*	*	*	*
		2008	4	*	*	*	*
	CV	98/01/04	524(210)	1,049	6.01(0.89)	1,139	6.52(1.45)
		2005	150	856	5.70(0.72)	857	5.71(0.73)
		2006	74	418	5.65(0.78)	448	6.05(1.19)
		2007	65	377	5.79(0.79)	400	6.15(1.08)
		2008	74	447	6.03(0.79)	489	6.61(1.41)
	CVCP	2009	77	536	6.96(4.12)	522	6.78(1.82)
		2010	68	444	6.53(2.61)	442	6.50(1.26)
		2011	68	453	6.66(2.87)	463	6.81(1.70)
		2012	72	502	6.97(3.61)	-	-
		2013	71	481	6.77(3.11)	-	-
2014		69	472	6.84(2.94)	-	-	
BST	CP	2006	1	*	*	*	*
		2007	1	*	*	*	*
		2008	1	*	*	*	*
	CV	2005	4	*	*	*	*
		2006	25	140	5.60(1.00)	143	5.72(1.02)
		2007	22	118	5.36(0.66)	131	5.95(0.84)
		2008	26	146	5.62(0.75)	162	6.23(1.31)
	CVCP	2009	14	102	7.29(5.20)	96	6.86(2.54)
		2010	4	*	*	*	*
		2013	22	156	7.09(3.52)	-	-
2014		39	268	6.87(2.67)	-	-	

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Table 4.15: Continued

		Year	Vessels	Crew positions		Crew participants	
				Total	Mean per vessel (sd)	Total	Mean per vessel (sd)
SMB	CP	98/01/04	2(2)	-	-	*	*
		98/01/04	94(94)	489	5.20(0.80)	516	5.49(0.84)
		2009	7	39	5.57(0.79)	40	5.71(0.76)
	CV	2010	11	63	5.73(0.65)	66	6.00(0.89)
		2011	17	112	6.56(1.12)	118	6.94(1.39)
		2012	17	106	6.24(0.97)	-	-
		2014	4	*	*	-	-
WAI	CP	98/01/04	2(1)	-	-	*	*
	CV	98/01/04	3(3)	*	*	*	*

**Notes:** Data shown by calendar year; statistics shown for 98/01/04 are calculated over the 1998, 2001, and 2004 calendar years, with vessel column indicating count of vessel-level observations, and unique vessels (in parentheses) over the 3-year period. Starting in 2009, data are summarized over all harvesting sectors (CVCP) to preserve confidentiality.

Total count and mean per vessel statistics by fishery/sector/year are shown for crew positions in the active fleet and unique crew members receiving payment for crab fishing; statistics include fishing crew and captain, excludes processing-only employees on CPs. Larger values for crew participant statistics relative to crew positions for a fishery/sector/year mainly reflect rotation in crew during the season.

Crew positions statistics are calculated using average fishing crew size reported in EDR data for 1998/04/05 (data not collected for CPs). As of 2005 calendar years (2006 for BSS fishery), crew positions are calculated using eLandings data on count of crew on-board reported by trip. CP crew positions statistics are inclusive of processing crew, as reported in the EDR and/or eLandings.

Crew participant statistics are calculated using EDR data on fishing crew pay settlements; statistics for 1998-2004 may slightly undercount number of crew participants due to discontinuity in EDR definition of fishing crew. Crew participants reporting was discontinued in the EDR beginning in 2012.

<sup>a</sup> No catcher/processor operations reported fishing activity in the SMB fishery from 2009 to 2012.

<sup>b</sup> 2001 WAI fishery was closed except for Petrel Bank test fishery.

<sup>c</sup> As elsewhere in this document, data for EAG and WAG fisheries are summarized in aggregate for Aleutian Islands golden king crab (AIG) fishery to preserve confidentiality; where vessel crew data are reported for both the EAG and WAG fisheries, mean figures over the two fisheries for crew participants and crew positions were used in place of cumulative figures under the assumption that the same individuals are employed in both fisheries.

**Source:** NMFS AFSC BSAI Crab Economic Data Report (EDR) database, 2005 and later crew positions information from eLandings.

Table 4.16: Participating Licensed Crew Members and Gear Operators by Alaska Residence, CR Program Fisheries

Year	Crew license holders				Gear operators			Crew and gear operators
	Alaska non-resident	Alaska resident	Unknown	Total	Alaska non-resident	Alaska resident	Total	Total
1998	-	-	-	-	243	106	349	-
1999	-	-	-	-	246	105	351	-
2000	-	-	-	-	208	90	298	-
2001	-	-	-	-	210	78	288	-
2002	-	-	-	-	204	77	281	-
2003	-	-	-	-	199	82	281	-
2004	-	-	-	-	197	81	278	-
2005	-	-	-	-	137	56	193	-
2006	331	193	10	534	96	36	132	666
2007	337	191	2	530	74	26	100	630
2008	414	214	3	631	90	29	119	750
2009	380	188	1	569	83	27	110	679
2010	344	167	4	515	71	28	99	614
2011	346	182	2	530	68	25	93	623
2012	402	204	5	611	82	30	112	723
2013	374	187	15	576	70	24	94	670
2014	380	200	4	584	69	23	92	676

**Notes:** Data shown by calendar year. Excludes crewmembers working solely on the processing line. A commercial crewmember license or CFEC Gear Operator permit is required of any individual participating directly or indirectly in taking of raw fishery products on a commercial vessel, including cooks, engineers, and individuals handling fishing gear or involved in maintenance or operation of the vessel.

<sup>a</sup> Note that crew license and gear operator permit number reporting in EDR data was likely incomplete for 2005 and 2006, but is largely accurate for 2007 and subsequent years due to improvements in EDR administration implemented by the NMFS EDR data collection agent (PSMFC), including providing lookup support to EDR submitters and online access to crew license and gear operator permit registries.

**Source:** ADF&G commercial crewmember license files, ADF&G fish ticket data, Landings,

Table 4.17: Active CFEC Gear Operator Permit Holders: Count of Permit Holders Reported on Crab Fishery Landings and Share of CR Fishery Ex-vessel Value Landed on Associated Vessels, by State of Residence

	Year	Non-Alaska residents <sup>ab</sup>		Alaska residents	
		Permit holders	Associated share of landed ex-vessel value	Permit holders	Associated share of landed ex-vessel value
AIG	1998	24	*	2	*
	1999	21	*	5	*
	2000	23	*	3	*
	2001	24	97	4	3
	2002	25	*	3	*
	2003	19	*	3	*
	2004	21	*	3	*
	2005	10	100	0	0
	2006	9	*	1	*
	2007	5	*	1	*
	2008	6	*	1	*
	2009	7	100	0	0
	2010	8	*	1	*
	2011	5	*	2	*
	2012	7	*	1	*
2013	7	*	1	*	
2014	5	*	1	*	
BBR	1998	186	76	87	24
	1999	185	74	72	26
	2000	174	73	70	27
	2001	164	77	66	23
	2002	176	73	67	27
	2003	180	79	73	21
	2004	183	78	73	22
	2005	69	78	33	22
	2006	59	76	28	24
	2007	55	78	19	22
	2008	64	79	21	21
	2009	54	78	21	22
	2010	50	77	20	23
	2011	44	78	18	22
	2012	47	77	18	23
2013	48	78	16	22	
2014	46	76	17	24	

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Table 4.17: Continued

	Year	Non-Alaska residents <sup>ab</sup>		Alaska residents	
		Permit holders	Associated share of landed ex-vessel value	Permit holders	Associated share of landed ex-vessel value
BSS	1998	183	77	72	23
	1999	194	75	81	25
	2000	156	72	74	28
	2001	154	81	54	19
	2002	138	77	56	23
	2003	136	76	56	24
	2004	137	78	53	22
	2005	126	78	45	22
	2006	74	84	18	16
	2007	58	76	19	24
	2008	72	82	21	18
	2009	69	83	19	17
	2010	55	78	21	22
	2011	55	79	19	21
	2012	69	79	24	21
2013	58	77	20	22	
2014	57	81	21	19	
BST	2005	4	100	0	0
	2006	38	89	10	11
	2007	25	79	9	21
	2008	28	83	6	17
	2009	17	*	3	*
	2010	2	*	2	*
	2014	14	64	8	36
2014	29	82	13	18	
PIK	1998	23	43	34	57
SMB	1998	97	75	34	25
	2009	5	*	2	*
	2010	7	67	4	33
	2011	14	76	4	24
	2012	11	66	7	34
2014	2	*	2	*	
WAI	1998	1	100	0	0
	2002	26	82	7	18
	2003	26	88	4	12

**Notes:** Data shown by calendar year.

<sup>a</sup> Count of unique holders of CFEC Gear Operator permits recorded on ADF&G fish tickets for BSAI crab landings.

<sup>b</sup> Percentage share of total aggregate crab fishery ex-vessel value represented by summed value of crab landings associated with Gear Operator permits, by State of Residence.

<sup>c</sup> 2001 Petrel Bank test fishery excluded.

**Source:** ADF&G fish ticket data, eLandings, CFEC ex-vessel pricing, and ADF&G Commercial Operator's Annual Report

Table 4.18: Captain and Crew Share Payments, and Crab-Equivalent Crew Pay, CR Program Fisheries

	Year	Crew share payment (\$million)			Captain share payment (\$million)		CV Crew payment, crab equivalent (1000 lbs)		
		Obs	Per vessel, median	Total	Per vessel, median	Total	Obs	Per vessel, median	Total
CP	98/01/04	4(2)	*	*	*	*	-	-	-
	2005	1	*	*	*	*	-	-	-
	2006	1	*	*	*	*	-	-	-
	2007	1	*	*	*	*	-	-	-
	2008	1	*	*	*	*	-	-	-
AIG CV	98/01/04	50(21)	\$0.13	\$3.67	\$0.06	\$1.78	50(21)	40.24	1,002.58
	2005	10	\$0.15	\$1.80	\$0.06	\$0.98	10	46.18	583.75
	2006	6	\$0.11	\$0.87	\$0.06	\$0.48	6	58.24	386.17
	2007	6	\$0.18	\$1.13	\$0.08	\$0.56	6	66.47	466.01
	2008	4	*	*	*	*	4	*	*
CV + CP	2009	5	\$0.39	\$1.93	\$0.21	\$1.13	4	*	*
	2010	5	\$0.65	\$3.24	\$0.28	\$1.84	4	*	*
	2011	5	\$0.69	\$4.05	\$0.36	\$2.20	4	*	*
	2012	6	\$0.64	\$3.53	\$0.32	\$1.82	5	175.67	739.97
	2013	6	\$0.54	\$3.37	\$0.28	\$1.53	6	137.26	821.72
	2014	5	\$0.70	\$3.25	\$0.29	\$1.41	5	167.09	807.83
BBR CP	98/01/04	20(9)	\$0.09	\$0.66	\$0.03	\$0.21	-	-	-
	2005	3	*	*	*	*	-	-	-
	2006	3	*	*	*	*	-	-	-
	2007	3	*	*	*	*	-	-	-
	2008	3	*	*	*	*	-	-	-
CV	98/01/04	626(249)	\$0.05	\$13.07	\$0.03	\$6.32	618(249)	10.88	2,551.38
	2005	84	\$0.12	\$11.96	\$0.06	\$6.29	84	22.81	2,261.70
	2006	79	\$0.10	\$8.77	\$0.05	\$4.44	79	23.45	2,002.05
	2007	70	\$0.14	\$11.86	\$0.08	\$5.91	70	27.60	2,391.78
	2008	76	\$0.17	\$14.52	\$0.08	\$6.56	76	29.74	2,568.73

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Table 4.18: Continued

	Year	Crew share payment (\$million)			Captain share payment (\$million)		CV Crew payment, crab equivalent (1000 lbs)		
		Obs	Per vessel, median	Total	Per vessel, median	Total	Obs	Per vessel, median	Total
BBR CV + CP	2009	70	\$0.12	\$9.67	\$0.06	\$4.58	68	24.50	1,848.95
	2010	65	\$0.20	\$13.33	\$0.10	\$6.35	63	24.96	1,630.31
	2011	62	\$0.16	\$10.88	\$0.09	\$5.05	59	14.07	942.64
	2012	66	\$0.10	\$8.11	\$0.05	\$3.65	62	13.55	958.50
	2013	63	\$0.09	\$7.58	\$0.05	\$3.61	61	13.13	1,021.99
	2014	63	\$0.11	\$7.73	\$0.05	\$3.74	60	15.67	1,113.59
CP	98/01/04	18(8)	\$0.25	\$1.62	\$0.08	\$0.52	-	-	-
	2005	6	\$0.07	\$0.56	\$0.03	\$0.19	-	-	-
	2006	4	*	*	*	*	-	-	-
	2007	4	*	*	*	*	-	-	-
	2008	4	*	*	*	*	-	-	-
BSS CV	98/01/04	517(210)	\$0.08	\$18.92	\$0.04	\$9.13	510(210)	33.92	18,059.94
	2005	150	\$0.07	\$10.72	\$0.04	\$5.51	150	31.02	5,335.74
	2006	74	\$0.07	\$6.07	\$0.04	\$3.03	74	56.65	4,787.81
	2007	65	\$0.12	\$8.97	\$0.06	\$4.26	64	63.39	4,701.20
	2008	74	\$0.20	\$16.49	\$0.10	\$7.85	74	108.04	8,833.86
CV + CP	2009	77	\$0.15	\$13.17	\$0.07	\$5.84	73	97.27	7,687.66
	2010	68	\$0.13	\$9.50	\$0.06	\$4.26	66	88.79	6,625.45
	2011	68	\$0.29	\$20.29	\$0.13	\$9.08	66	104.28	7,350.30
	2012	72	\$0.38	\$27.26	\$0.18	\$12.36	70	164.03	11,875.33
	2013	71	\$0.29	\$22.29	\$0.14	\$10.14	69	119.71	9,132.92
	2014	69	\$0.24	\$17.73	\$0.11	\$7.96	67	97.45	7,255.43
BST	2006	1	*	*	*	*	-	-	-
	2007	1	*	*	*	*	-	-	-
	2008	1	*	*	*	*	-	-	-
	2005	4	*	*	*	*	4	*	*
	2006	25	\$0.00	\$0.23	\$0.00	\$0.13	25	2.46	135.42
	2007	21	\$0.02	\$0.62	\$0.01	\$0.32	21	9.22	308.06
	2008	26	\$0.01	\$0.54	\$0.01	\$0.31	26	6.73	259.61

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Table 4.18: Continued

	Year	Crew share payment (\$million)			Captain share payment (\$million)		CV Crew payment, crab equivalent (1000 lbs)		
		Obs	Per vessel, median	Total	Per vessel, median	Total	Obs	Per vessel, median	Total
BST CV + CP	2009	14	\$0.03	\$0.55	\$0.02	\$0.34	13	13.71	256.98
	2010	4	*	*	*	*	4	*	*
	2013	19	\$0.01	\$0.45	\$0.01	\$0.21	18	6.92	198.93
	2014	38	\$0.07	\$3.09	\$0.03	\$1.44	37	27.32	1,268.04
PIK CV	98/01/04	42(42)	\$0.01	\$0.53	\$0.00	\$0.27	42(42)	3.22	163.87
	CP	98/01/04	2(2)	*	*	*	*	-	-
SMB CV	98/01/04	92(92)	\$0.01	\$1.18	\$0.01	\$0.65	88(88)	4.09	429.84
	2009	7	\$0.02	\$0.16	\$0.01	\$0.07	7	5.97	49.67
	2010	11	\$0.07	\$0.93	\$0.04	\$0.48	10	13.60	163.26
	2011	17	\$0.06	\$1.29	\$0.03	\$0.61	17	10.69	232.83
	2012	17	\$0.04	\$0.86	\$0.02	\$0.39	17	10.16	197.23
	2014	4	*	*	*	*	4	*	*
WAI	CP	98/01/04	2(1)	*	*	*	*	-	-
	CV	98/01/04	3(3)	*	*	*	*	3(3)	*

**Notes:** Data shown by calendar year; statistics shown for 98/01/04 are calculated over the 1998, 2001, and 2004 calendar years, with vessel obs. indicating total vessel-level observations, and unique vessels (in parentheses) over the 3-year period. Starting in 2009, data are summarized over all harvesting sectors (CVCP) to preserve confidentiality.

Crew and captain share payment statistics show total aggregate and vessel-level median payment by fishery/sector/year. Share payment reflects amount paid for harvesting labor and includes post-season adjustments, bonuses, and deductions for shared expenses such as fuel, bait, and food and provisions, where applicable; excludes any royalty or capital-rent payments for IFQ or vessel ownership share held by captain or crew members. Crab-equivalent crew pay represents crew share payment value in terms of pounds of landed crab, which normalizes over year-to-year changes in ex-vessel price; calculated for catcher vessels (excludes catcher/processor sector, which do not report ex-vessel landings or revenue) by dividing vessel crew share payment by the vessel-specific average ex-vessel price per pound (ex-vessel revenue/landed pounds).

<sup>a</sup> No catcher/processor operations reported fishing activity in the SMB fishery from 2009 to 2012.

<sup>b</sup> 2001 WAI fishery was closed except for Petrel Bank test fishery.

**Source:** NMFS AFSC BSAI Crab Economic Data Report (EDR) database



Table 4.19: Catcher Vessel Harvest Revenue Net and Gross Share Distribution, CR Program Fisheries

		Net share distribution		Gross share distribution		
		Share	Vessels	Median share	Vessels	Median share
ALL	98/01/04	Owner	660(257)	60%	-	-
		Captain/crew	660(257)	40%	640(250)	35%
	2005	Owner	10	65%	-	-
		Labor total	10	35%	10	21%
		Crew	10	23%	10	14%
		Captain	10	14%	10	8%
	2006	Owner	6	64%	-	-
		Labor total	6	36%	6	17%
		Crew	6	25%	6	11%
		Captain	6	13%	6	6%
	2007	Owner	6	60%	-	-
		Labor total	6	40%	6	18%
		Crew	6	25%	6	12%
		Captain	6	13%	6	6%
	2008	Owner	4	*	-	-
		Labor total	4	*	4	*
		Crew	4	*	4	*
		Captain	4	*	4	*
AIG	2009	Owner	4	*	-	-
		Labor total	4	*	4	*
		Crew	4	*	4	*
		Captain	4	*	4	*
	2010	Owner	4	*	-	-
		Labor total	4	*	4	*
		Crew	4	*	4	*
		Captain	4	*	4	*
	2011	Owner	4	*	-	-
		Labor total	4	*	4	*
		Crew	4	*	4	*
		Captain	4	*	4	*
	2012	Labor total	-	-	5	18%
		Crew	-	-	5	13%
		Captain	-	-	5	5%
	2013	Labor total	-	-	6	18%
		Crew	-	-	6	13%
		Captain	-	-	6	5%
	2014	Labor total	-	-	5	19%
		Crew	-	-	5	13%
		Captain	-	-	5	6%

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Table 4.19: Continued

	Share	Net share distribution		Gross share distribution	
		Vessels	Median share	Vessels	Median share
2005	Owner	82	61%	-	-
	Labor total	82	39%	83	23%
	Crew	82	25%	83	15%
	Captain	82	13%	83	8%
2006	Owner	78	61%	-	-
	Labor total	78	39%	77	23%
	Crew	78	26%	77	15%
	Captain	78	13%	77	8%
2007	Owner	69	60%	-	-
	Labor total	69	40%	70	21%
	Crew	69	26%	70	14%
	Captain	69	14%	70	7%
2008	Owner	75	61%	-	-
	Labor total	75	39%	75	21%
	Crew	75	26%	75	13%
	Captain	75	14%	75	7%
BBR 2009	Owner	67	60%	-	-
	Labor total	67	40%	67	20%
	Crew	67	26%	67	12%
	Captain	67	12%	67	6%
2010	Owner	62	60%	-	-
	Labor total	62	40%	61	18%
	Crew	62	27%	61	12%
	Captain	62	13%	61	6%
2011	Owner	59	60%	-	-
	Labor total	59	40%	58	19%
	Crew	59	27%	58	13%
	Captain	59	12%	58	7%
2012	Labor total	-	-	60	20%
	Crew	-	-	60	14%
	Captain	-	-	60	6%
2013	Labor total	-	-	60	18%
	Crew	-	-	60	12%
	Captain	-	-	60	6%
2014	Labor total	-	-	60	18%
	Crew	-	-	60	12%
	Captain	-	-	60	6%

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Table 4.19: Continued

	Share	Net share distribution		Gross share distribution	
		Vessels	Median share	Vessels	Median share
2005	Owner	150	60%	-	-
	Labor total	150	40%	147	35%
	Crew	150	26%	147	23%
	Captain	150	14%	147	12%
2006	Owner	73	61%	-	-
	Labor total	73	39%	73	22%
	Crew	73	26%	73	15%
	Captain	73	13%	73	7%
2007	Owner	63	61%	-	-
	Labor total	63	39%	63	23%
	Crew	63	26%	63	15%
	Captain	63	13%	63	8%
2008	Owner	73	61%	-	-
	Labor total	73	39%	73	23%
	Crew	73	26%	73	15%
	Captain	73	13%	73	8%
2009	Owner	74	61%	-	-
	Labor total	74	39%	72	22%
	Crew	74	26%	72	15%
	Captain	74	12%	72	7%
2010	Owner	65	60%	-	-
	Labor total	65	40%	65	22%
	Crew	65	27%	65	15%
	Captain	65	13%	65	7%
2011	Owner	64	60%	-	-
	Labor total	64	40%	65	21%
	Crew	64	27%	65	14%
	Captain	64	12%	65	7%
2012	Labor total	-	-	69	21%
	Crew	-	-	69	14%
	Captain	-	-	69	7%
2013	Labor total	-	-	68	20%
	Crew	-	-	68	13%
	Captain	-	-	68	6%
2014	Labor total	-	-	67	20%
	Crew	-	-	67	13%
	Captain	-	-	67	6%

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Table 4.19: Continued

	Share	Net share distribution		Gross share distribution	
		Vessels	Median share	Vessels	Median share
2005	Owner	4	*	-	-
	Labor total	4	*	3	*
	Crew	4	*	3	*
	Captain	4	*	3	*
2006	Owner	31	60%	-	-
	Labor total	31	40%	24	27%
	Crew	31	26%	24	17%
	Captain	31	14%	24	9%
2007	Owner	24	60%	-	-
	Labor total	24	40%	20	23%
	Crew	24	26%	20	15%
	Captain	24	14%	20	8%
BST 2008	Owner	25	60%	-	-
	Labor total	25	40%	24	22%
	Crew	25	26%	24	15%
	Captain	25	14%	24	8%
2009	Owner	15	60%	-	-
	Labor total	15	40%	13	21%
	Crew	15	26%	13	15%
	Captain	15	12%	13	7%
2010	Owner	4	*	-	-
	Labor total	4	*	4	*
	Crew	4	*	4	*
	Captain	4	*	4	*
2013	Labor total	-	-	18	24%
	Crew	-	-	18	17%
	Captain	-	-	18	8%
2014	Labor total	-	-	37	21%
	Crew	-	-	37	15%
	Captain	-	-	37	7%

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Table 4.19: Continued

	Share	Net share distribution		Gross share distribution		
		Vessels	Median share	Vessels	Median share	
SMB	2009	Owner	7	60%	-	-
		Labor total	7	40%	7	17%
		Crew	7	26%	7	13%
		Captain	7	14%	7	6%
	2010	Owner	11	60%	-	-
		Labor total	11	40%	10	20%
		Crew	11	27%	10	14%
		Captain	11	14%	10	6%
	2011	Owner	18	60%	-	-
		Labor total	18	40%	17	22%
		Crew	18	30%	17	14%
		Captain	18	12%	17	5%
2012	Labor total	-	-	17	18%	
	Crew	-	-	17	13%	
	Captain	-	-	17	6%	
2014	Labor total	-	-	4	*	
	Crew	-	-	4	*	
	Captain	-	-	4	*	

**Notes:** Data shown by calendar year. . Net revenue share percentages are estimated as the average over vessel-level net share percentages in EDR data from 1998-2011, and represent owner, crew, and captain percentages of ex-vessel revenue after deductions for vessel operating expenses and crew-related costs. Gross revenue share percentages represent crew and captain labor payments as a percentage of gross ex-vessel value, before deductions for expenses. Gross revenue share cannot be calculated for vessel owners with available data, or for catcher/processors, which do not report ex-vessel value.

Statistics shown for 98/01/04 are calculated as the annual average over the 1998, 2001, and 2004 calendar years. Vessels for 98/01/04 shows the count of vessels operating each year, summed over all years, with numbers in parentheses showing counts of unique vessels participating within the three years. For 1998-2004, net harvest revenue share data was reported over all fisheries, with crew share and captain share percentages reported in aggregate. Reporting of harvest revenue shares was discontinued with the 2006 EDR for the catcher/processor sector, and net revenue share reporting for all sectors was discontinued in the EDR beginning in 2012.

For net share statistics, Labor total calculated is by summing captain, crew, and, if applicable, processing employee shares for each vessel, then taking the median of the summed observations. Gross share statistics are calculated by dividing the crew and captain share payments by the reported ex-vessel revenue of catch, by fishery; Labor total for catcher vessels is calculated by dividing summed crew and captain share payments by ex-vessel revenue, where valid values are reported for both labor categories.

**Source:** NMFS AFSC BSAI Crab Economic Data Report (EDR) database.

Table 4.20: Harvesting Sector Activity Days, CR Program Fisheries

	Year	Vessels	Days active–total (median) <sup>b</sup>		Days fishing–total (median) <sup>c</sup>	
			EDR	CIF	EDR	CIF
CP	98/01/04	4(2)	*	-	-	-
	2005	2	*	-	*	-
	2006	1	*	-	*	-
	2007	1	*	*	*	*
	2008	1	*	*	*	*
AIG	98/01/04	52(22)	1,203(40)	-	-	-
	2005	10	589(54)	-	411(38)	-
	2006	6	571(102)	-	410(67)	-
	2007	6	471(75)	439(74)	349(55)	289(45)
	2008	4	*	*	*	*
CVCP	2009	6	666(105)	645(109)	460(68)	439(69)
	2010	5	719(105)	725(146)	486(77)	466(80)
	2011	5	617(107)	582(131)	398(76)	400(82)
	2012	6	-	641(104)	-	427(74)
	2013	6	-	662(104)	-	430(68)
	2014	5	-	676(84)	-	449(53)
CP	98/01/04	20(9)	59(7)	-	-	-
	2005	5	162(23)	-	98(19)	-
	2006	3	*	-	*	-
	2007	3	*	*	*	*
	2008	3	*	*	*	*
BBR	98/01/04	631(250)	2,611(10)	-	-	-
	2005	85	2,253(25)	-	1,374(13)	-
	2006	79	1,766(21)	-	1,062(12)	-
	2007	71	2,274(30)	1,930(26)	1,442(19)	1,230(16)
	2008	76	2,459(29)	2,306(28)	1,702(20)	1,555(19)
CVCP	2009	70	2,126(29)	1,936(27)	1,408(19)	1,306(18)
	2010	65	2,321(34)	2,023(30)	1,604(22)	1,429(22)
	2011	62	1,150(17)	910(14)	701(10)	538(8)
	2012	64	-	843(13)	-	499(8)
	2013	63	-	947(14)	-	587(9)
	2014	63	-	1,056(15)	-	660(10)

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Table 4.20: Continued

	Year	Vessels	Days active–total (median) <sup>b</sup>		Days fishing–total (median) <sup>c</sup>	
			EDR	CIF	EDR	CIF
CP	98/01/04	18(8)	239(39)	-	-	-
	2005	6	189(28)	-	80(8)	-
	2006	4	*	-	*	-
	2007	4	*	*	*	*
	2008	4	*	*	*	*
BSS	98/01/04	522(210)	6,331(25)	-	-	-
	2005	150	2,710(16)	-	1,275(7)	-
	2006	74	2,926(34)	-	1,930(22)	-
	2007	63	2,321(36)	2,009(31)	1,491(21)	1,057(15)
	2008	74	3,610(48)	3,223(40)	2,408(30)	1,737(22)
CVCP	2009	77	3,869(49)	3,602(44)	2,600(32)	2,111(26)
	2010	68	3,032(42)	2,812(40)	2,110(29)	1,718(24)
	2011	68	3,303(46)	2,878(40)	2,217(30)	1,734(24)
	2012	72	-	5,665(79)	-	3,391(48)
	2013	71	-	4,581(58)	-	2,998(38)
	2014	69	-	3,802(54)	-	2,629(35)
CP	2005	1	*	-	*	-
	2006	1	*	-	*	-
	2007	1	*	*	*	*
	2008	1	*	*	*	*
BST	2005	4	*	-	*	-
	2006	25	416(13)	-	283(10)	-
	2007	24	555(22)	445(17)	410(16)	295(11)
	2008	26	557(18)	549(22)	390(10)	389(12)
CVCP	2009	17	467(22)	350(17)	321(15)	238(12)
	2010	4	*	*	*	*
	2013	18	-	279(12)	-	200(9)
	2014	38	-	1,245(28)	-	905(22)

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Table 4.20: Continued

		Year	Vessels	Days active–total (median) <sup>b</sup>		Days fishing–total (median) <sup>c</sup>		
				EDR	CIF	EDR	CIF	
SMB	CP	98/01/04	2(2)	*	-	-	-	
		98/01/04	93(93)	1,630(17)	-	-	-	
		2009	7	184(19)	166(16)	133(10)	112(11)	
	CV		2010	11	485(36)	429(36)	365(23)	313(27)
			2011	18	663(33)	710(36)	473(26)	468(24)
			2012	17	-	542(33)	-	363(19)
			2014	4	-	*	-	*
WAI	CP	98/01/04	2(1)	*	-	-	-	
	CV	98/01/04	3(3)	*	-	-	-	

**Notes:** Data shown by calendar year.

Statistics shown for 98/01/04 are calculated as the annual average over the 1998, 2001, and 2004 calendar years; 'Vessels' for 98/01/04 shows count of vessels operating each year, summed over all years; numbers in parentheses show count of unique vessels participating within the three years. Total statistics for Days Active and Days Fishing columns for 98/01/04 shows total aggregate count of vessel activity days averaged across years for participating/reporting vessels. Starting in 2009, data are summarized over all harvesting sectors (CVCP) to preserve confidentiality.

Days active and days fishing are shown as calculated from EDR reporting (1998-2011 for days active, 2005-2011 for days fishing) and ADF&G Shellfish Observer Program confidential interview form data (CIF) supplemented with eLandings data (2009 and later). EDR days active by fishery is calculated using reported days at sea in the 1998-2004 data and, for 2005 and later, the sum of days fishing and days travelling and offloading (vessel activity was not reported by days fishing and traveling/offloading in the 1998-2004 EDR). Note that the 1998-2004 and 2005 and later figures for both total and median days active are not directly comparable, as the pre-2005 data do not include days spent queuing and offloading at processors.

<sup>a</sup> 2001 WAI data reflect activity in Petrel Bank test fishery.

**Source:** ADF&G Shellfish Observer Program, Confidential Interview Form (CIF) data, eLandings, NMFS AFSC BSAI Crab Economic Data Report (EDR) database



Table 4.21: Processor Non-Processing Salary and Wages, CR Program Fisheries

	Year	Processors	Salaried employees			Salary cost	
			Total	Per plant, median	Cost per employee, median (\\$1000)	Total (\\$1,000)	Per plant, median (\\$1,000)
CP	98/01/04	17(9)	17	\$2	\$16	338	\$39
	2005	8	44	\$3	\$11	1,025	\$44
	2006	4	*	*	*	*	*
	2007	4	*	*	*	*	*
	2008	4	*	*	*	*	*
	2009	5	*	*	*	*	*
	2010	3	*	*	*	*	*
	2011	3	*	*	*	*	*
	SF	98/01/04	65(32)	1,096	\$17	\$9	8,081
2005		17	1,592	\$20	\$5	10,128	\$68
2006		13	2,031	\$20	\$4	12,750	\$344
2007		14	691	\$15	\$8	5,517	\$235
2008		13	1,056	\$16	\$11	11,411	\$288
2009		17	900	\$29	\$10	7,756	\$522
2010		17	786	\$22	\$6	6,238	\$107
2011		17	1,148	\$25	\$6	7,023	\$393
2012		13	1,428	\$33	\$41	53,487	\$1,030
2013		12	1,459	\$28	\$40	57,216	\$1,252
2014	9	1,300	\$84	\$50	58,381	\$3,152	

**Notes:** Statistics shown for 98/01/04 are calculated as the annual average over the 1998, 2001, and 2004 calendar years; Processors column shows count processing operation-level observations, (catcher-processors and shoreside shown separately) operating each year, summed over all years; number in parentheses indicates count of unique operations active within the three years. Totals for 98/01/04 represent total annual salary costs or salaried employees averaged across years for processors reporting salary costs.

Salary cost obs column shows number of active processing observations that reported salary data in EDR; difference from Processors column reflects underreporting.

Where a submitter provided salary data applicable to more than just crab processing activity, reported salary costs are prorated using the ratio of crab-specific processing days to total processing days in all fisheries.

Where this ratio is unavailable, the ratio of crab processing revenue to total processing revenue in all fisheries; or of finished crab pounds to total finished pounds in all fisheries may be used. Data for number of salaried employees are not pro-rated.

<sup>a</sup> Reporting of salary costs dropped for CP sector in 2012. Beginning in 2012, salary costs reported for the shoreside and floating processor sectors are no longer crab-fishery specific and may reflect costs from other fisheries in which the processor participates. As such, 2012 salary figures are not comparable with pre-2012 salary figures, which are reported in the EDR on a crab-specific basis or adjusted to reflect crab-specific activity using other pro-rata factors reported in the pre-2012 EDR.

**Source:** NMFS AFSC BSAI Crab Economic Data Report (EDR) database .

Table 4.22: Food and Provisions Costs, CR Program Fisheries

	Year	Total Costs (\$1,000)	Median Costs (\$1,000)	Vessels/plants	
Processors ALL	98/01/04	\$2,574	\$121	49(24)	
	2005	\$931	\$79	13	
	2006	\$1,023	\$106	10	
	2007	\$1,140	\$98	12	
	2008	\$1,340	\$85	9	
	2009	\$811	\$113	7	
	2010	\$1,674	\$111	11	
	2011	\$1,588	\$111	11	
Vessels	98/01/04	\$2,650	\$8	647(258)	
	2005	\$1,497	\$6	156	
	2006	\$932	\$7	70	
	2007	\$839	\$10	61	
	2008	\$1,554	\$15	69	
	ALL	\$923	\$12	60	
	2010	\$1,083	\$14	49	
	2011	\$865	\$12	52	
	2012	\$1,866	\$8	81	
	2013	\$1,298	\$7	76	
	2014	\$1,576	\$6	72	
	AIG	2012	\$148	\$18	6
		2013	\$146	\$20	6
		2014	\$188	\$35	5
	BBR	2012	\$355	\$4	62
		2013	\$329	\$4	59
		2014	\$407	\$5	59
	BSS	2012	\$1,242	\$14	70
		2013	\$759	\$10	68
	2014	\$751	\$9	63	
BST	2013	\$64	\$3	16	
	2014	\$222	\$3	35	
SMB	2012	\$121	\$6	16	
	2014	*	*	2	

**Notes:** Data shown for all BSAI crab fisheries by calendar year. All dollar values are adjusted for inflation to 2014-equivalent value. Information suppressed for confidentiality where indicated by “\*”, and data not available where indicated by “-”.

<sup>a</sup> Beginning in 2012, vessel food and provisions expenses are reported on a by-fishery basis, and collection from shoreside processors was discontinued.

**Source:** NMFS AFSC BSAI Crab Economic Data Report (EDR) database .

Table 4.23: Fishery Expenditures -Vessel Fuel Costs, CR Program Fisheries

	Year	Fuel expenses		Gallons purchased		Fuel price
		Total (\$1,000)	Median (\$1,000)	Total (1,000s)	Median (1,000s)	Average
AIG	2012	\$1,265	\$238	355	70	\$3.57
	2013	\$1,687	\$307	455	85	\$3.71
	2014	\$1,385	\$279	386	75	\$3.59
BBR	2012	\$3,088	\$34	731	8	\$4.23
	2013	\$3,385	\$37	813	9	\$4.16
	2014	\$2,555	\$30	681	8	\$3.75
BSS	2012	\$14,355	\$163	3,431	38	\$4.18
	2013	\$11,102	\$117	2,645	28	\$4.20
	2014	\$8,177	\$99	2,172	27	\$3.76
BST	2013	\$527	\$22	137	6	\$3.84
	2014	\$2,052	\$45	546	12	\$3.76
SMB	2012	\$1,273	\$83	296	19	\$4.30
	2014	*	*	*	*	*

**Source:** NMFS AFSC BSAI Crab Economic Data Report (EDR) database .

Table 4.24: Average Monthly Fuel Prices For Selected Ports

	Port	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1999	Dutch Harbor	-	\$1.17	\$1.13	\$1.32	\$1.28	\$1.29	\$1.42	\$1.48	\$1.49	\$1.46	\$1.46	\$1.45
	Kodiak	-	\$1.06	\$1.05	\$1.26	\$1.34	\$1.34	\$1.44	\$1.45	\$1.47	\$1.47	\$1.49	\$1.49
	Seattle	\$0.72	\$0.79	\$0.72	\$1.14	\$0.86	\$1.04	\$1.21	\$1.05	\$1.22	\$1.17	\$1.11	\$1.15
2000	Dutch Harbor	\$1.45	\$1.58	\$1.91	\$1.91	\$1.72	-	\$1.74	\$1.76	\$1.86	\$2.05	\$2.11	\$2.11
	Kodiak	\$1.46	\$1.59	\$1.85	\$1.85	\$1.81	\$1.75	\$1.81	\$1.81	\$1.90	\$2.01	\$2.12	\$2.12
	Seattle	\$1.26	\$1.30	\$1.44	\$1.44	\$1.26	\$1.27	\$1.45	\$1.31	\$1.84	\$1.84	\$1.75	\$1.88
2001	Adak	-	-	\$2.00	\$1.87	\$1.87	\$1.80	\$1.87	\$1.71	\$1.71	\$1.80	-	\$1.65
	Dutch Harbor	\$2.07	\$1.95	\$1.95	\$1.83	\$1.81	\$1.80	\$1.81	\$1.70	\$1.77	\$1.79	\$1.70	\$1.59
	Kodiak	\$2.07	\$2.00	\$1.90	\$1.77	\$1.76	\$1.77	\$1.77	\$1.74	\$1.77	\$1.68	\$1.63	\$1.46
	Seattle	\$1.70	\$1.43	\$1.36	\$1.40	\$1.41	\$1.36	\$1.26	\$1.21	\$1.46	\$1.12	\$1.10	\$0.87
2002	Adak	\$1.62	\$1.62	\$1.62	\$1.62	\$1.74	-	-	\$1.62	\$1.73	\$1.85	-	-
	Dutch Harbor	\$1.48	\$1.27	\$1.26	\$1.39	\$1.45	\$1.45	\$1.45	\$1.45	\$1.52	\$1.58	\$1.62	\$1.65
	Kodiak	\$1.42	\$1.33	\$1.32	\$1.35	\$1.41	\$1.41	\$1.63	\$1.39	\$1.47	\$1.51	\$1.51	\$1.51
	Seattle	\$0.97	\$0.88	\$1.09	\$1.21	\$1.27	\$1.26	\$1.27	\$1.25	\$1.44	\$1.28	\$1.42	\$1.27
2003	Adak	\$1.82	\$1.82	-	\$2.09	\$2.01	\$2.01	\$1.94	\$1.94	\$1.94	\$1.94	\$1.94	\$1.94
	Dutch Harbor	\$1.61	\$1.69	\$1.83	\$1.94	\$1.84	\$1.81	\$1.81	\$1.81	\$1.88	\$1.87	\$1.87	\$1.87
	Kodiak	\$1.49	\$1.54	\$1.73	\$1.89	\$1.76	\$1.71	\$1.71	\$1.72	\$1.69	\$1.86	\$1.69	\$1.69
	Seattle	\$1.43	\$1.45	\$2.10	\$1.73	\$1.48	\$1.44	\$1.57	\$1.55	\$1.54	\$1.47	\$1.50	\$1.51
2004	Adak	\$1.95	\$1.95	\$1.95	-	\$2.13	\$2.38	\$2.38	\$2.38	-	\$2.50	\$2.56	\$2.56
	Dutch Harbor	\$1.82	\$1.82	\$2.00	\$1.95	\$2.01	\$2.16	\$2.16	\$2.25	\$2.26	\$2.37	\$2.44	\$2.44
	Kodiak	\$1.65	\$1.68	\$1.81	\$1.83	\$1.99	\$2.15	\$2.18	\$2.17	\$2.18	\$2.24	\$2.40	\$2.41
	Seattle	\$1.56	\$1.72	\$1.80	\$1.85	\$2.15	\$2.07	\$2.02	\$2.04	\$2.06	\$2.42	\$2.44	\$2.05
2005	Adak	\$2.48	\$2.48	\$2.54	\$2.61	-	\$3.13	\$2.72	\$2.78	\$2.97	\$3.13	\$3.13	\$3.13
	Dutch Harbor	\$2.36	\$2.36	\$2.46	\$2.54	\$2.60	\$2.60	\$2.60	\$2.72	\$2.97	\$2.99	\$3.06	\$3.04
	Kodiak	\$2.27	\$2.27	\$2.32	\$2.49	\$2.64	\$2.64	\$2.63	\$2.64	\$2.93	\$3.17	\$3.11	\$3.07
	Seattle	\$1.96	\$2.17	\$2.64	\$2.70	\$2.64	\$2.45	\$2.63	\$2.80	\$3.39	\$3.33	\$2.99	\$2.62

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Table 4.24: Continued

	Port	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2006	Adak	-	\$2.93	\$2.93	-	\$3.90	\$3.23	\$3.23	\$3.23	\$3.43	\$3.43	\$3.37	\$3.37
	Dutch Harbor	\$2.83	\$2.82	\$2.82	\$2.82	\$3.03	\$3.10	\$3.10	\$3.17	\$3.27	\$3.11	\$2.96	\$2.93
	Kodiak	\$2.85	\$2.86	\$2.85	\$2.88	\$3.08	\$3.08	\$3.08	\$3.15	\$3.31	\$3.15	\$2.91	\$2.97
	Seattle	\$2.66	\$2.51	\$2.89	\$2.79	\$3.23	\$3.32	\$3.19	\$3.39	\$3.46	\$2.81	\$2.83	\$3.09
2007	Adak	\$3.34	\$3.34	\$3.08	\$2.97	\$3.19	\$3.19	\$3.19	\$3.19	\$3.19	\$3.27	\$3.34	\$3.57
	Dutch Harbor	\$2.85	\$2.81	\$2.77	\$2.79	\$2.93	\$3.03	\$3.03	\$3.05	\$3.13	\$3.15	\$3.34	\$3.55
	Kodiak	\$2.84	\$2.81	\$2.78	\$2.77	\$2.89	\$3.00	\$3.00	\$3.00	\$3.17	\$3.12	\$3.28	\$3.36
	Seattle	\$2.97	\$2.91	\$2.77	\$3.02	\$3.11	\$3.11	\$3.18	\$3.23	\$3.10	\$3.33	\$3.81	\$3.61
2008	Adak	\$3.51	\$3.51	\$3.58	\$3.94	-	\$4.55	\$4.93	\$5.09	\$5.09	\$5.09	\$5.09	\$5.09
	Dutch Harbor	\$3.28	\$3.29	\$3.52	\$4.09	-	\$4.74	\$4.90	\$5.05	\$4.88	\$4.71	\$4.32	\$4.21
	Kodiak	\$3.30	\$3.35	\$3.47	\$4.15	-	\$4.66	\$4.81	\$5.08	\$4.92	\$4.64	\$4.36	\$3.60
	Seattle	\$3.65	\$3.48	\$3.87	\$4.11	-	\$4.87	\$4.84	\$4.72	\$4.46	\$3.44	\$3.22	\$2.67
2009	Adak	\$5.05	\$3.63	\$3.52	\$3.41	\$3.41	\$3.14	\$3.14	\$3.14	-	\$3.25	\$3.25	\$3.25
	Dutch Harbor	\$3.32	\$2.94	\$2.78	\$2.78	\$2.78	\$2.78	\$3.03	\$2.99	\$3.03	\$3.15	\$3.15	\$3.20
	Kodiak	\$3.14	\$2.98	\$2.82	\$2.71	\$2.71	\$2.82	\$2.92	\$2.92	\$2.96	\$3.14	\$3.01	\$3.03
	Seattle	\$2.49	\$2.35	\$2.18	\$2.27	\$2.47	\$2.60	\$2.61	\$2.65	\$2.95	\$2.81	\$2.94	\$2.93
2010	Adak	\$3.21	\$3.21	-	\$3.21	\$3.35	\$3.35	\$3.35	\$3.35	\$3.43	\$3.43	\$3.59	\$3.59
	Dutch Harbor	\$3.11	\$3.16	\$3.11	\$3.19	\$3.28	\$3.26	\$3.35	\$3.28	\$3.28	\$3.28	\$3.44	\$3.44
	Kodiak	\$3.00	\$3.16	\$3.10	\$3.21	\$3.37	\$3.32	\$3.22	\$3.21	\$3.21	\$3.24	\$3.38	\$3.37
	Seattle	\$3.03	\$2.88	\$2.95	\$3.17	\$3.38	\$3.13	\$2.97	\$3.10	\$3.21	\$3.11	\$3.35	\$3.29
2011	Adak	\$3.51	\$3.69	\$3.88	\$4.20	\$4.51	\$4.36	-	\$4.41	\$4.30	\$4.30	\$4.43	\$4.62
	Dutch Harbor	\$3.37	\$3.47	\$3.58	\$3.95	\$4.02	\$4.05	\$4.05	\$4.05	\$4.05	\$4.05	\$4.05	\$4.05
	Kodiak	\$3.30	\$3.41	\$3.45	\$3.94	\$4.02	\$4.11	\$4.07	\$4.08	\$4.02	\$4.08	\$4.06	\$4.08
	Seattle	\$3.32	\$3.50	\$3.94	\$4.16	\$4.25	\$4.15	\$3.84	\$3.95	\$4.17	\$3.85	\$3.95	\$3.87

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Table 4.24: Continued

	Port	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2012	Adak	\$4.53	-	-	-	\$4.49	\$4.49	\$4.49	\$4.49	\$4.49	\$4.49	\$4.49	\$4.49
	Dutch Harbor	\$3.98	\$3.98	\$4.18	\$4.18	\$4.28	\$4.25	\$4.08	\$3.98	\$4.08	\$4.13	\$4.13	\$4.13
	Kodiak	\$3.88	\$3.92	\$4.00	\$4.19	\$4.28	\$4.23	\$4.06	\$3.90	\$4.03	\$4.18	\$4.12	\$4.12
	Seattle	\$3.66	\$3.77	\$4.12	\$4.27	\$4.22	\$3.70	\$3.40	\$3.89	\$4.24	\$3.94	\$3.91	\$3.81
2013	Adak	-	\$4.42	\$4.42	-	\$4.46	\$4.46	-	\$4.46	\$4.46	\$4.46	\$4.46	\$4.46
	Dutch Harbor	\$4.07	\$4.01	\$4.08	\$4.06	\$4.06	\$4.06	\$4.06	\$4.08	\$4.09	\$4.07	\$4.06	\$3.99
	Kodiak	\$4.00	\$4.00	\$4.06	\$4.05	\$4.06	\$4.07	\$4.04	\$4.07	\$4.10	\$4.09	\$4.03	\$4.01
	Seattle	\$3.64	\$3.77	\$3.78	\$3.77	\$3.60	\$3.64	\$3.59	\$3.77	\$3.80	\$3.68	\$3.66	\$3.73
2014	Adak	-	\$4.39	\$4.39	\$4.39	-	\$4.39	\$4.39	\$4.39	\$4.39	-	-	-
	Dutch Harbor	\$3.93	\$3.85	\$3.87	\$3.87	\$3.85	\$3.85	\$3.97	\$3.95	\$3.97	\$3.95	\$3.82	\$3.75
	Kodiak	\$3.95	\$3.99	\$3.89	\$3.89	\$3.90	\$3.95	\$4.00	\$3.88	\$3.90	\$3.85	\$3.77	\$3.63
	Seattle	\$3.59	\$3.68	\$3.68	\$3.70	\$3.62	\$3.69	\$3.69	\$3.65	\$3.93	\$3.56	\$3.29	\$3.19
2015	Adak	\$4.35	\$4.35	\$4.35	\$4.35	\$4.35	\$4.35	\$4.35	-	\$3.93	-	\$3.72	-
	Dutch Harbor	\$3.49	\$3.37	\$3.32	\$3.24	\$3.22	\$3.22	\$3.30	\$3.22	\$2.97	\$2.97	\$2.97	\$2.97
	Kodiak	\$3.42	\$2.95	\$2.95	\$2.96	\$2.97	\$3.01	\$3.11	\$3.13	\$3.06	\$2.85	\$2.84	\$2.70
	Seattle	\$2.65	\$2.39	\$2.68	\$2.40	\$2.69	\$2.92	\$2.81	\$2.55	\$2.40	\$2.39	\$2.30	\$2.11

**Notes:**

**Source:** Pacific States Marine Fisheries Commission EFIN monthly marine fuel price data [[http://www.psmfc.org/efin/data/fuel.html#FUEL\\_AK](http://www.psmfc.org/efin/data/fuel.html#FUEL_AK)].

Table 4.25: Crab Harvest Quota Lease Activity, Volume, Cost, and Average Lease Prices and Rates; CR Program Fisheries

	Year	Vessels <sup>a</sup> Pounds Leased (1000lbs)			Cost (\$1000)			Lease Price (\$/pound) <sup>b</sup>		Lease Rate (percent of ex-vessel price) <sup>c</sup>		
		Total	Median	Mean	Total	Median	Mean	Median	Mean	Median		
AIG	CVO A	2012	4	*	*	*	*	*	*	*	*	
		2013	5	2,026.23	327.87	405.25	3,645.84	582.53	\$729.17	\$1.53	\$1.68	35%
		2014	4	*	*	*	*	*	*	*	*	*
	CVO B + CPO	2012	4	*	*	*	*	*	*	*	*	*
		2013	6	1,284.80	83.15	142.76	1,861.89	234.23	\$206.88	\$1.50	\$1.75	36%
		2014	4	*	*	*	*	*	*	*	*	*
	CVC + CPC	2012	4	*	*	*	*	*	*	*	*	*
		2013	5	151.06	27.36	25.18	311.48	45.46	\$51.91	\$1.89	\$1.92	41%
		2014	4	*	*	*	*	*	*	*	*	*
	CDQ + ACA	2012	4	*	*	*	*	*	*	*	*	*
		2013	2	*	*	*	*	*	*	*	*	*
		2014	3	*	*	*	*	*	*	*	*	*
BBR	CVO A	2012	50	3,618.97	65.48	72.38	18,396.83	315.44	\$367.94	\$5.33	\$5.48	64%
		2013	51	4,425.47	78.75	86.77	20,596.31	349.03	\$403.85	\$4.56	\$4.71	64%
		2014	50	5,229.07	88.41	104.58	22,262.78	373.57	\$445.26	\$4.21	\$4.24	62%
	CVO B + CPO	2012	42	539.10	7.60	11.72	3,008.70	42.98	\$66.86	\$5.51	\$5.90	63%
		2013	45	777.86	10.07	15.56	3,761.14	48.01	\$75.22	\$4.82	\$4.72	63%
		2014	43	853.62	11.77	17.42	3,731.39	54.57	\$76.15	\$4.37	\$4.36	64%
	CVC + CPC	2012	36	171.60	4.24	4.52	926.45	21.90	\$24.38	\$5.38	\$5.43	62%
		2013	37	198.96	4.52	4.85	989.43	21.97	\$24.13	\$4.85	\$5.00	64%
		2014	34	212.79	5.98	5.91	927.82	23.71	\$25.77	\$4.35	\$4.42	65%
	CDQ + ACA	2012	5	368.62	70.68	73.72	2,252.46	446.86	\$450.49	\$5.58	\$6.13	64%
		2013	8	713.42	77.40	89.18	3,517.35	380.38	\$439.67	\$4.94	\$4.93	65%
		2014	7	826.41	117.86	118.06	3,700.24	503.45	\$528.61	\$4.47	\$4.46	63%
BSS	CVO A	2012	55	42,796.16	640.32	778.11	43,946.54	677.81	\$799.03	\$1.03	\$1.03	46%
		2013	56	34,352.58	486.63	613.44	37,495.10	522.57	\$669.56	\$1.08	\$1.09	46%
		2014	57	29,682.64	442.04	520.75	32,362.23	489.15	\$567.76	\$1.12	\$1.08	46%
	CVO B + CPO	2012	47	6,989.61	83.97	131.88	8,061.94	103.55	\$152.11	\$1.12	\$1.19	46%
		2013	50	7,740.91	78.48	133.46	9,693.49	96.14	\$167.13	\$1.17	\$1.20	47%
		2014	48	5,987.69	69.15	106.92	7,187.37	93.82	\$128.35	\$1.21	\$1.27	47%
	CVC + CPC	2012	39	1,879.88	47.96	45.85	2,071.08	51.97	\$51.78	\$1.13	\$1.15	46%
		2013	41	1,767.02	35.03	40.16	2,114.26	40.55	\$48.05	\$1.15	\$1.25	46%
		2014	37	1,258.30	29.13	31.46	1,464.50	34.45	\$37.55	\$1.22	\$1.23	46%
	CDQ + ACA	2012	11	6,463.57	563.35	587.60	7,526.71	683.75	\$684.25	\$1.16	\$1.17	48%
		2013	11	6,409.21	563.98	582.66	8,116.99	759.94	\$737.91	\$1.26	\$1.26	53%
		2014	10	5,367.24	422.75	536.72	6,338.00	510.43	\$633.80	\$1.23	\$1.23	49%

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Table 4.25: Continued

	Year	Vessels <sup>a</sup> Pounds Leased (1000lbs)			Cost (\$1000)			Lease Price (\$/pound) <sup>b</sup>		Lease Rate (percent of ex-vessel price) <sup>c</sup>			
		Total	Median	Mean	Total	Median	Mean	Median	Mean	Median			
BST	CVO A	2013	16	776.65	52.73	48.54	552.78	25.65	\$34.55	\$0.74	\$0.67	28%	
		2014	32	5,255.66	94.55	128.19	3,433.50	65.41	\$83.74	\$0.65	\$0.70	28%	
	CVO B + CPO	2013	13	130.35	6.21	8.15	121.27	4.58	\$7.58	\$0.80	\$0.86	28%	
		2014	25	819.58	11.65	21.02	603.72	9.25	\$15.48	\$0.68	\$0.81	28%	
	CVC + CPC	2013	10	41.62	1.10	3.20	32.08	1.18	\$2.47	\$0.80	\$0.76	28%	
		2014	24	427.60	2.64	11.25	182.28	2.01	\$4.80	\$0.69	\$0.80	28%	
	CDQ + ACA	2013	5	88.01	24.87	17.60	75.49	15.90	\$15.10	\$1.02	\$1.06	34%	
		2014	6	728.51	29.61	80.95	584.15	31.24	\$64.91	\$0.94	\$0.89	34%	
	SMB	CVO A	2012	17	1,149.28	49.07	67.61	1,681.36	68.29	\$98.90	\$1.42	\$1.65	32%
			2014	3	*	*	*	*	*	*	*	*	*
CVO B + CPO		2012	10	143.73	11.56	11.06	214.29	18.52	\$16.48	\$1.47	\$1.52	33%	
		2014	2	*	*	*	*	*	*	*	*	*	
CVC + CPC		2012	9	94.70	2.48	10.52	46.47	5.53	\$5.16	\$1.47	\$1.66	34%	
		2014	2	*	*	*	*	*	*	*	*	*	
CDQ + ACA		2012	3	*	*	*	*	*	*	*	*	*	
		2014	1	*	*	*	*	*	*	*	*	*	

**Notes:** Other fishery data is not shown due to insufficient observations. Lease data shown represent arms length lease transactions reported by quota purchasers in the EDR.

Harvest quota types are categorized in this report as the following: CVO A (catcher vessel owner Class A IFQ), CVO B + CPO (catcher vessel owner Class B IFQ and catcher/processor owner IFQ), and CVC + CPC (catcher vessel crew IFQ and catcher/processor crew IFQ). Statistics reported represent results pooled over all quota types and/or regional designations within each category.

<sup>a</sup> Vessels column shows total count of vessel-level observations for fishery-year where both pounds and cost of quota leased were reported as non-zero values; in a small number of observations where leased pounds was reported for a given fishery/quota type but lease cost was missing, the mean price over all complete observations was used to impute the missing data in computing the total aggregate lease cost over all vessels.

<sup>b</sup> Average lease price statistics by fishery and quota type are calculated as the median and arithmetic mean, respectively, over all observations where both pounds and cost for one or more quota type within the respective category were reported as non-zero values.

<sup>c</sup> Average lease rate statistics by fishery and quota type are calculated as the median and mean, respectively, of the ratio of lease price to ex-vessel price, over all observations where both ex-vessel and lease pounds, and ex-vessel revenue and lease cost, were reported as non-zero values. Lease rate for each quota type is calculated with respect to ex-vessel value of crab sold using the same quota type. As such, variation in lease price and lease rate in a given fishery may not be consistent between different quota types.

**Source:** NMFS AFSC BSAI Crab Economic Data Report (EDR) database



Table 4.26: Counts Of QS/PQS Sales and IFQ/IPQ Lease Transfers, All CR Program Fisheries

	Transfer	05/06	06/07	07/08	08/09	09/10	10/11	11/12	12/13	13/14	14/15
Harvest	Cooperative lease	144	171	211	229	190	247	163	180	281	342
	Noncooperative lease	113	39	16	-	-	-	4	-	-	-
	QS sale	199	329	292	209	221	192	126	211	215	193
Processing	PQS sale	7	7	12	42	4	-	-	3	4	16
	PQS lease	40	39	32	45	31	25	28	35	30	37

**Notes:** Counts of Cooperative and Noncooperative Lease transfers represent the number of distinct transfers completed through submission of an Application for Transfer of IFQ Between Fishing Cooperatives and Application for Transfer (Lease) of Crab IFQ forms, respectively; each individual transfer if IFQ pounds in a given crab fishery (e.g., BBR, BSS) between one IFQ permit/entity and another IFQ permit/entity identified in submitted forms is counted separately, and counts are aggregated over all crab fisheries for a given crab year. Individual IFQ transfers between crab harvest cooperative members within a cooperative are not subject to reporting to NMFS and are not included in these counts.

**Source:** NMFS AKRO RAM division Quota Share and Processor Quota Share holder files

Table 4.27: IFQ Fisheries Estimated Weighted Mean Price Per Crab Quota Unit for QS and PQS Sale Transfers

Year	CVC QS				CVO QS				Processor QS			
	Transfers (trans- ferors, transfer- ees)	Total units trans- ferred (1,000)	Median units per transfer (1,000)	Median price per QS unit	Transfers (trans- ferors, transfer- ees)	Total units trans- ferred (1,000)	Median units per transfer (1,000)	Median price per QS unit	Transfers (trans- ferors, transfer- ees)	Total units trans- ferred (1,000)	Median units per transfer (1,000)	Median price per QS unit
EAG 05/06	2(2,1)	*	*	*	2(1,1)	*	*	*	1(1,1)	*	*	*
07/08	2(2,2)	*	*	*	-	-	-	-	-	-	-	-
08/09	4(4,3)	59.91	12.80	\$2.94	1(1,1)	*	*	*	3(2,2)	*	*	*
09/10	1(1,1)	*	*	*	5(2,5)	*	*	*	-	-	-	-
10/11	3(2,3)	*	*	*	-	-	-	-	-	-	-	-
13/14	-	-	-	-	9(2,9)	*	*	*	-	-	-	-
14/15	1(1,1)	*	*	*	-	-	-	-	1(1,1)	*	*	*
WAG 05/06	2(1,1)	*	*	*	1(1,1)	*	*	*	-	-	-	-
07/08	2(1,1)	*	*	*	-	-	-	-	-	-	-	-
08/09	1(1,1)	*	*	*	-	-	-	-	8(4,3)	18,921.69	979.27	\$0.07
10/11	-	-	-	-	2(1,1)	*	*	*	-	-	-	-
11/12	-	-	-	-	2(1,1)	*	*	*	-	-	-	-
12/13	-	-	-	-	2(1,1)	*	*	*	-	-	-	-
13/14	-	-	-	-	1(1,1)	*	*	*	-	-	-	-
14/15	1(1,1)	*	*	*	-	-	-	-	-	-	-	-
BBR 05/06	21(19,14)	1,221.05	56.18	\$0.99	14(6,10)	7,139.91	115.40	\$0.61	-	-	-	-
06/07	24(20,17)	1,130.33	40.08	\$0.71	27(17,11)	24,420.20	404.43	\$1.03	-	-	-	-
07/08	10(8,5)	525.49	56.28	\$0.79	21(11,13)	7,144.78	288.73	\$1.30	-	-	-	-
08/09	9(7,7)	482.47	53.64	\$0.85	25(16,19)	13,988.27	274.01	\$1.30	4(4,3)	31,159.18	4,680.19	\$0.10
09/10	9(6,7)	427.85	38.27	\$0.79	12(10,11)	4,525.84	374.91	\$1.09	1(1,1)	*	*	*
10/11	5(5,5)	292.57	45.87	\$0.70	33(15,22)	14,596.18	194.71	\$0.93	-	-	-	-
11/12	3(3,2)	*	*	*	3(3,3)	2,229.68	987.57	\$1.22	-	-	-	-
12/13	4(3,3)	127.72	34.93	\$0.70	21(9,16)	7,044.13	141.43	\$0.81	-	-	-	-
13/14	9(8,7)	282.72	34.00	\$0.81	7(6,4)	5,423.95	1,051.28	\$0.97	-	-	-	-
14/15	10(8,6)	484.07	48.19	\$0.90	18(8,11)	8,902.66	85.71	\$1.23	3(1,1)	*	*	*

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Table 4.27: Continued

Year	CVC QS				CVO QS				Processor QS				
	Transfers (trans- ferors, transfer- ees)	Total units trans- ferred (1,000)	Median units per transfer (1,000)	Median price per QS unit	Transfers (trans- ferors, transfer- ees)	Total units trans- ferred (1,000)	Median units per transfer (1,000)	Median price per QS unit	Transfers (trans- ferors, transfer- ees)	Total units trans- ferred (1,000)	Median units per transfer (1,000)	Median price per QS unit	
BSS	05/06	25(14,12)	2,793.09	109.80	\$0.25	22(9,12)	24,619.41	442.13	\$0.40	-	-	-	-
	06/07	35(17,15)	2,864.46	64.53	\$0.23	36(17,8)	48,984.24	603.67	\$0.31	-	-	-	-
	07/08	12(5,5)	821.97	50.65	\$0.33	26(10,13)	24,751.78	1,000.26	\$0.60	-	-	-	-
	08/09	10(5,6)	757.82	48.14	\$0.46	15(9,11)	12,649.18	382.28	\$0.54	2(2,2)	*	*	*
	09/10	15(6,8)	1,121.20	49.19	\$0.30	14(8,10)	6,452.42	365.95	\$0.43	2(1,1)	*	*	*
	10/11	11(6,6)	851.94	80.89	\$0.39	56(17,24)	34,571.82	248.49	\$0.53	-	-	-	-
	11/12	2(1,1)	*	*	*	21(10,12)	12,597.57	289.40	\$0.61	-	-	-	-
	12/13	9(4,5)	920.85	84.74	\$0.95	40(9,18)	16,222.63	178.61	\$0.94	-	-	-	-
	13/14	12(6,6)	674.45	33.76	\$0.73	50(15,18)	20,655.73	120.52	\$1.09	1(1,1)	*	*	*
	14/15	9(5,3)	418.10	27.73	\$0.85	23(13,14)	22,280.56	396.32	\$1.06	3(1,1)	*	*	*
EBT	06/07	17(14,14)	394.01	21.63	\$0.05	17(13,8)	6,577.53	416.69	\$0.09	-	-	-	-
	07/08	5(4,3)	178.14	35.14	\$0.09	9(7,8)	3,030.92	388.26	\$0.16	-	-	-	-
	08/09	4(4,4)	165.75	42.94	\$0.60	14(8,9)	6,246.18	373.38	\$0.16	5(5,4)	12,152.78	1,645.50	\$0.04
	09/10	3(2,3)	*	*	*	5(4,5)	832.23	171.59	\$0.04	-	-	-	-
	10/11	3(3,3)	83.85	33.89	\$0.05	6(6,2)	*	*	*	-	-	-	-
	11/12	-	-	-	-	2(2,2)	*	*	*	-	-	-	-
	12/13	2(2,2)	*	*	*	12(5,10)	2,824.76	44.15	\$0.11	-	-	-	-
	13/14	6(5,6)	127.32	26.55	\$0.06	10(5,6)	1,411.57	120.99	\$0.05	-	-	-	-
	14/15	8(8,7)	184.98	24.95	\$0.19	15(7,11)	4,355.27	152.63	\$0.44	1(1,1)	*	*	*
WBT	06/07	16(13,13)	372.39	21.89	\$0.05	22(18,9)	8,511.78	358.84	\$0.06	-	-	-	-
	07/08	5(4,3)	178.14	35.14	\$0.06	8(6,7)	2,948.05	388.26	\$0.11	-	-	-	-
	08/09	4(4,4)	165.75	42.94	\$0.10	14(8,9)	6,246.18	373.38	\$0.11	5(5,4)	12,152.78	1,645.50	\$0.00
	09/10	2(2,2)	*	*	*	5(4,5)	832.23	171.59	\$0.02	-	-	-	-
	10/11	3(3,3)	83.85	33.89	\$0.05	5(5,2)	*	*	*	-	-	-	-
	11/12	-	-	-	-	1(1,1)	*	*	*	-	-	-	-
	12/13	2(2,2)	*	*	*	11(5,9)	884.76	36.26	\$0.08	-	-	-	-
	13/14	6(5,6)	127.32	26.55	\$0.05	10(5,6)	1,411.58	120.99	\$0.05	-	-	-	-
	14/15	6(6,5)	135.96	24.95	\$0.22	16(8,12)	4,677.25	172.14	\$0.34	1(1,1)	*	*	*

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Table 4.27: Continued

Year	CVC QS				CVO QS				Processor QS				
	Transfers (trans- ferors, transfer- ees)	Total units trans- ferred (1,000)	Median units per transfer (1,000)	Median price per QS unit	Transfers (trans- ferors, transfer- ees)	Total units trans- ferred (1,000)	Median units per transfer (1,000)	Median price per QS unit	Transfers (trans- ferors, transfer- ees)	Total units trans- ferred (1,000)	Median units per transfer (1,000)	Median price per QS unit	
PIK	07/08	-	-	-	-	8(2,3)	*	*	*	-	-	-	-
	08/09	4(2,1)	*	*	*	-	-	-	-	-	-	-	-
	10/11	1(1,1)	*	*	*	6(3,1)	*	*	*	-	-	-	-
	12/13	2(1,1)	*	*	*	4(1,2)	*	*	*	-	-	-	-
SMB	05/06	1(1,1)	*	*	*	2(1,2)	*	*	*	-	-	-	-
	06/07	4(3,3)	40.32	10.23	\$0.28	6(1,3)	*	*	*	-	-	-	-
	07/08	4(2,1)	*	*	*	10(3,4)	876.90	91.10	\$0.38	-	-	-	-
	08/09	2(1,1)	*	*	*	-	-	-	-	-	-	-	-
	09/10	2(1,1)	*	*	*	4(2,2)	*	*	*	-	-	-	-
	10/11	3(2,2)	*	*	*	1(1,1)	*	*	*	-	-	-	-
	11/12	2(2,1)	*	*	*	2(2,2)	*	*	*	-	-	-	-
	12/13	2(1,1)	*	*	*	23(8,12)	1,002.73	20.65	\$0.89	3(2,1)	*	*	*
	13/14	6(3,3)	36.29	5.62	\$0.60	2(1,1)	*	*	*	-	-	-	-
14/15	2(1,1)	*	*	*	2(2,2)	*	*	*	2(1,1)	*	*	*	
WAI	13/14	-	-	-	-	2(2,1)	*	*	*	-	-	-	-

**Notes:****Source:** NMFS AKRO RAM division Quota share transfer data.

Table 4.28: CR Program Computation Quota Share (QS) and IFQ Ratio

	Fishery	QS Pool for LLP Holders (CVO and CPO)	QS Pool for Captains/Crew (QS units)	QS Pool for all Harvester QS Units (Holders + Crew)	Final Ratio QS units/IFQ pound
2013/2014	EAG	9,700,156	299,989	10,000,145	3.3569
2014/2015	EAG	9,700,156	299,989	10,000,145	3.3569
2015/2016	EAG	9,700,156	299,989	10,000,145	3.3569
2013/2014	WAG	38,800,000	1,200,058	40,000,058	14.9143
2014/2015	WAG	38,800,000	1,200,058	40,000,058	14.9143
2015/2016	WAG	38,800,000	1,200,058	40,000,058	14.9143
2013/2014	BBR	387,828,995	12,000,335	399,829,330	51.6575
2014/2015	BBR	387,828,995	12,000,335	399,829,330	44.4878
2015/2016	BBR	387,828,995	12,000,335	399,829,330	44.5413
2013/2014	BSS	970,675,714	30,207,732	1,000,883,446	20.6008
2014/2015	BSS	970,675,714	30,200,191	1,000,875,905	16.3662
2015/2016	BSS	970,675,714	30,200,191	1,000,875,905	27.3838
2013/2014	EBT	194,308,390	6,002,104	200,310,494	152.1307
2014/2015	EBT	194,308,390	5,848,302	200,156,692	26.2260
2015/2016	EBT	194,308,390	5,940,391	200,248,781	19.7391
2013/2014	WBT	194,308,390	5,941,499	200,249,889	135.2583
2014/2015	WBT	194,308,390	5,787,697	200,096,087	33.5591
2015/2016	WBT	194,308,390	5,940,391	200,248,781	26.5006
2014/2015	SMB	29,008,038	867,016	29,875,054	50.6786
2015/2016	SMB	29,008,038	867,016	29,875,054	80.7652

**Source:** NMFS AKRO RAM division Quota Share and Processor Quota Share Pools and Ratios

Table 4.29: Comparison of QS Sale Price to IFQ Lease Price

Season	CVC QS					CVO QS				
	Average price/QS unit	Ratio QS units:IFQ pounds	QS Price/IFQ Pound	Average IFQ Lease Price	IFQ/QS Price Ratio	Average price/QS unit	Ratio QS units:IFQ pounds	QS Price/IFQ Pound	Average IFQ Lease Price	IFQ/QS Price Ratio
2012/2013	\$0.69	56.57	\$39.03	\$5.44	0.14	\$0.80	56.57	\$45.26	\$5.65	0.12
BBR2013/2014	\$0.80	51.66	\$41.33	\$4.99	0.12	\$0.95	51.66	\$49.07	\$4.68	0.10
2014/2015	\$0.91	44.49	\$40.26	\$4.41	0.11	\$1.24	44.49	\$55.16	\$4.28	0.08
2011/2012	-	-	-	-	-	\$0.58	12.51	\$7.26	\$1.10	0.15
BSS 2012/2013	\$0.92	16.76	\$15.42	\$1.24	0.08	\$0.92	16.76	\$15.42	\$1.14	0.07
2013/2014	\$0.73	20.60	\$15.04	\$1.22	0.08	\$1.07	20.60	\$22.04	\$1.17	0.05
EBT 2013/2014	\$0.06	152.13	\$8.37	\$0.81	0.10	\$0.05	152.13	\$7.62	\$0.75	0.10
2014/2015	\$0.19	26.23	\$4.89	\$0.76	0.16	\$0.44	26.23	\$11.54	\$0.75	0.07
WBT 2014/2015	\$0.23	33.56	\$7.55	\$0.85	0.11	\$0.34	33.56	\$11.41	\$0.75	0.07
SMB2012/2013	-	-	-	-	-	\$0.88	20.47	\$18.01	\$1.60	0.09

**Notes:** Average price/QS unit is calculated as the median price of quota share sales as reported by QS transfer applicants to NMFS AKRO RAM division; Ratio of QS units/IFQ pounds is the season-specific conversion factor used by RAM in determining annual IFQ issuance in pounds per QS share; QS Price/IFQ Pound is the ratio of the preceding quotients, used to convert the QS price from price/QS unit to price/IFQ pound, to facilitate comparison of QS price to IFQ price on the same per-unit basis.

**Source:** NMFS AKRO RAM division Quota share transfer data; NMFS AFSC BSAI Crab Economic Data Report (EDR) database.

Table 4.30: IFQ Fisheries Owner-and Crew-Type Quota Share Holdings

	Season	Crew QS			Owner QS		
		QS holders	Median holding	Max holding	QS holders	Median holding	Max holding
EAG	Initial allocation	13	8.20%	12.79%	15	5.90%	20.11%
	2013/2014	10	8.55%	20.14%	24	1.85%	20.00%
	2014/2015	10	8.55%	20.14%	24	1.85%	20.00%
WAG	Initial allocation	9	6.17%	41.74%	15	1.78%	45.73%
	2013/2014	8	7.45%	41.74%	13	1.81%	45.73%
	2014/2015	9	6.30%	41.74%	13	1.81%	45.73%
BBR	Initial allocation	181	0.52%	1.23%	252	0.36%	2.24%
	2013/2014	132	0.56%	2.00%	255	0.29%	5.00%
	2014/2015	128	0.56%	2.00%	249	0.29%	5.00%
BSS	Initial allocation	155	0.64%	1.59%	241	0.39%	2.35%
	2013/2014	124	0.69%	1.99%	260	0.26%	5.00%
	2014/2015	121	0.70%	1.99%	261	0.25%	5.00%
EBT	Initial allocation	166	0.56%	1.99%	256	0.30%	3.87%
	2013/2014	146	0.58%	1.99%	240	0.28%	4.97%
	2014/2015	143	0.58%	1.99%	240	0.27%	4.97%
WBT	Initial allocation	166	0.56%	1.99%	256	0.30%	3.87%
	2013/2014	146	0.58%	1.99%	241	0.27%	4.97%
	2014/2015	143	0.58%	1.99%	241	0.27%	4.97%
PIK	Initial allocation	40	2.47%	4.81%	112	0.53%	3.41%
	2013/2014	40	2.54%	4.81%	116	0.53%	6.96%
	2014/2015	39	2.60%	4.81%	115	0.52%	6.96%
SMB	Initial allocation	73	1.35%	3.10%	137	0.62%	4.43%
	2013/2014	66	1.41%	3.33%	138	0.54%	5.00%
	2014/2015	65	1.42%	3.33%	133	0.53%	5.00%
WAI	Initial allocation	4	20.84%	49.46%	30	0.65%	45.16%
	2013/2014	4	20.84%	49.46%	37	0.65%	45.16%
	2014/2015	4	20.84%	49.46%	37	0.65%	45.16%

**Notes:** Statistics shown for 'Initial allocation' represent the status of the crab catcher vessel and catcher/processor crew (CVC and CPC) and owner (CVO and CPO) quota share pools as of the beginning of the 2005/06 crab season, including the number of distinct QS holders (entities or individuals), and the median and maximum percentage of QS pool shares held amongst distinct entities in the pool; statistics shown for 13/14 and 14/15 show the same information as of the 2013/14 and 2014/15 season end, respectively. Initial issues received QS for the first crab season under the CR program, 2005/06. In the Tanner crab fishery, BST quota was initially issued, and the pool was subsequently split into Eastern and Western BST quota (EBT, WBT); statistics shown for Initial allocation for EBT and WBT are identical and represent the same pool, while statistics for subsequent periods are calculated separately for the distinct Eastern and Western fisheries.

**Source:** NMFS AKRO RAM division Quota Share and Processor Quota Share holder files .

Table 4.31: IFQ Fisheries Owner and Crew Quota Share Holdings by Fishery and Sector

	Season	Crew QS				Owner QS				
		QS holders	Median holding	Max holding	Mean(sd) holding	QS holders	Median holding	Max holding	Mean(sd) holding	
EAG	CP	Initial allocation	-	-	-	-	2	50.00%	84.59%	50(48.92)%
		2013/2014	-	-	-	-	5	7.24%	49.66%	20(18.99)%
		2014/2015	-	-	-	-	5	7.24%	49.66%	20(18.99)%
	CV	Initial allocation	13	8.20%	12.79%	7.69(3.28)%	13	6.90%	21.12%	7.69(5.49)%
		2013/2014	10	8.55%	20.14%	10(6.88)%	20	4.06%	21.02%	5(5.35)%
		2014/2015	10	8.55%	20.14%	10(6.88)%	20	3.59%	21.02%	5(5.39)%
WAG	CP	Initial allocation	2	50.00%	98.19%	50(68.14)%	2	50.00%	98.94%	50(69.21)%
		2013/2014	2	50.00%	98.19%	50(68.14)%	3	1.06%	98.93%	33.33(56.81)%
		2014/2015	2	50.00%	98.19%	50(68.14)%	3	1.06%	98.93%	33.33(56.81)%
	CV	Initial allocation	8	9.67%	37.75%	12.5(10.75)%	13	3.31%	45.51%	7.69(11.98)%
		2013/2014	7	10.96%	37.75%	14.29(11.66)%	11	3.31%	45.51%	9.09(13.72)%
		2014/2015	8	8.93%	37.75%	12.5(11.85)%	11	3.31%	45.51%	9.09(13.72)%
BBR	CP	Initial allocation	8	11.16%	35.13%	12.5(12.15)%	13	8.40%	21.62%	7.69(5.52)%
		2013/2014	9	10.01%	35.13%	11.11(11.89)%	11	7.03%	21.62%	9.09(6.67)%
		2014/2015	9	10.01%	35.13%	11.11(11.89)%	9	10.64%	21.62%	11.11(7.63)%
	CV	Initial allocation	178	0.52%	1.17%	0.56(0.22)%	242	0.37%	2.17%	0.41(0.3)%
		2013/2014	129	0.58%	2.07%	0.78(0.52)%	248	0.31%	4.90%	0.4(0.47)%
		2014/2015	125	0.58%	2.07%	0.8(0.54)%	245	0.31%	4.90%	0.41(0.5)%

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Table 4.31: Continued

		Crew QS				Owner QS				
Season		QS holders	Median holding	Max holding	Mean(sd) holding	QS holders	Median holding	Max holding	Mean(sd) holding	
BSS	CP	Initial allocation	8	11.79%	27.11%	12.5(7.31)%	14	7.78%	13.53%	7.14(3.66)%
		2013/2014	7	11.33%	33.82%	14.29(9.52)%	21	2.65%	24.29%	4.76(5.71)%
		2014/2015	7	11.33%	33.82%	14.29(9.52)%	21	1.06%	24.29%	4.76(6.56)%
	CV	Initial allocation	152	0.66%	1.39%	0.66(0.24)%	231	0.41%	2.58%	0.43(0.32)%
		2013/2014	122	0.71%	2.11%	0.82(0.51)%	248	0.30%	4.44%	0.4(0.48)%
		2014/2015	119	0.72%	2.11%	0.84(0.51)%	249	0.29%	4.44%	0.4(0.5)%
EBT	CP	Initial allocation	15	5.37%	18.32%	6.67(4.74)%	13	6.97%	16.79%	7.69(5.11)%
		2013/2014	16	5.29%	18.32%	6.25(4.87)%	12	8.44%	16.79%	8.33(5.57)%
		2014/2015	16	5.29%	18.32%	6.25(4.87)%	9	10.49%	37.53%	11.11(11.18)%
	CV	Initial allocation	160	0.58%	2.08%	0.63(0.38)%	246	0.32%	2.94%	0.41(0.38)%
		2013/2014	141	0.61%	2.17%	0.71(0.52)%	233	0.29%	4.56%	0.43(0.48)%
		2014/2015	138	0.62%	2.17%	0.72(0.52)%	236	0.29%	4.56%	0.42(0.49)%
WBT	CP	Initial allocation	15	5.37%	18.32%	6.67(4.74)%	13	6.97%	16.79%	7.69(5.11)%
		2013/2014	16	5.29%	18.32%	6.25(4.87)%	12	8.44%	16.79%	8.33(5.57)%
		2014/2015	16	5.29%	18.32%	6.25(4.87)%	9	10.49%	37.53%	11.11(11.18)%
	CV	Initial allocation	160	0.58%	2.08%	0.63(0.38)%	246	0.32%	2.94%	0.41(0.38)%
		2013/2014	141	0.61%	2.17%	0.71(0.52)%	234	0.29%	4.56%	0.43(0.48)%
		2014/2015	138	0.62%	2.17%	0.72(0.52)%	237	0.29%	4.56%	0.42(0.49)%

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Table 4.31: Continued

	Season	Crew QS				Owner QS				
		QS holders	Median holding	Max holding	Mean(sd) holding	QS holders	Median holding	Max holding	Mean(sd) holding	
PIK	CP	Initial allocation	-	-	-	-	1	100.00%	100.00%	100%
		2013/2014	-	-	-	-	1	100.00%	100.00%	100%
		2014/2015	-	-	-	-	1	100.00%	100.00%	100%
	CV	Initial allocation	40	2.47%	4.81%	2.5(1.05)%	111	0.55%	3.42%	0.9(0.86)%
		2013/2014	40	2.54%	4.81%	2.5(1.17)%	115	0.55%	6.99%	0.87(0.94)%
		2014/2015	39	2.60%	4.81%	2.56(1.17)%	114	0.53%	6.99%	0.88(0.96)%
SMB	CP	Initial allocation	-	-	-	-	5	15.46%	43.40%	20(13.24)%
		2013/2014	-	-	-	-	5	15.46%	43.40%	20(13.24)%
		2014/2015	-	-	-	-	2	50.00%	56.60%	50(9.34)%
	CV	Initial allocation	73	1.35%	3.10%	1.37(0.44)%	133	0.65%	4.52%	0.75(0.62)%
		2013/2014	66	1.41%	3.33%	1.52(0.65)%	135	0.56%	5.10%	0.74(0.71)%
		2014/2015	65	1.42%	3.33%	1.54(0.67)%	132	0.53%	5.10%	0.76(0.77)%
WAI	CP	Initial allocation	1	100.00%	100.00%	100%	2	50.00%	96.86%	50(66.26)%
		2013/2014	1	100.00%	100.00%	100%	2	50.00%	96.86%	50(66.26)%
		2014/2015	1	100.00%	100.00%	100%	2	50.00%	96.86%	50(66.26)%
	CV	Initial allocation	4	16.53%	57.26%	25(22.34)%	29	1.01%	22.09%	3.45(5.32)%
		2013/2014	4	16.53%	57.26%	25(22.34)%	36	1.04%	18.78%	2.78(4.56)%
		2014/2015	4	16.53%	57.26%	25(22.34)%	36	1.04%	18.78%	2.78(4.56)%

**Notes:****Source:** NMFS AKRO RAM division Quota Share and Processor Quota Share holder files

Table 4.32: Crew-Type Crab Quota Share Allocation Held by Active CFEC-Licensed Gear Operators, IFQ Fisheries

	Year	Total QS holders at season end	QS holders active during season	Percent of Crew QS holders active during season	Percent of Crew QS held by active vessel operators
CPC	2005/2006	24	13	54	69
	2006/2007	24	10	42	69
	2007/2008	24	12	50	60
	2008/2009	24	13	54	60
	2009/2010	25	9	36	43
	2010/2011	27	12	44	51
	2011/2012	28	12	43	51
	2012/2013	28	11	39	49
	2013/2014	29	11	38	49
	2014/2015	28	8	29	27
CVC	2005/2006	218	94	43	53
	2006/2007	208	81	39	51
	2007/2008	205	83	40	51
	2008/2009	200	80	40	49
	2009/2010	201	72	36	49
	2010/2011	198	70	35	47
	2011/2012	197	71	36	45
	2012/2013	196	64	33	43
	2013/2014	197	63	32	42
	2014/2015	198	65	33	42
Combined	2005/2006	224	95	42	54
	2006/2007	214	82	38	52
	2007/2008	211	84	40	51
	2008/2009	206	82	40	50
	2009/2010	207	72	35	49
	2010/2011	204	71	35	48
	2011/2012	203	72	35	46
	2012/2013	202	65	32	43
	2013/2014	203	64	32	42
	2014/2015	204	66	32	41

**Notes:** Active gear operators are those who made landings of any CR-program crab (including landings on IFQ, CDQ, and ACA permits), irrespective of fishery, during the given season. Data show gear operators active during the season and holding crew-type quota share (CVC, CPC) at season end.

**Source:** eLandings, CFEC Gear Operator Permit registry, NMFS AKRO RAM division Quota Share and Processor Quota Share holder files and IFQ accounting database.

Table 4.33: IFQ Fisheries Owner and Crew Quota Share Holdings by QS Holder Location

	Season	Owner QS, Alaska		Owner QS, WA-OR-ID		Owner QS, Other Location		Crew QS, Alaska		Crew QS, WA-OR-ID		Crew QS, Other Location	
		QS holders	percent of pool held	QS holders	percent of pool held	QS holders	percent of pool held	QS holders	percent of pool held	QS holders	percent of pool held	QS holders	percent of pool held
EAG	Initial allocation	1	2%	14	98%	0	0%	1	2%	11	94%	1	4%
	2013/2014	5	31%	18	69%	1	0%	0	0%	10	100%	0	0%
	2014/2015	5	30%	18	70%	1	0%	0	0%	10	100%	0	0%
WAG	Initial allocation	1	2%	14	98%	0	0%	0	0%	8	94%	1	6%
	2013/2014	5	63%	8	37%	0	0%	0	0%	8	100%	0	0%
	2014/2015	5	63%	8	37%	0	0%	0	0%	9	100%	0	0%
BBR	Initial allocation	41	16%	203	82%	8	2%	44	19%	127	74%	10	6%
	2013/2014	55	27%	189	70%	11	2%	30	21%	89	69%	13	10%
	2014/2015	52	29%	186	68%	11	2%	28	20%	88	71%	12	8%
BSS	Initial allocation	40	16%	195	82%	6	2%	35	19%	111	76%	9	5%
	2013/2014	52	30%	196	67%	12	3%	28	21%	84	71%	12	8%
	2014/2015	51	32%	196	65%	14	3%	27	21%	83	72%	11	6%
EBT	Initial allocation	40	16%	209	82%	7	2%	40	20%	117	75%	9	5%
	2013/2014	52	29%	175	68%	13	3%	33	21%	96	69%	17	11%
	2014/2015	52	32%	175	66%	13	3%	31	21%	96	70%	16	10%
WBT	Initial allocation	40	16%	209	82%	7	2%	40	20%	117	75%	9	5%
	2013/2014	53	29%	175	68%	13	3%	33	21%	96	69%	17	11%
	2014/2015	53	32%	175	66%	13	3%	31	21%	96	70%	16	10%

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Table 4.33: Continued

Season	Owner QS, Alaska		Owner QS, WA-OR-ID		Owner QS, Other Location		Crew QS, Alaska		Crew QS, WA-OR-ID		Crew QS, Other Location		
	QS holders	percent of pool held	QS holders	percent of pool held	QS holders	percent of pool held	QS holders	percent of pool held	QS holders	percent of pool held	QS holders	percent of pool held	
PIK	Initial allocation	22	25%	86	72%	4	3%	16	34%	19	55%	5	11%
	2013/2014	34	38%	77	56%	5	5%	17	36%	17	50%	6	14%
	2014/2015	33	38%	76	55%	6	7%	17	37%	16	49%	6	14%
SMB	Initial allocation	20	19%	113	80%	4	1%	17	24%	53	72%	3	4%
	2013/2014	32	32%	102	66%	4	2%	17	24%	43	68%	6	8%
	2014/2015	31	34%	98	63%	4	2%	17	24%	43	69%	5	7%
WAI	Initial allocation	6	3%	24	97%	0	0%	0	0%	4	100%	0	0%
	2013/2014	13	52%	23	48%	1	0%	0	0%	4	100%	0	0%
	2014/2015	13	52%	23	48%	1	0%	0	0%	4	100%	0	0%

**Notes:** Owner QS includes Catcher Vessel Owner (CVO) and Catcher/Processor Owner (CPO) QS; Crew QS includes Catcher Vessel Crew (CVC) and Catcher/Processor Crew (CPC) QS

**Source:** NMFS AKRO RAM division Quota Share and Processor Quota Share holder files

Table 4.34: Crab Processor Quota Share Allocation Holdings, by IFQ Fishery

	Season	PQS holders	Median holding	Max holding	Mean holding in fishery PQS pool (sd)
EAG	Initial allocation	9	3.55%	45.36%	11.11(15.37)%
	2013/2014	10	5.24%	45.36%	10(13.84)%
	2014/2015	9	6.93%	45.36%	11.11(14.24)%
WAG	Initial allocation	9	1.03%	62.98%	11.11(21.23)%
	2013/2014	10	3.41%	29.98%	10(12.04)%
	2014/2015	10	3.41%	29.98%	10(12.04)%
BBR	Initial allocation	17	1.64%	22.98%	5.88(7.07)%
	2013/2014	16	4.39%	22.98%	6.25(6.48)%
	2014/2015	14	6.12%	23.20%	7.14(6.79)%
BSS	Initial allocation	20	2.08%	25.18%	5(6.73)%
	2013/2014	18	3.76%	25.18%	5.56(6.9)%
	2014/2015	17	3.42%	25.18%	5.88(7.52)%
EBT	Initial allocation	23	0.83%	24.26%	4.35(6.51)%
	2013/2014	21	1.85%	24.26%	4.76(6.51)%
	2014/2015	19	1.85%	24.37%	5.26(7.04)%
WBT	Initial allocation	23	0.83%	24.26%	4.35(6.51)%
	2013/2014	21	1.85%	24.26%	4.76(6.51)%
	2014/2015	19	1.85%	24.37%	5.26(7.04)%
PIK	Initial allocation	14	3.17%	24.49%	7.14(8.09)%
	2013/2014	13	3.87%	24.49%	7.69(8.19)%
	2014/2015	12	4.99%	25.46%	8.33(8.47)%
SMB	Initial allocation	12	5.06%	32.67%	8.33(10.56)%
	2013/2014	11	4.34%	32.67%	9.09(10.26)%
	2014/2015	10	4.18%	32.67%	10(11.3)%
WAI	Initial allocation	9	1.03%	62.98%	11.11(21.23)%
	2013/2014	8	4.03%	32.99%	12.5(14.67)%
	2014/2015	8	4.03%	32.99%	12.5(14.67)%

**Notes:** 2013/2014 and 2014/2015 holdings as of fishery season end. Includes QS and PQS held by wholly owned direct subsidiaries of CDQ groups.

**Source:** NMFS AKRO RAM division Quota Share and Processor Quota Share holder files .

Table 4.35: CDQ/ACA Group Direct Holdings Of CR Program/IFQ Quota Share Allocation, by Share Type and IFQ Fishery

	Season	CP QS		CV QS		ALL QS		PQS	
		CDQ Groups	Share of QS held	CDQ Groups	Share of QS held	CDQ Groups	Share of QS held	CDQ Groups	Share of QS held
EAG	2013/2014	-	-	3	29.17%	3	27.80%	1	1.24%
	2014/2015	-	-	3	28.27%	3	26.94%	2	11.72%
WAG	2013/2014	1	96.19%	3	27.83%	4	59.35%	-	-
	2014/2015	1	96.19%	3	27.83%	4	59.35%	1	29.98%
BBR	Initial allocation	1	4.29%	3	1.23%	4	1.37%	-	-
	2013/2014	3	21.55%	5	12.37%	5	12.79%	1	2.58%
	2014/2015	4	40.98%	5	14.39%	5	15.59%	2	13.84%
BSS	Initial allocation	1	3.86%	3	1.42%	4	1.64%	-	-
	2013/2014	4	32.07%	6	13.31%	6	15.01%	2	5.44%
	2014/2015	4	44.53%	6	15.16%	6	17.82%	3	22.90%
EBT	Initial allocation	1	3.39%	3	1.42%	4	1.55%	-	-
	2013/2014	4	40.80%	6	10.72%	6	12.75%	1	4.09%
	2014/2015	4	62.68%	6	11.71%	6	15.17%	2	18.56%
WBT	Initial allocation	1	3.39%	3	1.42%	4	1.55%	-	-
	2013/2014	4	40.80%	6	10.72%	6	12.75%	1	4.09%
	2014/2015	4	62.68%	6	11.71%	6	15.17%	2	18.56%
PIK	Initial allocation	-	-	1	2.34%	1	2.33%	-	-
	2013/2014	-	-	5	12.95%	5	12.88%	-	-
	2014/2015	-	-	5	14.20%	5	14.13%	2	15.77%
SMB	Initial allocation	-	-	2	1.14%	2	1.11%	-	-
	2013/2014	2	56.55%	4	11.45%	5	12.32%	1	8.63%
	2014/2015	2	100.00%	4	13.60%	5	15.26%	2	23.74%
WAI	Initial allocation	-	-	1	0.16%	1	0.10%	-	-
	2013/2014	1	95.82%	5	16.95%	5	47.13%	-	-
	2014/2015	1	95.82%	5	16.95%	5	47.13%	-	-

**Notes:** 2013/2014 and 2014/2015 holdings as of fishery season end. Includes QS and PQS held by wholly owned direct subsidiaries of CDQ groups.

**Source:** NMFS AKRO RAM division Quota Share and Processor Quota Share holder files .

Table 4.36: Initial Crab QS/PQS Issues With Holdings At Season End, by Share Type and IFQ Fishery

	Quota	Initial issuance	13/14	14/15	Net change from initial issuance	Net change from previous year
All	All Harvest QS	532	415	402	-130	-13
EAG	CPO	2	0	0	-2	0
	CVC	13	6	5	-8	-1
	CVO	13	8	8	-5	0
	All Harvest QS	28	14	13	-15	-1
	Processor QS	9	6	5	-4	-1
WAG	CPC	2	1	1	-1	0
	CPO	2	1	1	-1	0
	CVC	8	5	5	-3	0
	CVO	13	8	8	-5	0
	All Harvest QS	24	15	15	-9	0
	Processor QS	9	6	6	-3	0
BBR	CPC	8	6	6	-2	0
	CPO	13	8	5	-8	-3
	CVC	178	107	100	-78	-7
	CVO	242	178	174	-68	-4
	All Harvest QS	426	292	278	-148	-14
	Processor QS	17	10	8	-9	-2
BSS	CPC	8	5	5	-3	0
	CPO	14	8	5	-9	-3
	CVC	152	97	88	-64	-9
	CVO	231	168	166	-65	-2
	All Harvest QS	389	269	255	-134	-14
	Processor QS	20	12	11	-9	-1
BST	CPC	15	-	-	-	-
	CPO	14	-	-	-	-
	CVC	170	-	-	-	-
	CVO	248	-	-	-	-
	All Harvest QS	426	-	-	-	-
	Processor QS	23	-	-	-	-

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Table 4.36: Continued

	Quota	Initial issuance	13/14	14/15	Net change from initial issuance	Net change from previous year
BTE	CPC	15	14	13	-2	-1
	CPO	13	8	5	-8	-3
	CVC	160	127	117	-43	-10
	CVO	246	185	182	-64	-3
	All Harvest QS	413	320	304	-109	-16
	Processor QS	23	16	14	-9	-2
	BTW	CPC	15	14	13	-2
CPO		13	8	5	-8	-3
CVC		160	127	117	-43	-10
CVO		246	186	182	-64	-4
All Harvest QS		413	321	304	-109	-17
Processor QS		23	16	14	-9	-2
PIK		CPO	1	1	1	0
	CVC	40	35	34	-6	-1
	CVO	111	86	84	-27	-2
	All Harvest QS	148	118	115	-33	-3
	Processor QS	14	11	9	-5	-2
	SMB	CPO	5	4	1	-4
CVC		73	51	49	-24	-2
CVO		133	94	91	-42	-3
All Harvest QS		210	148	141	-69	-7
Processor QS		12	6	5	-7	-1
WAI		CPC	1	1	1	0
	CPO	2	2	2	0	0
	CVC	4	4	4	0	0
	CVO	29	20	19	-10	-1
	All Harvest QS	34	25	24	-10	-1
	Processor QS	9	5	5	-4	0

**Notes:**

Initial issuance shows the number of QS recipients as of the beginning of the 2005/06 crab season; 13/14 and 14/15 show the number of original QS issues remaining of the 2013/14 and 2014/15 season end.

Initial issues received QS for the first crab season under the CR program, 2005/06. In the Tanner crab fishery, BST quota was initially issued; Eastern and Western BST quota (EBT, WBT) was issued in subsequent seasons. For EBT and WBT, net change from initial issuance shows the difference between initial quota holders in EBT or WBT in 2009/2010 and initial quota holders in BST at initial issuance.

**Source:** NMFS AKRO RAM division Quota Share and Processor Quota Share holder files

Table 4.37: New Holders of Crab QS and PQS in 2014, Relative to Initial Allocation and Prior Season End

	Season	Owner QS, New in fishery		Owner QS, New crab entrant		Crew QS, New in fishery		Crew QS, New crab entrant		PQS, New in fishery		PQS, New crab entrant	
		Entrants	Share of QS type acquired	Entrants	Share of QS type acquired	Entrants	Share of QS type acquired	Entrants	Share of QS type acquired	Entrants	Share of QS type acquired	Entrants	Share of QS type acquired
EAG	2013 season end	1	1%	1	1%	1	5%	-	-	-	-	-	-
	Initial allocation	16	49%	12	44%	5	28%	2	18%	4	24%	3	23%
WAG	2013 season end	-	-	-	-	1	8%	1	8%	-	-	-	-
	Initial allocation	4	17%	3	5%	3	27%	2	20%	4	53%	3	53%
BBR	2013 season end	5	0%	3	0%	5	5%	4	4%	-	-	-	-
	Initial allocation	70	25%	63	21%	25	23%	18	18%	6	33%	5	32%
BSS	2013 season end	7	0%	7	0%	7	4%	7	4%	-	-	-	-
	Initial allocation	91	23%	80	21%	31	25%	25	20%	6	32%	5	31%
EBT	2013 season end	6	0%	3	0%	7	4%	6	3%	-	-	-	-
	Initial allocation	53	18%	53	18%	21	12%	19	12%	5	22%	4	22%
WBT	2013 season end	7	1%	4	0%	7	4%	6	3%	-	-	-	-
	Initial allocation	54	19%	54	19%	21	12%	19	12%	5	22%	4	22%
PIK	2013 season end	1	1%	1	1%	-	-	-	-	1	13%	-	-
	Initial allocation	30	30%	19	22%	5	15%	1	3%	3	30%	2	16%
SMB	2013 season end	-	-	-	-	2	3%	2	3%	-	-	-	-
	Initial allocation	41	23%	31	17%	16	26%	10	16%	5	35%	4	27%
WAI	2013 season end	1	8%	1	8%	-	-	-	-	-	-	-	-
	Initial allocation	17	27%	8	13%	-	-	-	-	3	62%	2	35%

**Notes:** Entrants and Share of QS type acquired columns show the change in entry to the respective quota pools, relative to the reference period (Initial allocation = 2005/06) as of the beginning of the 2014/15 crab season.

**Source:** NMFS AKRO RAM division, Quota shareholder files.

Table 4.38: IFQ Fisheries Landings by Season

	Season	IFQ permit holders	RCR permit holders	Landings	IFQ pounds (million)	Sold pounds (million)	Personal use pounds (1,000)	Deadloss pounds (1,000)
EAG	2005/2006	6	5	32	2.6	2.5	0.1	23.8
	2006/2007	4	6	32	2.7	2.7	0.0	31.3
	2007/2008	4	4	36	2.7	2.7	0.0	21.0
	2008/2009	3	5	29	2.8	2.8	0.0	24.1
	2009/2010	2	6	32	*	*	*	*
	2010/2011	2	7	30	*	*	*	*
	2011/2012	2	9	45	*	*	*	*
	2012/2013	2	10	46	*	*	*	*
	2013/2014	2	9	39	*	*	*	*
	2014/2015	2	7	37	*	*	*	*
WAG	2005/2006	3	5	42	2.4	2.4	3.5	26.3
	2006/2007	3	5	31	2.0	2.0	0.0	19.8
	2007/2008	3	4	34	2.2	2.2	0.0	23.2
	2008/2009	3	7	37	2.3	2.2	0.2	22.8
	2009/2010	2	5	38	*	*	*	*
	2010/2011	2	7	37	*	*	*	*
	2011/2012	2	7	43	*	*	*	*
	2012/2013	2	8	46	*	*	*	*
	2013/2014	2	6	42	*	*	*	*
	2014/2015	1	8	44	*	*	*	*
BBR	2005/2006	83	13	255	16.5	16.4	18.4	77.5
	2006/2007	36	13	183	13.9	13.8	10.3	98.7
	2007/2008	27	17	246	18.3	18.2	33.8	132.0
	2008/2009	25	16	252	18.3	18.1	21.0	160.8
	2009/2010	13	14	212	14.4	14.2	20.8	111.5
	2010/2011	10	14	223	13.3	13.2	25.9	99.5
	2011/2012	10	15	254	7.1	7.0	15.1	30.2
	2012/2013	9	15	219	7.1	7.0	15.2	28.8
	2013/2014	10	15	250	7.7	7.7	18.7	60.6
	2014/2015	10	14	241	9.0	8.9	14.4	94.5
BSS	2005/2006	70	13	301	33.3	32.9	0.7	322.6
	2006/2007	30	16	272	32.7	32.3	0.3	378.8
	2007/2008	25	17	459	56.7	56.2	6.5	500.1
	2008/2009	24	15	428	52.7	52.3	0.6	403.3
	2009/2010	12	11	321	43.2	42.7	1.8	500.0
	2010/2011	10	14	466	48.8	48.5	3.3	314.0
	2011/2012	11	14	798	79.9	79.4	5.4	582.4
	2012/2013	9	14	585	59.6	59.2	2.1	427.3
	2013/2014	10	13	573	48.6	48.2	1.5	354.5
	2014/2015	10	13	640	61.1	60.6	1.3	546.0

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Table 4.38: Continued

	Season	IFQ permit holders	RCR permit holders	Landings	IFQ pounds (million)	Sold pounds (million)	Personal use pounds (1,000)	Deadloss pounds (1,000)
BST	2005/2006	34	9	73	0.8	0.8	2.9	14.6
	2006/2007	21	10	57	1.3	1.3	0.7	8.4
	2007/2008	10	8	58	1.4	1.4	0.1	15.6
EBT	2008/2009	10	10	60	1.6	1.5	0.8	11.9
	2009/2010	8	12	45	1.2	1.2	3.5	7.1
	2013/2014	5	13	107	1.3	1.3	2.1	6.2
	2014/2015	7	13	194	7.6	7.6	1.2	48.2
	2006/2007	14	10	60	0.6	0.6	0.0	18.5
	2007/2008	8	8	44	0.5	0.5	1.1	4.1
WBT	2008/2009	10	7	50	0.1	0.1	0.1	2.6
	2009/2010	4	1	22	*	*	*	*
	2013/2014	8	13	186	1.2	1.2	0.0	15.0
	2014/2015	8	13	234	4.6	4.5	1.7	92.4
	2009/2010	1	6	30	*	*	*	*
	2010/2011	2	8	63	*	*	*	*
SMB	2011/2012	6	10	107	1.7	1.7	2.9	25.6
	2012/2013	3	10	125	1.5	1.4	0.9	19.8
	2014/2015	1	6	28	*	*	*	*

**Notes:** Excludes harvest from CDQ programs. A landing is an offload by a vessel to a registered crab receiver, and includes at sea landings on catcher/processors and stationary floating processors. A fishing cooperative and its members are counted as a single IFQ permit holder.

**Source:** NMFS AKRO RAM division Quota Share and Processor Quota Share holder files and IFQ accounting database .

Table 4.39: Fleet Harvest Statistics by Calendar Year

	Year	Vessels	Sold weight (million lbs)	Median vessel weight sold (1,000lbs)	Median vessel harvest as percent of fishery-year commercial lbs	Gini ratio
AIG	1998	16	5.44	302.09	5.55%	0.42
	1999	16	5.10	249.34	4.89%	0.42
	2000	17	5.95	228.92	3.85%	0.45
	2001	21	6.38	209.56	3.28%	0.47
	2002	22	5.54	167.04	3.02%	0.46
	2003	21	5.82	189.45	3.26%	0.45
	2004	22	6.02	168.79	2.80%	0.49
	2005	9	4.44	595.27	13.42%	0.31
	2006	7	5.24	623.29	11.89%	0.34
	2007	6	5.44	755.96	13.90%	0.34
	2008	5	5.73	1,246.72	21.77%	0.18
	2009	5	5.51	1,109.87	20.13%	0.19
	2010	5	6.09	1,410.32	23.15%	0.20
	2011	5	6.00	1,324.31	22.09%	0.21
	2012	6	5.92	1,007.69	17.01%	0.34
2013	6	5.94	937.88	15.78%	0.38	
2014	5	6.07	1,375.97	22.66%	0.14	
BBR	1998	274	14.70	49.34	0.34%	0.30
	1999	256	11.53	37.92	0.33%	0.29
	2000	244	8.07	28.46	0.35%	0.31
	2001	230	8.30	29.26	0.35%	0.34
	2002	241	9.48	36.09	0.38%	0.24
	2003	250	15.39	48.19	0.31%	0.35
	2004	251	15.02	53.79	0.36%	0.28
	2005	89	18.14	177.99	0.98%	0.37
	2006	81	15.55	169.27	1.09%	0.35
	2007	73	20.17	259.63	1.29%	0.32
	2008	79	20.13	240.73	1.20%	0.31
	2009	70	15.78	209.29	1.33%	0.26
	2010	65	14.73	214.69	1.46%	0.28
	2011	62	7.79	109.07	1.40%	0.30
	2012	64	7.80	108.53	1.39%	0.30
2013	63	8.52	122.03	1.43%	0.29	
2014	63	9.87	134.03	1.36%	0.29	

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Table 4.39: Continued

	Year	Vessels	Sold weight (million lbs)	Median vessel weight sold (1,000lbs)	Median vessel harvest as percent of fishery-year commercial lbs	Gini ratio
BSS	1998	230	249.05	1,050.76	0.42%	0.23
	1999	241	192.41	813.75	0.42%	0.25
	2000	231	32.81	132.61	0.40%	0.28
	2001	207	24.78	88.71	0.36%	0.40
	2002	191	31.94	149.81	0.47%	0.31
	2003	190	27.51	127.15	0.46%	0.27
	2004	189	23.69	113.04	0.48%	0.26
	2005	167	24.86	131.14	0.53%	0.24
	2006	78	38.02	402.31	1.06%	0.37
	2007	68	34.76	447.33	1.29%	0.34
	2008	78	62.23	702.73	1.13%	0.31
	2009	77	57.68	599.96	1.04%	0.32
	2010	68	47.84	642.93	1.34%	0.32
	2011	68	54.05	693.58	1.28%	0.30
	2012	72	88.23	1,126.73	1.28%	0.30
2013	71	70.69	892.41	1.26%	0.31	
2014	70	55.19	733.59	1.33%	0.33	
BST	2005	4	0.26	*	*	0.37
	2006	45	0.99	5.94	0.60%	0.72
	2007	29	2.25	56.02	2.49%	0.52
	2008	30	2.33	45.52	1.95%	0.65
	2009	18	2.14	91.97	4.30%	0.63
	2010	4	0.37	*	*	0.25
	2013	22	1.25	45.51	3.64%	0.49
	2014	40	9.09	195.02	2.14%	0.38
PIK	1998	58	1.03	15.61	1.52%	0.34
SMB	1998	131	2.95	20.54	0.70%	0.22
	2009	7	0.45	33.85	7.52%	0.42
	2010	11	1.25	117.30	9.36%	0.34
	2011	18	1.85	80.15	4.33%	0.32
	2012	17	1.59	83.71	5.25%	0.31
	2014	4	0.30	*	*	0.36
WAI	1998	1	*	*	*	*
	2002	33	0.50	14.29	2.85%	0.30
	2003	30	0.48	13.18	2.77%	0.31

**Notes:** Data shown by calendar year. Includes harvest from CDQ and IFQ fisheries and pre-rationalization general access fisheries, as well as landings and harvest made on catcher/processors.

**Source:** ADF&G fish ticket data, and eLandings.

Table 4.40: Purchasing Statistics

	Year	Processors	Purchased (million lbs)	Median Purchased lbs (million)	Median as percent of fishery year commercial lbs	Gini ratio
AIG	1998	9	5.44	0.24	4.4%	0.65
	1999	8	5.10	0.29	5.7%	0.60
	2000	7	5.95	0.66	11.1%	0.41
	2001	7	6.38	0.36	5.7%	0.59
	2002	6	5.54	0.83	15.1%	0.50
	2003	6	5.82	1.08	18.6%	0.45
	2004	5	6.02	1.35	22.5%	0.40
	2005	6	4.44	0.48	10.8%	0.49
	2006	6	5.24	0.71	13.5%	0.56
	2007	6	5.44	0.79	14.5%	0.49
	2008	7	5.73	1.04	18.1%	0.34
	2009	9	5.51	0.30	5.4%	0.58
	2010	9	6.09	0.49	8.0%	0.42
	2011	14	6.00	0.28	4.7%	0.52
	2012	14	5.92	0.20	3.3%	0.53
2013	13	5.94	0.25	4.2%	0.58	
2014	12	6.07	0.26	4.2%	0.60	
BBR	1998	28	14.70	0.26	1.8%	0.61
	1999	24	11.53	0.21	1.9%	0.61
	2000	24	8.07	0.11	1.4%	0.65
	2001	25	8.30	0.10	1.2%	0.66
	2002	26	9.48	0.13	1.4%	0.64
	2003	26	15.39	0.29	1.9%	0.58
	2004	25	15.02	0.23	1.5%	0.61
	2005	16	18.14	0.50	2.8%	0.61
	2006	15	15.55	0.54	3.5%	0.61
	2007	18	20.17	0.52	2.6%	0.60
	2008	17	20.13	0.61	3.0%	0.54
	2009	16	15.78	0.48	3.1%	0.55
	2010	17	14.73	0.39	2.7%	0.58
	2011	18	7.79	0.20	2.5%	0.58
	2012	17	7.80	0.33	4.2%	0.54
2013	17	8.52	0.34	4.0%	0.58	
2014	17	9.87	0.39	4.0%	0.56	

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Table 4.40: Continued

	Year	Processors	Purchased (million lbs)	Median Purchased lbs (million)	Median as percent of fishery year commercial lbs	Gini ratio
BSS	1998	44	249.05	1.73	0.7%	0.59
	1999	37	192.41	3.79	2.0%	0.55
	2000	28	32.81	0.86	2.6%	0.52
	2001	24	24.78	0.63	2.5%	0.51
	2002	27	31.94	0.35	1.1%	0.63
	2003	21	27.51	0.97	3.5%	0.48
	2004	23	23.69	0.61	2.6%	0.53
	2005	20	24.86	0.86	3.5%	0.53
	2006	13	38.02	2.27	6.0%	0.47
	2007	18	34.76	1.74	5.0%	0.49
	2008	17	62.23	2.96	4.8%	0.49
	2009	18	57.68	2.51	4.3%	0.52
	2010	13	47.84	3.30	6.9%	0.42
	2011	16	54.05	2.21	4.1%	0.49
2012	16	88.23	3.73	4.2%	0.50	
2013	15	70.69	3.14	4.4%	0.53	
2014	13	55.19	4.43	8.0%	0.45	
BST	2005	5	0.26	*	*	0.78
	2006	9	0.99	0.07	7.4%	0.61
	2007	9	2.25	0.21	9.4%	0.41
	2008	11	2.33	0.16	6.9%	0.51
	2009	11	2.14	0.16	7.5%	0.45
	2010	7	0.37	*	*	0.43
	2013	13	1.25	0.06	4.7%	0.61
	2014	13	9.09	0.34	3.8%	0.56
PIK	1998	17	1.03	0.03	2.8%	0.57
SMB	1998	16	2.95	0.09	3.1%	0.66
	2009	6	0.45	0.06	12.2%	0.45
	2010	9	1.25	0.07	5.7%	0.59
	2011	11	1.85	0.08	4.1%	0.61
	2012	11	1.59	0.07	4.4%	0.59
	2014	6	0.30	*	*	0.64
WAI	1998	1	*	*	*	*
	2002	9	0.50	0.04	8.2%	0.42
	2003	10	0.48	0.04	8.2%	0.53

**Notes:** Data shown by calendar year. Includes harvest from CDQ and IFQ fisheries and pre-rationalization general access fisheries. Landings/harvest made by and self-processed by catcher/processers are treated as purchases, with catcher/processors counted as buyers

Buyers include catcher/processors landing and processing their own crab.

**Source:** ADF&G fish ticket data, and eLandings.



Table 4.41: Delivery and Trip Statistics by Season, CR Program Fisheries

Season	Vessels	Deliveries total	Trips total	Deliveries per vessel mean(sd)	Landings per trip, mean(sd) (thousand lbs)	Landings per delivery, mean(sd) (thousand lbs)	Trips per vessel means(sd)
1998	14	53	-	3.8(1.4)	-	59.7(36.0)	-
1999	15	59	-	3.9(1.2)	-	50.8(32.5)	-
2000	15	50	-	3.3(0.8)	-	61.5(33.0)	-
2001	19	45	-	2.4(0.6)	-	69.5(44.3)	-
2002	19	43	-	2.3(0.5)	-	64.3(38.1)	-
2003	18	37	-	2.1(0.2)	-	78.4(38.0)	-
2004	19	32	-	1.7(0.5)	-	88.8(54.7)	-
EAG 2005-2006	7	34	-	4.9(2.1)	-	83.5(47.3)	-
2006-2007	6	28	22	4.7(4.2)	136.0(82.5)	105.6(59.5)	3.7(2.0)
2007-2008	4	35	28	8.8	106.8(62.3)	84.8(57.7)	7.0
2008-2009	3	*	*	*	*	*	*
2009-2010	3	*	*	*	*	*	*
2010-2011	3	*	*	*	*	*	*
2011-2012	3	*	*	*	*	*	*
2012-2013	3	*	*	*	*	*	*
2013-2014	3	*	*	*	*	*	*
1998-1999	3	*	-	*	-	*	-
1999-2000	15	113	-	7.5(10.4)	-	24.1(15.3)	-
2000-2001	12	97	-	8.1(9.4)	-	28.6(17.4)	-
2001-2002	9	90	-	10.0(8.2)	-	29.9(16.2)	-
2002-2003	6	72	-	12.0(9.2)	-	36.2(20.7)	-
2003-2004	6	60	-	10.0(6.8)	-	44.0(29.5)	-
2004-2005	6	51	-	8.5(5.9)	-	51.8(36.2)	-
WAG 2005-2006	3	*	-	*	-	*	-
2006-2007	4	33	29	8.3	77.7(32.0)	67.6(29.6)	7.3
2007-2008	3	*	*	*	*	*	*
2008-2009	3	*	*	*	*	*	*
2009-2010	3	*	*	*	*	*	*
2010-2011	3	*	*	*	*	*	*
2011-2012	3	*	*	*	*	*	*
2012-2013	4	32	27	8.0	109.4(40.2)	90.5(40.1)	6.8
2013-2014	3	*	*	*	*	*	*

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Table 4.41: Continued

	Season	Vessels	Deliveries total	Trips total	Deliveries per vessel mean(sd)	Landings per trip, mean(sd) (thousand lbs)	Landings per delivery, mean(sd) (thousand lbs)	Trips per vessel means(sd)
	1998	274	293	-	1.1(0.3)	-	50.2(27.3)	-
	1999	256	273	-	1.1(0.3)	-	42.2(22.8)	-
	2000	244	263	-	1.1(0.4)	-	30.7(16.2)	-
	2001	230	249	-	1.1(0.4)	-	33.3(20.1)	-
	2002	241	258	-	1.1(0.4)	-	36.7(14.6)	-
	2003	250	274	-	1.1(0.4)	-	56.2(35.5)	-
	2004	251	278	-	1.1(0.4)	-	54.0(25.1)	-
BBR	2005-2006	89	261	-	2.9(1.7)	-	69.8(47.8)	-
	2006-2007	81	187	156	2.3(1.1)	100.1(72.8)	82.8(61.6)	1.9(0.9)
	2007-2008	74	247	207	3.3(1.6)	98.4(55.7)	81.7(53.7)	2.8(1.4)
	2008-2009	78	263	237	3.4(1.8)	85.8(51.3)	76.5(48.1)	3.0(1.5)
	2009-2010	70	211	198	3.0(1.2)	80.5(50.3)	74.8(48.4)	2.8(1.1)
	2010-2011	65	213	201	3.3(1.3)	73.8(45.7)	69.0(42.7)	3.1(1.1)
	2011-2012	62	124	114	2.0(0.9)	68.1(51.9)	62.8(49.8)	1.8(0.9)
	2012-2013	64	118	101	1.8(0.9)	77.7(57.1)	66.1(45.2)	1.6(0.7)
	2013-2014	63	119	105	1.9(1.0)	81.9(52.7)	71.6(47.7)	1.7(0.7)
	1999	241	1,720	-	7.1(2.7)	-	111.9(71.8)	-
	2000	231	313	-	1.4(0.7)	-	104.8(53.8)	-
	2001	207	316	-	1.5(1.0)	-	78.4(56.3)	-
	2002	191	430	-	2.3(1.1)	-	74.3(57.5)	-
	2003	190	261	-	1.4(1.0)	-	105.4(55.9)	-
	2004	189	243	-	1.3(0.8)	-	97.5(53.9)	-
	2005	167	211	-	1.3(0.7)	-	116.1(52.3)	-
BSS	2005-2006	78	316	-	4.1(2.9)	-	115.9(75.7)	-
	2006-2007	69	273	215	4.0(2.5)	169.1(104.1)	131.5(83.1)	3.1(2.0)
	2007-2008	78	466	413	6.0(2.9)	151.9(85.9)	134.1(81.2)	5.3(2.5)
	2008-2009	77	437	381	5.7(2.7)	153.7(84.4)	132.9(78.0)	4.9(2.3)
	2009-2010	68	308	289	4.5(1.9)	165.0(88.7)	154.1(85.4)	4.3(1.7)
	2010-2011	68	343	323	5.0(2.2)	168.0(84.6)	157.2(83.9)	4.8(2.1)
	2011-2012	72	658	636	9.1(3.7)	139.7(87.8)	134.0(85.4)	8.8(3.7)
	2012-2013	70	435	422	6.2(2.5)	157.0(82.7)	151.2(81.9)	6.0(2.4)
	2013-2014	70	379	370	5.4(2.3)	145.1(78.5)	141.4(76.7)	5.3(2.3)

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Table 4.41: Continued

	Season	Vessels	Deliveries total	Trips total	Deliveries per vessel mean(sd)	Landings per trip, mean(sd) (thousand lbs)	Landings per delivery, mean(sd) (thousand lbs)	Trips per vessel means(sd)
BST	2005-2006	33	64	-	1.9(1.1)	-	14.6(22.9)	-
	2006-2007	39	88	81	2.3(1.3)	18.3(28.2)	23.8(28.2)	2.1(1.2)
	2007-2008	27	95	93	3.5(2.4)	17.7(25.2)	21.9(25.3)	3.4(2.4)
	2008-2009	20	67	59	3.4(3.0)	14.7(33.8)	28.7(35.8)	3.0(2.3)
	2009-2010	13	32	28	2.5(1.6)	14.9(35.7)	41.0(43.0)	2.2(1.2)
	2013-2014	25	74	71	3.0(2.0)	10.9(26.0)	37.2(35.2)	2.8(2.0)
PIK	1998	58	91	-	1.6(0.7)	-	11.3(8.7)	-
SMB	1998	131	259	-	2.0(0.5)	-	11.4(7.1)	-
	2009-2010	7	16	15	2.3(1.5)	30.7(22.3)	28.1(16.5)	2.1(1.5)
	2010-2011	11	40	38	3.6(1.5)	33.3(17.7)	31.3(17.8)	3.5(1.4)
	2011-2012	18	58	57	3.2(1.4)	33.0(21.0)	31.9(17.0)	3.2(1.4)
	2012-2013	17	45	45	2.6(1.4)	35.9(18.1)	35.4(17.7)	2.6(1.4)
WAI	1998-1999	1	*	-	*	-	*	-
	2002-2003	33	35	-	1.1(0.2)	-	14.4(8.3)	-
	2003-2004	30	30	-	1.0(0.0)	-	15.8(9.7)	-

**Notes:** A delivery is counted as each unique day that a vessel landed crab and may include landings to multiple processors; a single fishing trip may result in multiple deliveries if crab was landed on multiple days. Includes landings on and by catcher/processors. Trip accounting data unavailable prior to 2006/2007 season.

**Source:** NMFS AKRO RAM division Quota Share and Processor Quota Share holder files and IFQ accounting database, and eLandings

Table 4.42: Opening and Closing Dates, Season Length, and Days Fished by Season, CR Program Fisheries

	Year	Season length, days	Earliest landing	Latest landing	Days fished	Percent of season fished	Season dates
	1998	68	-	-	-	-	01-Sep - 07-Nov
	1999	55	-	-	-	-	01-Sep - 25-Oct
	2000	41	-	-	-	-	15-Aug - 24-Sep
	2001	27	-	-	-	-	15-Aug - 10-Sep
	2002	24	-	-	-	-	15-Aug - 07-Sep
	2003	25	-	-	-	-	15-Aug - 08-Sep
	2004	15	-	-	-	-	15-Aug - 29-Aug
EAG	05-06	274	30-Aug	28-Mar	211	77%	15-Aug - 15-May
	06-07	274	31-Aug	13-Jan	136	50%	15-Aug - 15-May
	07-08	275	30-Aug	09-Feb	164	60%	15-Aug - 15-May
	08-09	274	07-Sep	22-Dec	107	39%	15-Aug - 15-May
	09-10	274	31-Aug	10-Jan	133	49%	15-Aug - 15-May
	10-11	274	22-Aug	16-Dec	117	43%	15-Aug - 15-May
	11-12	275	26-Aug	24-Nov	91	33%	15-Aug - 15-May
	12-13	274	25-Aug	03-Dec	101	37%	15-Aug - 15-May
	13-14	274	30-Aug	26-Nov	89	32%	15-Aug - 15-May
	14-15	274	30-Aug	13-Nov	76	28%	15-Aug - 15-May
	98-99	365	-	-	-	-	01-Sep - 31-Aug
	99-00	349	-	-	-	-	01-Sep - 14-Aug
	00-01	270	-	-	-	-	01-Sep - 28-May
	01-02	228	-	-	-	-	15-Aug - 30-Mar
	02-03	206	-	-	-	-	15-Aug - 08-Mar
	03-04	176	-	-	-	-	15-Aug - 06-Feb
WAG	05-06	274	06-Sep	25-Mar	201	73%	15-Aug - 15-May
	06-07	274	10-Sep	06-May	239	87%	15-Aug - 15-May
	07-08	275	14-Sep	21-May	251	91%	15-Aug - 15-May
	08-09	274	13-Sep	12-May	242	88%	15-Aug - 15-May
	09-10	274	05-Sep	18-May	256	93%	15-Aug - 15-May
	10-11	274	11-Sep	18-Mar	189	69%	15-Aug - 15-May
	11-12	275	06-Sep	10-Apr	218	79%	15-Aug - 15-May
	12-13	274	10-Sep	05-May	238	87%	15-Aug - 15-May
	13-14	274	09-Sep	08-May	242	88%	15-Aug - 15-May
	14-15	274	06-Sep	17-May	254	93%	15-Aug - 15-May
	1998	6	-	-	-	-	01-Nov - 06-Nov
	1999	6	-	-	-	-	15-Oct - 20-Oct
	2000	5	-	-	-	-	16-Oct - 20-Oct
	2001	4	-	-	-	-	15-Oct - 18-Oct
	2002	4	-	-	-	-	15-Oct - 18-Oct
	2003	6	-	-	-	-	15-Oct - 20-Oct
	2004	4	-	-	-	-	15-Oct - 18-Oct
BBR	05-06	93	20-Oct	16-Jan	89	96%	15-Oct - 15-Jan
	06-07	93	19-Oct	28-Nov	41	44%	15-Oct - 15-Jan
	07-08	93	18-Oct	15-Jan	90	97%	15-Oct - 15-Jan
	08-09	93	18-Oct	17-Jan	92	99%	15-Oct - 15-Jan
	09-10	93	17-Oct	16-Jan	92	99%	15-Oct - 15-Jan
	10-11	93	16-Oct	10-Dec	56	60%	15-Oct - 15-Jan
	11-12	93	18-Oct	18-Nov	32	34%	15-Oct - 15-Jan
	12-13	93	18-Oct	16-Dec	60	65%	15-Oct - 15-Jan
	13-14	93	21-Oct	15-Nov	26	28%	15-Oct - 15-Jan
	14-15	93	19-Oct	17-Nov	30	32%	15-Oct - 15-Jan

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Table 4.42: Continued

	Year	Season length, days	Earliest landing	Latest landing	Days fished	Percent of season fished	Season dates
	1998	65	-	-	-	-	15-Jan - 20-Mar
	1999	67	-	-	-	-	15-Jan - 22-Mar
	2000	8	-	-	-	-	01-Apr - 08-Apr
	2001	31	-	-	-	-	15-Jan - 14-Feb
	2002	25	-	-	-	-	15-Jan - 08-Feb
	2003	11	-	-	-	-	15-Jan - 25-Jan
	2004	9	-	-	-	-	15-Jan - 23-Jan
	2005	6	-	-	-	-	15-Jan - 20-Jan
BSS	05-06	229	27-Oct	27-May	213	93%	15-Oct - 31-May
	06-07	229	07-Nov	05-May	180	79%	15-Oct - 31-May
	07-08	230	18-Nov	10-May	175	76%	15-Oct - 31-May
	08-09	229	30-Nov	16-May	168	73%	15-Oct - 31-May
	09-10	229	11-Jan	06-May	116	51%	15-Oct - 31-May
	10-11	229	18-Nov	09-Apr	143	62%	15-Oct - 31-May
	11-12	245	02-Nov	19-Jun	231	94%	15-Oct - 15-Jun
	12-13	229	24-Nov	05-Jun	194	85%	15-Oct - 31-May
	13-14	229	20-Oct	29-Apr	192	84%	15-Oct - 31-May
	14-15	229	03-Nov	30-May	209	91%	15-Oct - 31-May
BST	05-06	168	27-Oct	02-Apr	158	94%	15-Oct - 31-Mar
	06-07	168	23-Oct	27-Mar	157	93%	15-Oct - 31-Mar
	07-08	169	20-Oct	02-Apr	166	98%	15-Oct - 31-Mar
BTE	08-09	168	19-Oct	11-Mar	144	86%	15-Oct - 31-Mar
	09-10	168	17-Oct	01-Mar	136	81%	15-Oct - 31-Mar
	13-14	168	29-Oct	29-Mar	152	90%	15-Oct - 31-Mar
	14-15	168	21-Oct	01-Apr	163	97%	15-Oct - 31-Mar
	06-07	168	04-Nov	26-Mar	144	86%	15-Oct - 31-Mar
	07-08	169	16-Nov	31-Mar	137	81%	15-Oct - 31-Mar
BTW	08-09	168	13-Jan	25-Mar	72	43%	15-Oct - 31-Mar
	13-14	229	07-Nov	08-Apr	153	67%	15-Oct - 31-May
	14-15	168	03-Nov	18-Apr	167	99%	15-Oct - 31-Mar
PIK	1998	14	-	-	-	-	15-Sep - 28-Sep
	1998	12	-	-	-	-	15-Sep - 26-Sep
	09-10	110	23-Oct	07-Dec	46	42%	15-Oct - 01-Feb
SMB	10-11	110	23-Oct	11-Dec	50	45%	15-Oct - 01-Feb
	11-12	110	21-Oct	15-Dec	56	51%	15-Oct - 01-Feb
	12-13	110	23-Oct	08-Dec	47	43%	15-Oct - 01-Feb
	14-15	110	28-Oct	05-Dec	39	35%	15-Oct - 01-Feb
	98-99	273	-	-	-	-	01-Nov - 31-Jul
WAI	02-03	3	-	-	-	-	25-Oct - 27-Oct
	03-04	372	-	-	-	-	24-Oct - 29-Oct

**Notes:** Some 2007/2008 and 2011/2012 fisheries extended by a day due to the leap year. Days fished is calculated as the difference between latest and earliest landing dates, inclusive. Percent of season fished is calculated as days fished divided by season length. In some fisheries, deliveries made were after the season closing date. Includes landings made on catcher/processors.

<sup>a</sup> 2011/2012 Bering Sea Snow crab fishery season extended past regular season closing date (May 31) due to sea ice coverage.

**Source:** Season dates and season length from ADF&G. Earliest and latest landing dates in 2005/2006 and later seasons from NMFS AKRO RAM division IFQ accounting.

Table 4.43: Days Between First and Last Delivery by Season, CR Program Fisheries

	Season	Vessels with one delivery	Vessels with multiple deliveries	Median days	Minimum days	Maximum days	Average days between first and last delivery, mean(sd)
EAG	2005-2006	0	7	47	23	182	72(66)
	2006-2007	0	6	37	17	86	41(25)
	2007-2008	1	4	77	47	105	77(27)
	2008-2009	0	3	75	31	105	70(37)
	2009-2010	0	3	91	33	132	85(50)
	2010-2011	0	3	76	38	116	77(39)
	2011-2012	0	3	69	31	90	63(30)
	2012-2013	0	3	89	30	92	70(35)
	2013-2014	0	3	79	46	80	68(19)
	2014-2015	0	3	67	37	72	59(19)
WAG	2005-2006	0	3	181	175	3,621	1326(1988)
	2006-2007	1	4	113	22	241	122(94)
	2007-2008	0	3	153	26	250	143(112)
	2008-2009	2	2	196	153	238	196(60)
	2009-2010	0	3	136	18	232	129(107)
	2010-2011	0	3	134	44	186	121(72)
	2011-2012	0	3	140	49	164	118(61)
	2012-2013	0	4	67	46	168	87(57)
	2013-2014	0	3	113	87	206	135(63)
	2014-2015	0	2	239	230	248	239(13)
BBR	2005-2006	21	69	17	1	70	19(15)
	2006-2007	23	59	9	1	26	10(6)
	2007-2008	7	68	15	1	51	18(12)
	2008-2009	10	69	16	4	57	22(14)
	2009-2010	8	63	18	2	67	18(12)
	2010-2011	5	61	19	5	51	21(10)
	2011-2012	23	40	6	1	21	7(5)
	2012-2013	29	35	5	1	21	6(4)
	2013-2014	28	35	7	1	16	7(4)
	2014-2015	19	45	7	1	21	8(5)

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Table 4.43: Continued

	Season	Vessels with one delivery	Vessels with multiple deliveries	Median days	Minimum days	Maximum days	Average days between first and last delivery, mean(sd)
BSS	2005-2006	3	75	20	1	148	32(30)
	2006-2007	9	60	26	5	156	33(26)
	2007-2008	0	78	36	7	116	41(25)
	2008-2009	0	77	38	5	117	38(22)
	2009-2010	2	67	27	9	107	31(20)
	2010-2011	2	67	29	7	102	34(19)
	2011-2012	0	72	116	12	201	105(45)
	2012-2013	0	70	47	7	151	56(34)
	2013-2014	2	68	49	7	134	52(29)
	2014-2015	1	70	59	11	168	65(35)
BST	2005-2006	15	17	22	1	148	31(35)
	2006-2007	14	25	30	1	145	49(48)
	2007-2008	4	23	86	4	161	73(56)
	2008-2009	6	14	40	3	146	56(50)
	2009-2010	5	8	15	2	105	24(34)
	2013-2014	6	19	127	6	152	104(49)
	2014-2015	7	38	86	6	156	87(50)
SMB	2009-2010	3	4	24	5	45	24(16)
	2010-2011	0	11	24	6	47	25(17)
	2011-2012	1	17	23	6	50	27(15)
	2012-2013	5	12	20	6	44	23(13)
	2014-2015	0	4	25	18	32	25(8)

**Notes:** A delivery is counted as each unique day that a vessel landed crab and may include landings to multiple processors; a single fishing trip may result in multiple deliveries if crab was landed on multiple days. Includes landings on and by catcher/processors. Trip accounting data unavailable prior to 2006/2007 season.

**Source:** NMFS AKRO RAM division Quota Share and Processor Quota Share holder files and IFQ accounting database, and Landings

Table 4.44: BBR Fishery Harvest by Week Of Season

Week	2010-2011		2011-2012		2012-2013		2013-2014		2014-2015	
	Vessels	Percent of pounds landed	Vessels	Percent of pounds landed	Vessels	Percent of pounds landed	Vessels	Percent of pounds landed	Vessels	Percent of pounds landed
1: 15-Oct	7	2(2,0)	16	7(9,2)	11	9(8,1)	1	1(1,0)	8	6(7,3)
2: 22-Oct	49	34(36,9)	52	71(74,51)	43	69(76,30)	29	36(33,26)	47	57(61,35)
3: 29-Oct	36	54(58,30)	27	97(97,95)	28	95(96,86)	43	83(84,75)	31	85(87,76)
4: 05-Nov	45	78(81,63)	6	98(97,100)	10	100(100,98)	22	98(97,97)	16	98(98,95)
5: 12-Nov	24	87(89,82)	2	100(100,100)	0	100(100,98)	4	100(100,100)	3	100(100,100)
6: 19-Nov	18	95(97,95)	0	100(100,100)	0	100(100,98)	0	100(100,100)	0	100(100,100)
7: 26-Nov	8	99(99,99)	0	100(100,100)	0	100(100,98)	0	100(100,100)	0	100(100,100)
8: 03-Dec	3	100(100,100)	0	100(100,100)	1	100(100,98)	0	100(100,100)	0	100(100,100)
9: 10-Dec	1	100(100,100)	0	100(100,100)	1	100(100,100)	0	100(100,100)	0	100(100,100)
10: 17-Dec	0	100(100,100)	0	100(100,100)	0	100(100,100)	0	100(100,100)	0	100(100,100)
11: 24-Dec	0	100(100,100)	0	100(100,100)	0	100(100,100)	0	100(100,100)	0	100(100,100)
12: 31-Dec	0	100(100,100)	0	100(100,100)	0	100(100,100)	0	100(100,100)	0	100(100,100)
13: 07-Jan	0	100(100,100)	0	100(100,100)	0	100(100,100)	0	100(100,100)	0	100(100,100)
14: 14-Jan	0	100(100,100)	0	100(100,100)	0	100(100,100)	0	100(100,100)	0	100(100,100)
Postseason: 16-Jan	0	100(100,100)	0	100(100,100)	0	100(100,100)	0	100(100,100)	0	100(100,100)

**Notes:** BBR fishery season open by regulation from October 15 to January 15. Cumulative proportion of pounds landed indicates total of a) combined IFQ and CDQ sold pounds, including catcher/processor landings (“All”); b) sold pounds landed on catcher vessel owner A-type IFQ permits (CVOA); and c) sold pounds landed on catcher vessel owner B-type IFQ permits or catcher vessel crew type IFQ permits (CVOB + CVC). CVOA IFQ permits are subject to matching to processing quota, whereas CVC and CVOB may be landed at any processor.

**Source:** NMFS RAM IFQ accounting database via eLandings.



Table 4.45: BSS Fishery Harvest by Week of Season

Week	2010-2011		2011-2012		2012-2013		2013-2014		2014-2015	
	Vessels	Percent of pounds landed	Vessels	Percent of pounds landed	Vessels	Percent of pounds landed	Vessels	Percent of pounds landed	Vessels	Percent of pounds landed
1: 15-Oct	0	0(0,0)	0	0(0,0)	0	0(0,0)	1	0(0,0)	0	0(0,0)
2: 22-Oct	0	0(0,0)	0	0(0,0)	0	0(0,0)	0	0(0,0)	0	0(0,0)
3: 29-Oct	0	0(0,0)	1	0(0,0)	0	0(0,0)	2	0(1,0)	1	0(0,0)
4: 05-Nov	0	0(0,0)	0	0(0,0)	0	0(0,0)	0	0(1,0)	2	0(0,0)
5: 12-Nov	1	0(0,0)	1	0(0,0)	0	0(0,0)	0	0(1,0)	1	0(0,0)
6: 19-Nov	0	0(0,0)	1	0(0,0)	1	0(0,0)	0	0(1,0)	1	0(1,0)
7: 26-Nov	0	0(0,0)	1	1(0,0)	0	0(0,0)	0	0(1,0)	1	1(1,0)
8: 03-Dec	0	0(0,0)	0	1(0,0)	1	1(0,0)	2	1(2,0)	4	2(2,0)
9: 10-Dec	1	0(0,0)	0	1(0,0)	0	1(0,0)	8	4(5,0)	12	5(6,0)
10: 17-Dec	1	1(0,0)	0	1(0,0)	1	1(0,0)	9	7(7,0)	12	8(9,1)
11: 24-Dec	0	1(0,0)	0	1(0,0)	0	1(0,0)	6	10(10,5)	8	10(11,1)
12: 31-Dec	0	1(0,0)	0	1(0,0)	8	3(4,0)	10	13(13,6)	12	13(14,3)
13: 07-Jan	7	3(2,0)	20	5(7,1)	30	12(14,1)	26	20(22,9)	21	18(20,3)
14: 14-Jan	24	11(14,1)	26	12(14,1)	29	20(24,3)	23	27(31,11)	30	25(28,3)
15: 21-Jan	26	20(23,1)	31	20(23,3)	33	29(34,7)	25	34(39,16)	25	31(36,4)
16: 28-Jan	35	32(36,7)	33	24(29,5)	29	36(42,12)	28	42(47,21)	33	40(46,7)
17: 04-Feb	48	48(53,15)	16	29(33,11)	38	45(51,14)	35	52(58,28)	33	47(54,9)
18: 11-Feb	41	62(69,22)	25	33(38,14)	44	54(60,21)	32	62(69,32)	28	53(61,12)
19: 18-Feb	37	74(78,36)	31	40(45,16)	26	60(67,26)	31	70(78,34)	30	61(67,26)
20: 25-Feb	32	84(88,55)	40	47(52,19)	29	68(73,34)	28	78(84,53)	32	69(73,38)
21: 04-Mar	23	91(93,84)	24	51(57,21)	31	75(81,41)	24	84(88,67)	27	75(79,46)
22: 11-Mar	15	96(97,94)	35	57(63,26)	23	81(85,55)	16	90(94,73)	23	80(83,51)
23: 18-Mar	7	98(98,97)	34	60(67,31)	27	90(91,69)	14	94(97,77)	13	83(86,55)
24: 25-Mar	4	99(100,100)	15	63(69,31)	11	92(93,73)	11	96(98,90)	17	86(90,56)
25: 01-Apr	0	99(100,100)	22	66(73,32)	12	94(95,75)	7	98(99,93)	13	88(91,59)
26: 08-Apr	1	100(100,100)	8	67(74,32)	9	96(96,86)	1	98(99,93)	9	90(93,62)
27: 15-Apr	1	100(100,100)	43	72(79,36)	2	97(96,87)	3	99(100,96)	11	92(94,70)
28: 22-Apr	0	100(100,100)	1	73(79,37)	0	97(96,87)	4	100(100,100)	9	93(95,78)
29: 29-Apr	0	100(100,100)	29	75(81,39)	8	99(97,95)	2	100(100,100)	9	95(96,84)
30: 06-May	0	100(100,100)	35	78(83,42)	3	99(98,95)	0	100(100,100)	10	98(98,95)
31: 13-May	0	100(100,100)	0	78(83,42)	2	100(98,97)	0	100(100,100)	7	99(99,97)
32: 20-May	0	100(100,100)	21	80(85,45)	2	100(98,98)	0	100(100,100)	3	100(100,97)
33: 27-May	0	100(100,100)	35	87(89,67)	0	100(98,98)	0	100(100,100)	3	100(100,100)
Postseason: 01-Jun	0	100(100,100)	42	100(100,100)	0	100(100,100)	0	100(100,100)	0	100(100,100)

**Notes:** BSS fishery is open by regulation from October 15 to May 31. Cumulative proportion of pounds landed indicates total of a) combined IFQ and CDQ sold pounds landed, including catcher/processor landings (“All”); b) sold pounds landed on catcher vessel owner A-type IFQ permits (CVOA); and c) sold pounds landed on catcher vessel owner B-type IFQ permits or catcher vessel crew type IFQ permits (CVOB + CVC). CVOA IFQ permits are subject to matching to processing quota, whereas CVC and CVOB may be landed at any processor.

<sup>a</sup> 2011/2012 Bering Sea Snow crab fishery season extended past regular season closing date (May 31) due to sea ice coverage.

**Source:** NMFS RAM IFQ accounting database via eLandings.

Table 4.46: Fishing Effort (Pot Lifts, CPUE, and RPUE) by Season, CR Program Fisheries

Season	Vessels	CPUE (lb legal crab)		Pot lifts		RPUE (\$)	
		Mean(sd) CPUE per vessel, 1,000	Weighted mean	Mean(sd) per vessel, 1,000	Total	Mean(sd) RPUE per vessel, 1,000	Weighted mean
1998	14	8.1(4.3)	8.7	6.0(2.3)	83.4	\$93(46)	\$98
1999	15	9.0(4.6)	8.8	5.3(2.2)	79.0	\$162(85)	\$158
2000	15	9.7(4.4)	9.7	4.8(1.5)	71.5	\$196(94)	\$197
2001	19	11.2(5.6)	11.5	3.3(1.1)	62.6	\$205(97)	\$208
2002	19	12.2(4.9)	12.1	2.7(0.7)	52.0	\$234(92)	\$235
2003	18	10.6(2.9)	10.6	3.3(0.7)	58.9	\$216(60)	\$220
2004	19	18.6(7.1)	18.0	1.8(0.4)	34.8	\$327(116)	\$316
05-06	7	25.3(7.9)	25.2	3.5(1.9)	24.6	\$350(130)	\$367
EAG 06-07	6	23.7(5.4)	24.5	4.4(3.5)	26.2	\$224(58)	\$249
07-08	4	29.1	27.8	5.7	22.7	\$304	\$329
08-09	3	*	*	*	*	*	*
09-10	3	*	*	*	*	*	*
10-11	3	*	*	*	*	*	*
11-12	3	*	*	*	*	*	*
12-13	3	*	*	*	*	*	*
13-14	3	*	*	*	*	*	*
14-15	3	*	*	*	*	*	*
98-99	3	*	*	*	*	*	*
99-00	15	4.1(2.7)	6.1	7.2(8.0)	108.7	\$74(46)	\$107
00-01	12	4.7(3.3)	6.8	8.3(6.9)	99.5	\$83(54)	\$117
01-02	9	5.8(1.7)	6.4	11.7(9.4)	105.5	\$99(26)	\$107
02-03	6	6.4(3.4)	8.3	13.2(10.5)	79.0	\$111(55)	\$144
03-04	6	8.5(3.3)	10.0	11.0(7.8)	66.2	\$147(56)	\$171
04-05	6	9.3(4.4)	11.9	9.5(7.1)	56.8	\$141(65)	\$179
05-06	3	*	*	*	*	*	*
WAG 06-07	4	18.3	19.4	6.7	26.7	\$144	\$147
07-08	3	*	*	*	*	*	*
08-09	3	*	*	*	*	*	*
09-10	3	*	*	*	*	*	*
10-11	3	*	*	*	*	*	*
11-12	3	*	*	*	*	*	*
12-13	4	20.8	20.2	8.2	32.7	\$353	\$335
13-14	3	*	*	*	*	*	*
14-15	2	*	*	*	*	*	*

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Table 4.46: Continued

Season	Vessels	CPUE (lb legal crab)		Pot lifts		RPUE (\$)	
		Mean(sd) CPUE per vessel, 1,000	Weighted mean	Mean(sd) per vessel, 1,000	Total	Mean(sd) RPUE per vessel, 1,000	Weighted mean
1998	274	15.3(6.7)	15.2	0.5(0.2)	144.9	\$368(161)	\$364
1999	257	12.6(6.1)	12.5	0.6(0.2)	150.0	\$650(322)	\$648
2000	244	11.9(5.2)	12.0	0.4(0.1)	103.4	\$480(211)	\$486
2001	230	19.1(10.0)	19.2	0.3(0.1)	66.2	\$764(406)	\$767
2002	242	20.6(7.1)	20.4	0.3(0.1)	72.2	\$1,043(355)	\$1,033
2003	250	18.2(9.5)	18.4	0.5(0.2)	134.1	\$716(373)	\$730
2004	251	22.9(9.0)	22.9	0.4(0.1)	96.3	\$890(340)	\$893
05-06	89	28.0(10.5)	23.7	1.3(1.0)	114.6	\$974(368)	\$829
BBR 06-07	81	33.3(9.9)	34.0	0.9(0.5)	71.7	\$888(271)	\$907
07-08	74	27.9(7.2)	27.5	1.5(0.9)	113.1	\$883(232)	\$871
08-09	78	23.7(7.1)	21.7	1.8(1.1)	139.7	\$860(267)	\$788
09-10	70	22.3(5.9)	21.2	1.7(0.8)	118.4	\$699(185)	\$667
10-11	65	18.6(5.1)	18.1	2.0(1.0)	131.4	\$911(256)	\$886
11-12	62	27.6(7.3)	28.2	0.7(0.3)	45.1	\$1,920(507)	\$1,957
12-13	64	30.7(9.0)	30.2	0.6(0.3)	38.0	\$1,722(518)	\$1,701
13-14	63	27.0(8.9)	26.9	0.7(0.3)	45.8	\$1,300(440)	\$1,290
14-15	63	29.0(28.7)	25.3	0.9(0.5)	58.5	\$1,323(1,355)	\$1,150
1999	241	155.4(42.0)	158.3	3.9(1.5)	945.4	\$265(67)	\$269
2000	231	138.5(59.9)	136.2	0.8(0.3)	181.5	\$450(200)	\$439
2001	207	91.6(48.0)	95.6	0.9(0.5)	191.0	\$248(119)	\$259
2002	191	76.2(35.2)	75.6	1.7(0.8)	325.6	\$174(80)	\$172
2003	190	151.6(63.0)	146.9	0.8(0.4)	153.7	\$424(168)	\$409
2004	189	156.0(60.3)	149.6	0.7(0.4)	123.4	\$500(188)	\$479
2005	168	246.2(87.9)	242.8	0.4(0.1)	72.9	\$731(274)	\$719
05-06	78	211.4(71.9)	202.6	1.5(1.1)	120.0	\$422(136)	\$407
BSS 06-07	69	349.1(74.7)	343.0	1.2(0.8)	85.3	\$772(178)	\$748
07-08	78	354.7(74.1)	352.7	1.8(1.0)	141.4	\$824(169)	\$820
08-09	77	284.6(70.5)	279.1	2.1(1.3)	163.3	\$552(140)	\$542
09-10	69	255.8(55.6)	255.0	2.0(1.1)	136.8	\$489(100)	\$487
10-11	68	255.3(51.4)	254.9	2.2(1.1)	147.2	\$974(194)	\$971
11-12	72	224.7(63.4)	222.7	3.7(1.8)	270.0	\$729(204)	\$726
12-13	70	219.2(64.1)	210.0	3.2(1.6)	224.4	\$711(200)	\$683
13-14	70	181.8(49.9)	179.8	3.3(1.7)	231.4	\$554(154)	\$544
14-15	4	155.4	157.8	0.6	2.2	\$462	\$465

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Table 4.46: Continued

Season	Vessels	CPUE (lb legal crab)		Pot lifts		RPUE (\$)		
		Mean(sd) per vessel, 1,000	Weighted mean	Mean(sd) per vessel, 1,000	Total	Mean(sd) RPUE per vessel, 1,000	Weighted mean	
BST	05-06	43	20.6(18.8)	15.3	0.7(0.5)	28.4	\$74(69)	\$56
	06-07	52	16.8(15.4)	17.2	1.0(0.8)	52.9	\$70(64)	\$71
	07-08	41	18.6(10.1)	17.6	1.3(1.3)	52.0	\$77(42)	\$74
	08-09	49	14.7(15.7)	12.9	1.3(1.3)	63.9	\$60(65)	\$53
	09-10	41	38.8(30.9)	11.8	1.0(0.7)	40.6	\$190(152)	\$58
	10-11	49	0.0(0.0)	0.0	0.8(0.5)	38.6	\$0	\$0
	11-12	56	0.0(0.0)	0.0	1.1(0.7)	64.2	\$0	\$0
	12-13	59	0.0(0.0)	0.0	1.4(0.9)	81.1	\$0	\$0
	13-14	66	15.2(12.0)	9.7	2.2(1.6)	147.6	\$78(62)	\$49
	14-15	42	46.4(17.5)	46.0	1.7(1.0)	72.6	\$238(92)	\$237
PIK	1998	58	3.0(1.7)	3.0	0.8(0.3)	46.0	\$72(40)	\$70
	1998	132	7.1(2.0)	6.9	0.7(0.3)	91.7	\$87(24)	\$84
SMB	09-10	7	9.3(1.4)	9.6	1.5(1.0)	10.6	\$98(15)	\$102
	10-11	11	9.7(2.0)	10.1	2.7(1.2)	29.3	\$218(44)	\$228
	11-12	18	8.5(2.1)	8.9	2.7(1.1)	48.6	\$181(44)	\$188
	12-13	17	9.8(2.6)	10.1	2.2(1.0)	37.0	\$189(51)	\$193
	14-15	4	6.2	6.7	2.5	10.1	\$94	\$101
WAI	98-99	1	*	*	*	*	*	*
	02-03	33	18.7(12.7)	17.9	0.1(0.0)	3.8	\$1,091(741)	\$1,041
	03-04	30	10.2(5.4)	10.3	0.2(0.1)	5.8	\$518(278)	\$525

**Notes:** Effort statistics for the most recent crab year shown in the table represent fishing activity occurring during the early part of the season, before December 31. CPUE = number of legal crab per potlift; RPUE = ex-vessel value of commercially sold crab per potlift. Dollars are inflation-adjusted to 2014 equivalent value using the GDP deflator. Includes catcher/processor harvest and effort.

**Source:** ADF&G fish ticket data, and eLandings

Table 4.47: Snow and King Crab Exports and Imports

Year	King crab						Snow crab					
	Export (1,000t)	Export value (\$mil- lion)	Import (1,000t)	Import value (\$mil- lion)	Net export (1,000t)	Net export value (\$mil- lion)	Export (1,000t)	Export value (\$mil- lion)	Import (1,000t)	Import value (\$mil- lion)	Net export (1,000t)	Net export value (\$mil- lion)
1991	3.85	\$84.47	0.30	\$6.28	3.55	\$78.19	32.20	\$241.58	0.74	\$8.36	31.46	\$233.22
1992	3.70	\$91.86	2.19	\$34.17	1.51	\$57.69	61.61	\$464.93	0.88	\$7.23	60.73	\$457.70
1993	5.96	\$129.56	1.12	\$19.37	4.84	\$110.19	45.56	\$403.95	1.33	\$12.86	44.23	\$391.09
1994	3.62	\$70.46	2.60	\$50.22	1.02	\$20.24	31.12	\$376.10	2.86	\$31.60	28.26	\$344.50
1995	2.85	\$50.24	4.01	\$65.12	-1.16	\$-14.88	12.26	\$178.35	2.26	\$26.74	10.00	\$151.61
1996	4.46	\$80.14	6.27	\$90.87	-1.81	\$-10.73	9.53	\$99.03	3.38	\$31.31	6.15	\$67.72
1997	2.80	\$39.31	9.77	\$153.50	-6.97	\$-114.19	10.17	\$74.74	6.90	\$50.24	3.27	\$24.50
1998	3.10	\$31.35	11.82	\$167.63	-8.72	\$-136.28	11.99	\$73.83	12.26	\$85.99	-0.27	\$-12.16
1999	2.73	\$34.72	11.49	\$184.58	-8.76	\$-149.86	15.62	\$125.60	24.68	\$225.76	-9.06	\$-100.16
2000	3.05	\$60.22	10.05	\$192.38	-7.00	\$-132.16	4.75	\$54.83	28.61	\$318.53	-23.86	\$-263.70
2001	1.83	\$42.87	9.29	\$179.16	-7.46	\$-136.29	3.09	\$32.39	42.18	\$378.12	-39.09	\$-345.73
2002	2.28	\$42.68	10.42	\$236.97	-8.14	\$-194.29	3.36	\$33.72	44.41	\$398.79	-41.05	\$-365.07
2003	3.94	\$62.80	9.96	\$202.41	-6.02	\$-139.61	3.92	\$47.26	51.60	\$545.02	-47.68	\$-497.76
2004	3.25	\$47.27	10.55	\$181.79	-7.30	\$-134.52	4.09	\$48.11	49.10	\$511.25	-45.01	\$-463.14
2005	3.90	\$63.31	18.39	\$293.88	-14.49	\$-230.57	3.42	\$35.21	45.97	\$381.95	-42.55	\$-346.74
2006	4.32	\$65.79	28.07	\$381.46	-23.75	\$-315.67	4.79	\$46.26	46.28	\$345.78	-41.49	\$-299.52
2007	3.31	\$54.26	30.35	\$405.57	-27.04	\$-351.31	2.12	\$16.86	47.98	\$448.55	-45.86	\$-431.69
2008	4.33	\$75.41	15.92	\$288.47	-11.59	\$-213.06	5.55	\$48.56	42.00	\$402.55	-36.45	\$-353.99
2009	3.36	\$71.75	15.83	\$264.69	-12.47	\$-192.94	5.48	\$48.74	51.65	\$413.44	-46.17	\$-364.70
2010	3.62	\$87.15	10.06	\$191.26	-6.44	\$-104.11	4.96	\$44.39	43.57	\$401.20	-38.61	\$-356.81
2011	2.66	\$66.67	8.50	\$179.63	-5.84	\$-112.96	8.48	\$95.29	41.04	\$528.32	-32.56	\$-433.03
2012	1.98	\$52.18	9.41	\$169.70	-7.43	\$-117.52	12.72	\$132.69	41.68	\$447.99	-28.96	\$-315.30
2013	1.78	\$44.26	10.69	\$196.54	-8.91	\$-152.28	8.22	\$92.23	52.05	\$559.89	-43.83	\$-467.66
2014	2.19	\$50.96	12.34	\$243.77	-10.15	\$-192.81	7.24	\$86.48	45.49	\$504.39	-38.25	\$-417.91

**Notes:** Imports and exports shown for product codes 306144010 (frozen king crab) and 306144020 (frozen snow crab) from the Tariff Schedule for the United States, Annotated (TSUSA).

**Source:** U.S. Foreign Census Bureau Foreign Trade Division, via NMFS Fisheries Statistics Division, U.S. Foreign Trade Database [<http://www.st.nmfs.noaa.gov/st1/trade/>].

Table 4.48: Producer Price Index - Unprocessed and Packaged Fish

Year	Index	2014 Adjustment Factor
1991	69.057	1.57
1992	70.633	1.54
1993	72.314	1.5
1994	73.851	1.47
1995	75.393	1.44
1996	76.767	1.42
1997	78.088	1.39
1998	78.935	1.38
1999	80.065	1.36
2000	81.89	1.33
2001	83.755	1.3
2002	85.041	1.28
2003	86.736	1.25
2004	89.118	1.22
2005	91.985	1.18
2006	94.812	1.15
2007	97.34	1.12
2008	99.218	1.1
2009	100	1.09
2010	101.226	1.07
2011	103.316	1.05
2012	105.22	1.03
2013	106.936	1.02
2014	108.694	1
2015	109.615	0.99

**Source:** Bureau of Labor Statistics. Producer Price Index-Commodities, Series WPU0223 (Unprocessed and packaged fish), retrieved December 2014.

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