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, 2017

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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 maintaion continuous efforts 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. Please address comments and suggestions to Brian Garber-Yonts (contact information below).

This report will be 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, 2017

The Bering Sea/Aleutian Islands (BSAI) crab fisheries managed under the North Pacific Fishery Management Council's Fishery Management Plan (FMP) are currently (as of calendar year 2016) prosecuted by an active fleet of 116 catcher vessels and two catcher processors, and landed and processed at 12 processing facilities throughout the region. Of the 10 crab stocks and 11 fisheries managed under the FMP[1], seven fisheries were open to targeted fishing in 2016. After closure for the 2010/11 through 2012/13 seasons, the Bering Sea Tanner (BST) crab fisheries opened for targeted fishing for 2013/14 through 2015/16 seasons, but were subsequently closed for the 2016/17 season.[2] 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. The Saint Matthew blue king (SMB) crab fishery was closed for the 2013/14 season under the State of Alaska's management strategy, reopened for the 2014/15 and 2015/16 seasons, and closed again for 2016/17.

This report provides a comprehensive presentation of available information on status and trends in a variety of indicators of economic status and performance of BSAI crab fisheries through 2016 calendar year operations. 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 document 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. Note that results presented below for 2016 calendar year fisheries are preliminary pending completion of data validation and additional analyses, and may be revised in the final update of the full Economic Status Report.

[1]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 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.

[2]Most activity in the BSS and BST fisheries occur during January through March of the crab season/year, such that effects of closing the 2016/17 BST fishery occurred primarily during calendar year 2017 and are not reflected in this report.

Fishery production and economic value

Harvest and processing sector production statistics by crab fishery, including ex-vessel and first wholesale output and estimated revenue are shown in Table 1 for calendar years 2012 through 2016 and summarized in Figure **??**, with ex-vessel and first wholesale prices shown in Figure **??**. Across all fisheries managed under the BSAI Crab FMP, the total volume of ex-vessel landings commercially sold to processors during 2016 was 64 million pounds (29 thousand metric tons), a 30 percent decrease from the previous year. Processing sector finished production volume during 2016 was 42.3 million pounds (19.2 thousand metric tons) aggregated over all BSAI crab species and product forms, also declining 30 percent from the previous year. The effect of fishery closures and reduced production over all fisheries combined with offsetting price increases produced an aggregate 3.6 percent decrease in total ex-vessel revenues over all fisheries in 2016, totaling $259.3[3] million for the year, and with aggregate first wholesale revenues declining by 3.9 percent to $349 million.

As of 2016, allowable catch quantities in all BSAI crab fisheries currently open to targeted fishing are fully exploited (greater than 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 2016 reflected declines across nearly all fisheries compared to 2015, with the total catch of 39.6 million pounds (17.6 thousand mt) landed in the Bering Sea snow crab (BSS) fishery representing the largest decline in both absolute and proportional (-35%) terms. Landings in the BST fisheries decreased 30 percent from 2015 levels, to 10.6 million pounds (4.7 thousand mt), and landings of 8.4 million pounds (3.8 metric tons) in the Bristol Bay red king crab (BBR) fishery declined 14 percent. The 5.6 million pounds (2.5 metic tons) landed in the Aleutian Islands golden king crab (AIG) fisheries during 2016 represented a relatively modest reduction of 3.4 percent from 2015.

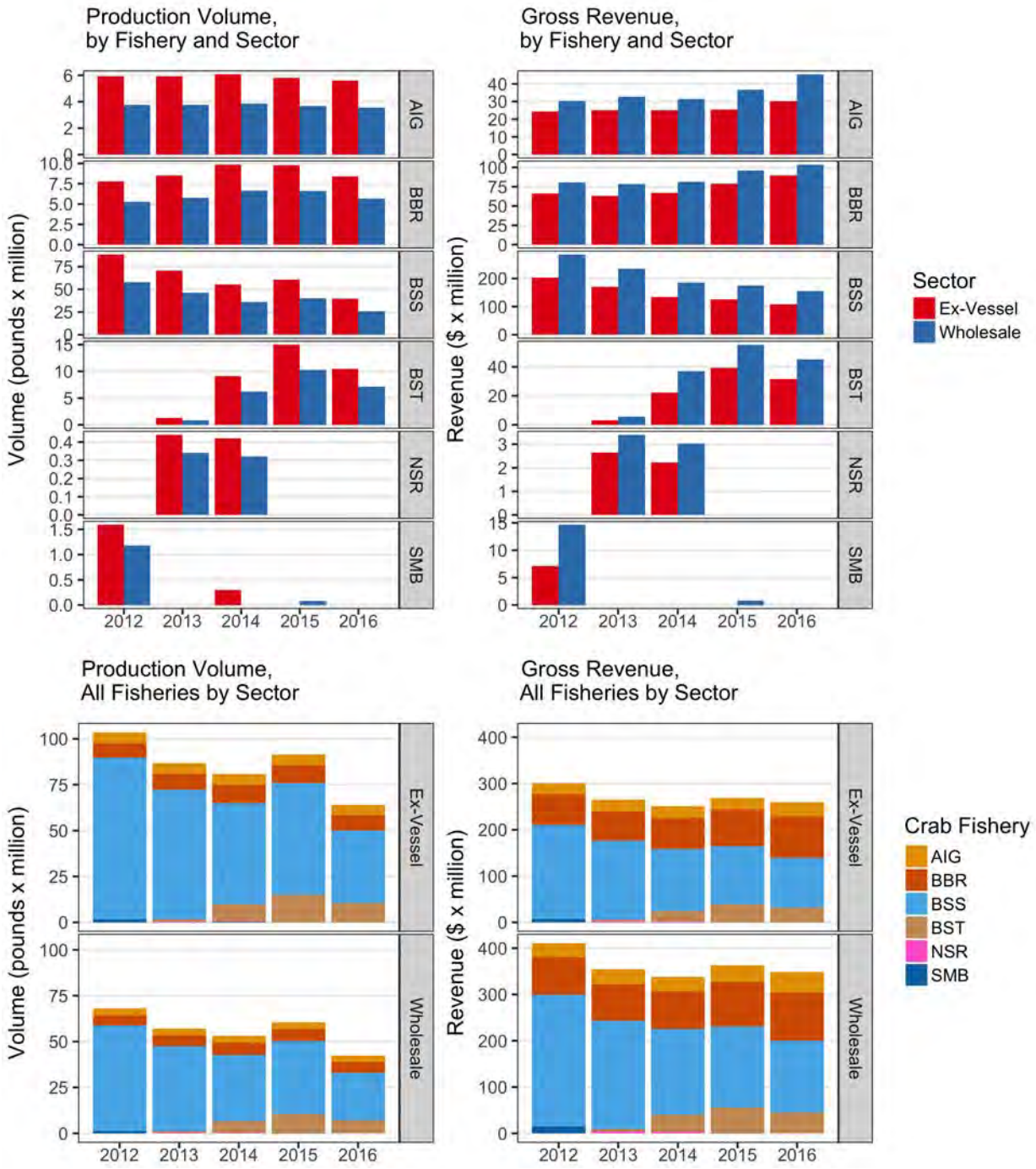
Similar to ex-vessel production, the 30 percent decrease in processing sector output aggregated over all active crab fisheries was driven in the largest part by the 35 percent decline to 25.9 million pounds (11.8 thousand mt) of finished production in the BSS fishery, and a 30 percent decline in finished volume in the BST fisheries to 7.2 million pounds (3.2 thousand mt).

Increases in average prices reported for both sectors continued for a second year across all crab fisheries during 2016, substantially offsetting production declines in the respective fisheries, producing increased ex-vessel and wholesale revenues in both AIG and BBR fisheries, and partially mitigating production output declines in BSS and BST fisheries (Table 1). Average BBR ex-vessel price increased 32% per landed pound to $10.67, and average first wholesale price increased 26 percent to $18.27 per finished pound, while AIG prices increased to o $5.38 per-pound (+23%) ex-vessel and to $9.38 (+28%) first wholesale. The largest proportional increase in prices occurred in the BSS fishery, with with ex-vessel price of $2.73 and and wholesale price $5.97 increasing by 33% and 36%, respectively. Prices in the BST fishery increased to $3.02 ex-vessel (+15%) and $6.31 (+17%) at first wholesale.

The combined effect of declining production levels, due to catch allocations and fishery closures, with market-driven price increases across crab fisheries produced an overall 3.6 percent decrease

[3]All monetary values in the report, unless otherwise noted, are inflation-adjusted to 2015-equivalent dollars using the GDP-chaintype price index (`https://research.stlouisfed.org/fred2/series/GDPCTPI`). The GDP price index is used to adjust fishery production revenues and costs to account for the change in general US production prices over time.

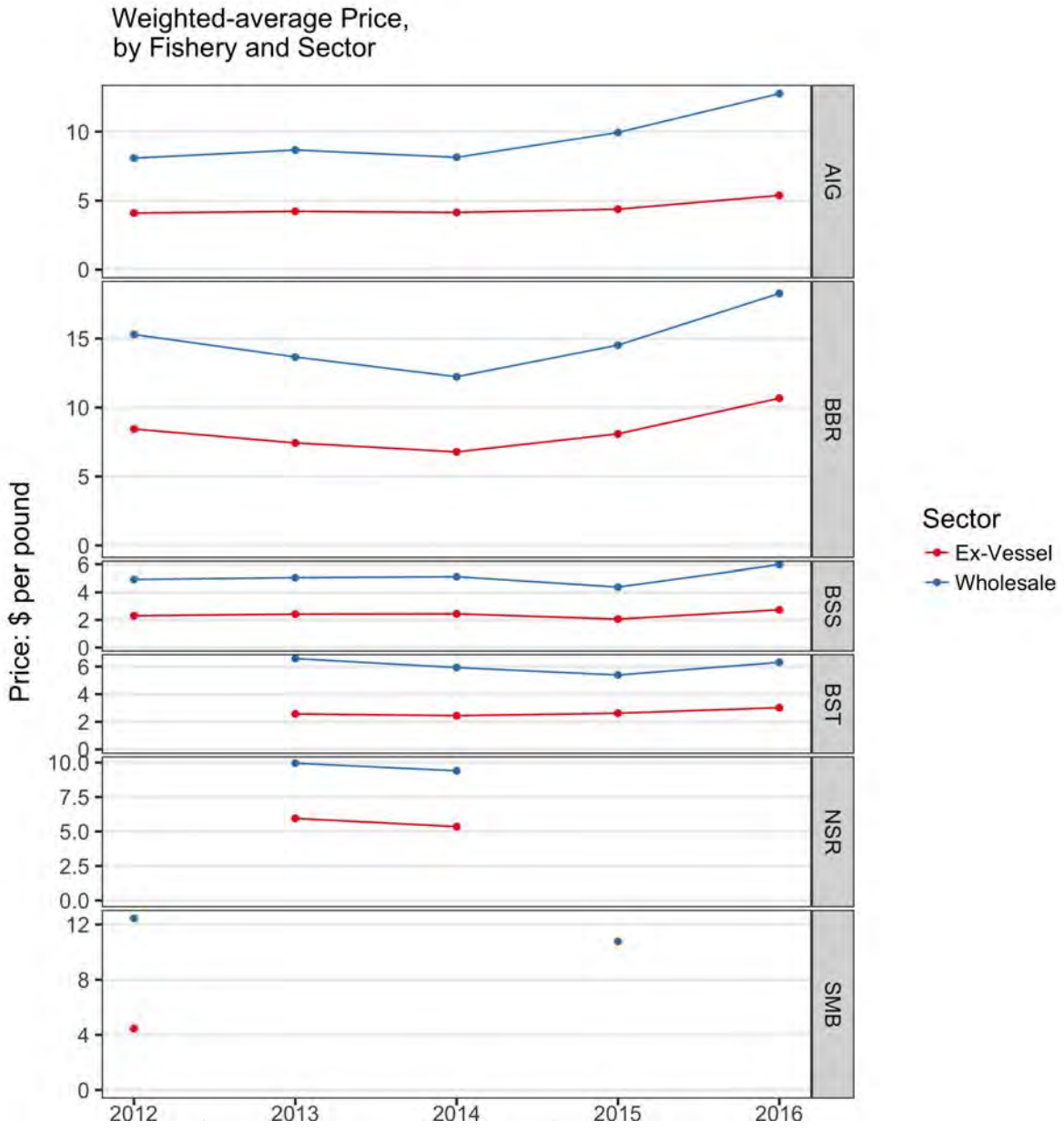
Figure 1: BSAI Crab Ex-vessel and First Wholesale Production, 2012 - 2016



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) Ex-vessel and Processing Revenue and Volume, 2012 - 2016; 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: BSAI Crab Ex-vessel and First Wholesale Price, 2012 - 2016



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.* Ex-vessel and First Wholesale Weighted Average Price, 2012 - 2016. See Table 1 footnotes for data sources and details.

in gross ex-vessel revenues and 3.9 percent revenue decline in the processing sector for 2016, with aggregate gross ex-vessel revenues of $259 million and first wholesale revenues of $349 million. The relatively large proportional price increases, and production declines, in both sectors of the BSS fishery produced gross revenue of $108 million in the harvest sector (-14%) compared to 2015, and $155 million in the processing sector (-11%). The BST fishery produced gross revenue of $31.6 million ex-vessel and $45 million in the processing sector, both declining by 19 percent from the previous year. In contrast, gross ex-vessel earnings increased by 13 percent to $89.6 million in the BBR fishery, and by 8 percent to $103.7 million first wholesale, while ex-vessel revenues in the AIG

fisheries increased by 19 percent to $30.1 million and by 24 percent in the processing sector to $45.4 million. The proportional variation in aggregate gross revenue across crab fisheries from 2015 to 2016 was unexceptional relative to inter-annual variation over the last 15 years in the historically volatile crab fisheries; longer time series for these and other measures of production and earnings performance in crab fisheries are presented and more fully examined in the 2017 (to be released in February, 2018).

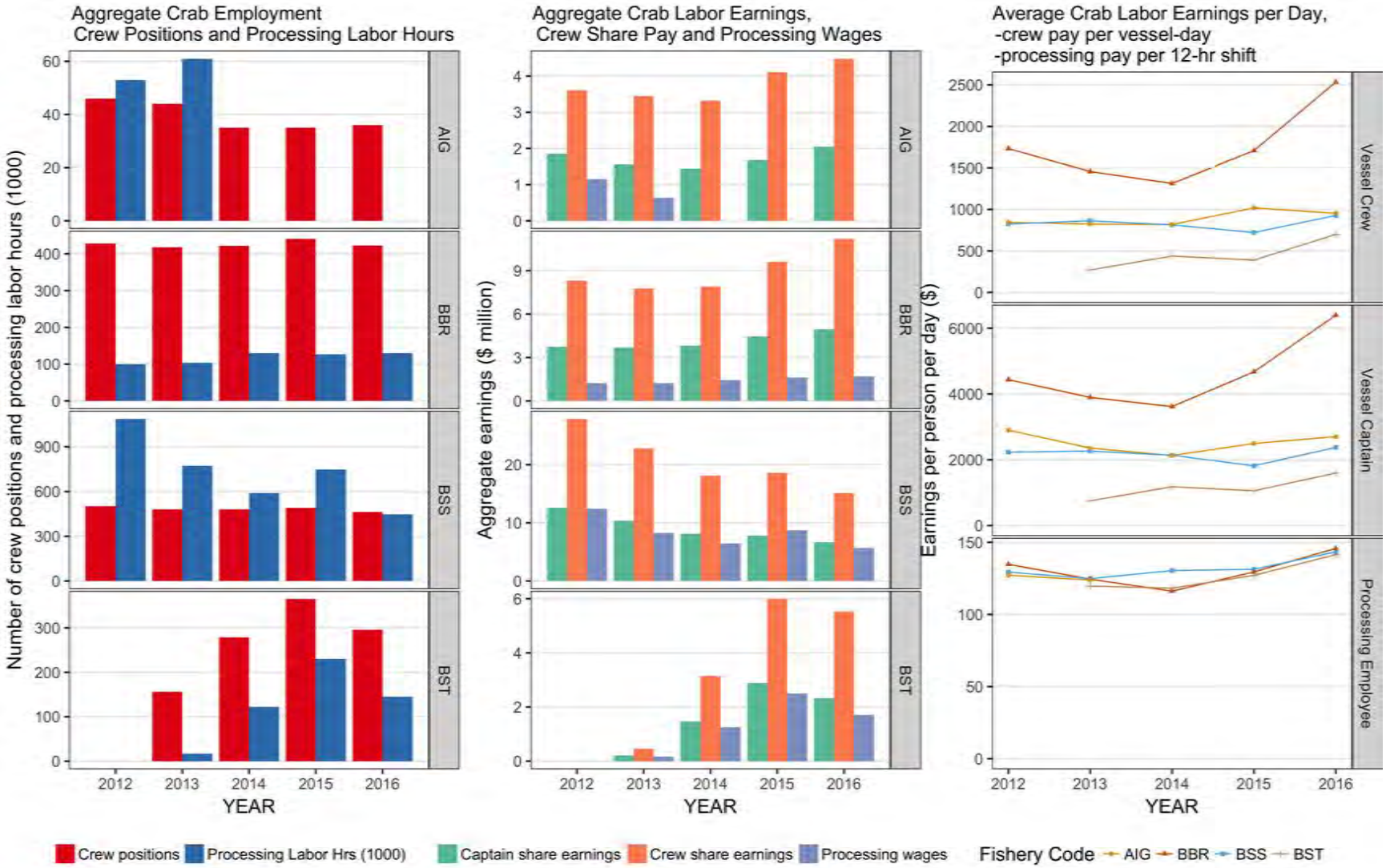
Employment and Income

A summary of selected indicators from the most recent employment data available for Crab Rationalization (CR) program fisheries is provided in Table 2[4] and depicted graphically in Figure 3. Crab EDR data for calendar year 2016 are reported where available, but note that results are preliminary pending completion of data validation and additional analyses. The number of vessels operating in one or more of the CR fisheries in 2016 declined from 82 to 80. The active fleet in the BBR and BSS fisheries were similarly reduced, to 63 and 68, respectively, while 46 vessels participated in the BST fishery, 11 fewer compared to 2015. Based on the number of crew onboard reported by participating vessels during each fishery (averaged over crew size values reported in eLandings catch accounting records for crab vessels), there were an estimated 1,218 crew positions in aggregate across all 80 vessels in CR fisheries in 2016, 114 fewer than the previous year, of which 69 were due to the smaller fleet in the BST fishery.[5]

[4]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.

[5] 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.

Figure 3: Harvest and Processing Employment and Compensation, Selected Crab Fisheries, 2012 - 2016



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.*

Revenue-share payments to crab vessel crew members as a group totaled approximately $36 million in 2016, with an additional $16 million paid to vessel captains, both declining by approximately 5%.[6] Aggregate crew and captain earnings in the BSS fishery declined by 19 percent to $15.1 million and decreased by 14 percent to $6.7 million, respectively. Aggregate crew and captain earnings in the BBR fisheries increased Sexpryr-1, to $11.2 million (+17%) and $5 million (+11%), respectively. Crew and captain earnings in the BST fishery totaled $5.9 million and $2.86 million, respectively, nearly doubling the level of earnings in 2014.

Crab processing labor input at processing plants that received IFQ and CDQ crab landings in 2016 is estimated at 788 thousand labor hours, declining 33 percent from 2015, with the number of plants active over all CR fisheries reduced from 9 to 8. Aggregate processing labor income generated across all CR fisheries during 2016 was $9.6 million, 29 percent less than the previous year. Processing labor pay statistics reflect increasing hourly processing wage rates across all fisheries beginning in 2014 associated with annual incremental increases in Alaska state minimum wage. Median plant-level hourly wage rate increased by 11 percent from 2015, to $11.93 over all CR fisheries.

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 2016 calendar year crab fishing activity. Table 3 and Figure 4 shows aggregated results for crab fishing quota lease volume (in pounds) and cost reported for crab vessels active during the most recent five calendar years for CR fisheries, 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 2016 BBR fishery range from 50 vessels leasing CVO Class A shares to 5 vessels leasing CDQ shares (out of 63 crab vessels active during the 2016/17 BBR fishery), and from 54 vessels leasing CVO Class A BSS IFQ allocation to 7 vessels leasing CDQ allocation (out of 67 active vessels) in the BSS fishery. Total volume and cost over all vessels leasing the respective quota types during 2016 range from 4.43 million pounds and $29.7 million for BBR CVO Class A IFQ, to 201 thousand pounds and $1.4 million for BBR CVO and CPC crew IFQ allocation; BSS lease volume and cost ranged from 19.6 million pounds and $26 million for CVO Class A IFQ to 925 thousand pounds and $1.3 million for crew share IFQ allocation.

[6] 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).

Median vessel-level values[7] for 2016 BBR quota leased volume and cost ranged from 121 thousand pounds and $846 thousand per vessel for the five vessels leasing BBR CDQ allocation, 75 thousand pounds and $494 thousand for BBR CVO-A shares, and 4.0 thousand pounds and $34 thousand for BBR CVO and CPO crew IFQ. BSS per-vessel averages ranged from 337 thousand pounds and $404 thousand per vessel for BSS CVO- Class A allocation to 22 thousand pounds and $31 thousand for BSS crew share allocation.

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 inter-annual variation in price per pound corresponding to changes in ex-vessel prices. In the 2016 BBR fishery, median lease price ranged from $6.66 per pound for BBR CVO Class A allocation (62% of ex-vessel value) to $7.02 per pound (median 63% of ex-vessel value) for CDQ allocation. Median lease price and rate in the 2016 BSS fishery were least for CVO Class A IFQ at $1.32 (median 46% of ex-vessel value), and $1.37-$1.43 for other allocation types (ranging from median 46% to 51% of ex-vessel price).

Notes on Content Changes in the Crab Economic SAFE Report

In addition to numerous editorial changes throughout the document intended to improve clarity of exposition, some content from previous editions of the report have been discontinued, and new content introduced. A summary of changes is as follows:

emphSection refsec:production:

The table reporting catch deadloss by IFQ type is not included in the 2017 report pending revisions to the data summary process.

emphSection refincome-and-employment:

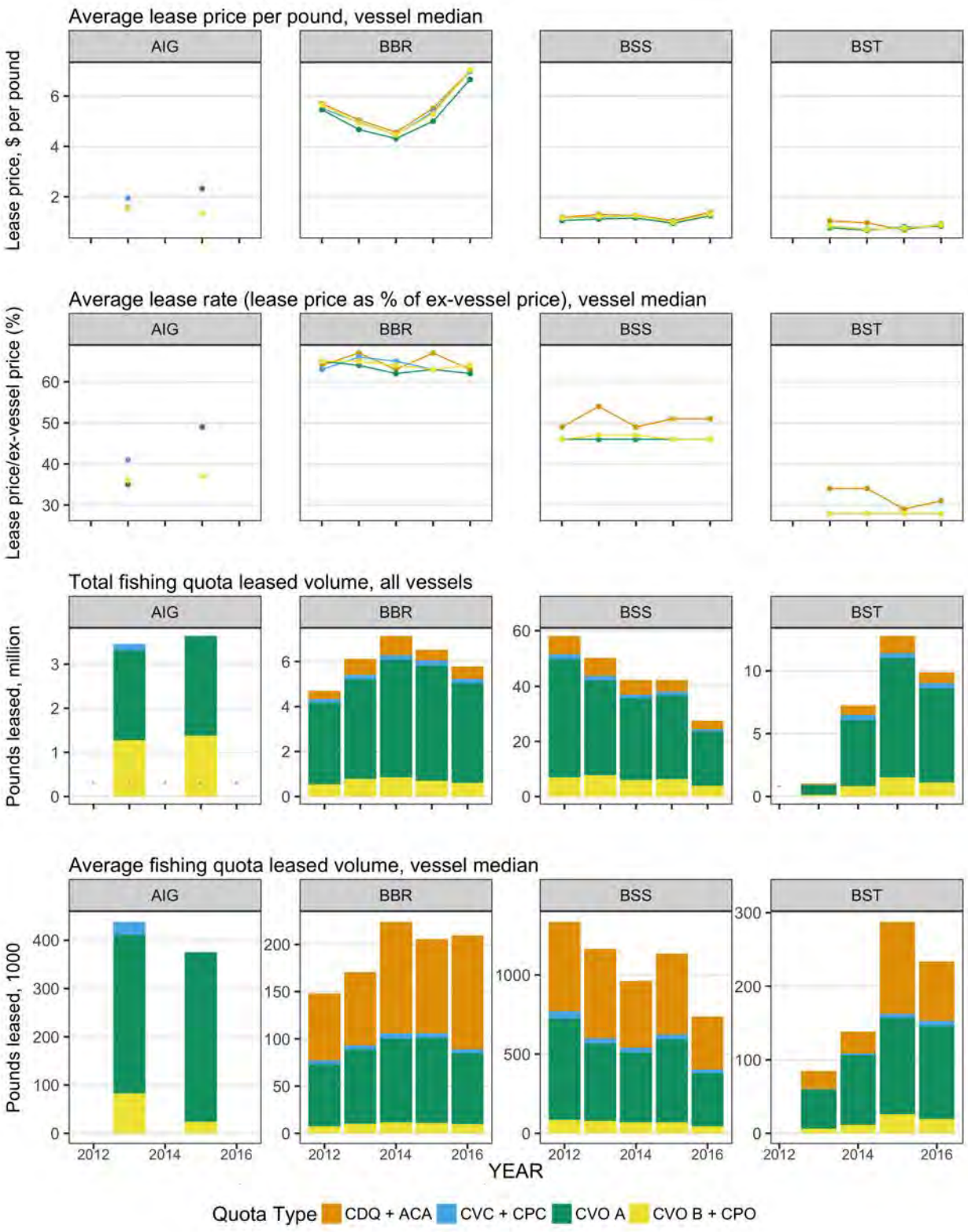
Table 3.11 has been revised to incorporate median plant-level statistics for crab processing labor productivity in terms of labor hours input and labor cost per 1,000 pounds of raw crab processed.

emphSection refnet-indices:

Substantial new content has been added to provide an integrated 'income statement' of the crab harvesting sector, at the vessel and fleet levels. Figures 2.7 and 2.8 have been added, summarizing statistics reported in Tables 3.24 and 3.25.

[7]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.

Figure 4: Crab Harvest Quota Lease Activity; Lease Volume, Price, and Rate, Selected Crab Fisheries, 2012 - 2016



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[a]

		Harvesting Sector: Ex-Vessel Statistics[a]							Processing Sector: First Wholesale Statistics[b]				
	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	2012	113	284	46.97	103.55	26	$300.49	-	20	30.84	68.00	$410.54	-
	2013	115	238	39.39	86.85	29	$265.06	-	22	25.87	57.03	$354.79	-
	2014	109	256	36.73	80.97	25	$251.00	-	17	24.15	53.24	$338.25	-
	2015	117	270	41.49	91.46	22	$268.98	-	15	27.45	60.51	$363.37	-
	2016	118	262	29.04	64.03	21	$259.32	-	12	19.19	42.31	$349.04	-
AIG	2012	6	14	2.69	5.92	14	$24.28	$4.10	8	1.71	3.76	$30.38	$8.08
	2013	6	14	2.70	5.94	13	$25.06	$4.22	7	1.71	3.77	$32.69	$8.67
	2014	5	11	2.75	6.07	12	$25.16	$4.14	5	1.75	3.85	$31.38	$8.14
	2015	5	12	2.63	5.80	9	$25.39	$4.38	4	1.67	3.68	$36.59	$9.94
	2016	5	13	2.54	5.60	11	$30.13	$5.38	5	1.61	3.56	$45.36	$12.76
BBR	2012	64	74	3.54	7.80	17	$65.90	$8.44	12	2.39	5.27	$80.58	$15.29
	2013	63	73	3.86	8.52	17	$63.33	$7.43	11	2.61	5.75	$78.58	$13.66
	2014	63	72	4.48	9.87	17	$66.93	$6.78	9	3.02	6.66	$81.49	$12.23
	2015	64	71	4.43	9.77	15	$79.05	$8.09	10	2.99	6.60	$95.79	$14.52
	2016	63	70	3.81	8.41	17	$89.66	$10.67	10	2.57	5.68	$103.72	$18.27
BSS	2012	72	109	40.02	88.23	16	$203.21	$2.30	13	26.21	57.79	$284.95	$4.93
	2013	71	90	32.07	70.69	15	$170.83	$2.42	12	21.00	46.31	$234.49	$5.06
	2014	70	91	25.05	55.22	13	$134.47	$2.44	10	16.41	36.17	$185.45	$5.13
	2015	70	94	27.63	60.91	14	$125.35	$2.06	10	18.10	39.90	$174.86	$4.38
	2016	68	86	17.95	39.57	12	$107.97	$2.73	8	11.76	25.92	$154.82	$5.97
BST	2013	22	26	0.57	1.25	13	$3.21	$2.57	9	0.39	0.86	$5.63	$6.58
	2014	40	52	4.12	9.09	13	$22.20	$2.44	9	2.82	6.23	$36.91	$5.93
	2015	55	77	6.79	14.98	13	$39.19	$2.62	8	4.65	10.26	$55.29	$5.39
	2016	46	63	4.74	10.45	12	$31.56	$3.02	7	3.24	7.15	$45.15	$6.31

Continued on next page.

Table 1: Continued

		Harvesting Sector: Ex-Vessel Statistics[a]							Processing Sector: First Wholesale Statistics[b]				
	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
	2012	30	64	*	*	3	*	*	3	*	*	*	*
	2013	34	52	0.20	0.44	5	$2.64	$5.95	5	0.16	0.34	$3.40	$9.95
NSR	2014	34	65	0.19	0.42	4	$2.23	$5.35	4	0.15	0.32	$3.02	$9.40
	2015	37	72	*	*	3	*	*	3	*	*	*	*
	2016	37	75	*	*	2	*	*	1	*	*	*	*
	2012	1	1	*	*	1	*	*	1	*	*	*	*
PIG	2013	1	1	*	*	1	*	*	1	*	*	*	*
	2014	1	1	*	*	1	*	*	1	*	*	*	*
	2012	17	22	0.72	1.59	11	$7.11	$4.46	6	0.53	1.18	$14.63	$12.45
SMB	2014	4	5	0.14	0.30	6	*	*	1	*	*	*	*
	2015	3	3	*	*	4	*	*	1	0.04	0.08	$0.83	$10.77

Notes: Data shown for all BSAI crab fisheries by calendar year. All dollar values are adjusted for inflation to 2016-equivalent value. Information suppressed for confidentiality where indicated by "*", and data not available where indicated by "-".

[a] 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 average price results are sourced from CV sector EDR data where available (2012 to 2015 for CR program fisheries) and secondarily from CFEC gross earnings estimates (2016 for CR fisheries and all years for non-CR fisheries); ex-vessel value of CP and catcher-seller landings are incorporated in revenue total using average CV ex-vessel price as a proxy per-pound value, multiplied by pounds of live catch

[b] 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 is sourced from crab processor EDR production reports where available (2012to2015), or eLandings ex-vessel sales volume adjusted by average product recovery rate (PRR) by fishery (2016). Wholesale price results are sourced from crab processor EDR gross earnings reports where available (2012 to 2015) and secondarily from COAR gross earnings estimates (2016); gross wholesale revenue estimates are derived from price and volume sourced or estimated as described.

[c]Statistics reported for "All BSAI Fisheries" reflect information aggregated over all FMP crab fisheries, excluding fishery-level confidential information suppressed where indicated by "*".

[d]Landings and ex-vessel revenue suppressed in years where CDQ fishery landings are confidential.

[e]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 (COAR) data; NMFS AFSC BSAI Crab Economic Data Report (EDR) database.

Table 2: CR Program Fisheries Crew and Processing Sector Employment and Earnings

		Crew positions[a]			Crew share[b]		Captain share		Processing labor hours[c]			Processing labor payment[d]			
	Year	Vessels	Total	Vessel median	Total $million	Vessel median $1,000	Total $million	Vessel median $1,000	Plants	Total 1,000 hrs	Plant median 1,000 hrs	Median $/hour	Median $/pound	Total $million	Plant median, $1,000
All CR Fisheries	2012	83	1,081	-	$40.68	-	$18.64	-	13	1,261.90	71.66	$10.79	$0.17	$15.05	628.68
	2013	81	1,099	-	$34.46	-	$15.85	-	12	955.77	53.70	$10.52	$0.13	$10.30	579.70
	2014	76	1,216	-	$32.49	-	$14.85	-	9	905.08	103.11	$10.24	$0.13	$9.78	619.16
	2015	82	1,332	-	$38.32	-	$16.83	-	9	1,179.34	112.90	$10.76	$0.22	$13.59	1,087.08
	2016	80	1,218	-	$36.33	-	$16.00	-	8	788.23	95.46	$12.15	$0.19	$9.84	723.10
AIG	2012	6	46	7.67	$3.61	$657.98	$1.86	$329.64	7	53.16	2.60	$10.60	$0.08	$1.15	61.69
	2013	6	44	7.33	$3.45	$555.20	$1.56	$283.36	6	61.09	5.96	$10.32	$0.11	$0.63	63.73
	2014	5	35	7.00	$3.32	$717.60	$1.44	$298.53	4	*	*	*	*	*	*
	2015	5	35	7.00	$4.11	$725.17	$1.68	$350.45	3	*	*	*	*	*	*
	2016	5	36	7.20	$4.48	$988.90	$2.05	$361.71	4	*	*	*	*	*	*
BBR	2012	64	428	6.68	$8.30	$105.54	$3.74	$56.17	10	100.36	6.51	$11.23	$0.14	$1.22	70.20
	2013	63	418	6.63	$7.76	$97.12	$3.69	$54.68	8	103.96	10.00	$10.37	$0.20	$1.23	96.98
	2014	63	422	6.70	$7.90	$108.64	$3.82	$54.00	7	129.98	21.07	$9.68	$0.14	$1.44	77.83
	2015	64	441	6.89	$9.60	$138.42	$4.46	$63.83	8	127.01	14.80	$10.79	$0.18	$1.61	120.51
	2016	63	423	6.71	$11.20	$157.67	$4.95	$70.09	8	129.78	8.93	$12.15	$0.17	$1.70	87.49
BSS	2012	72	502	6.97	$27.88	$386.58	$12.65	$181.51	11	1,087.26	77.94	$10.78	$0.17	$12.43	633.98
	2013	71	481	6.77	$22.80	$293.40	$10.38	$146.39	10	774.12	63.55	$10.40	$0.13	$8.27	498.94
	2014	70	480	6.86	$18.12	$242.13	$8.13	$112.22	8	590.39	76.01	$10.87	$0.15	$6.49	468.98
	2015	70	491	7.01	$18.62	$243.44	$7.80	$113.85	8	747.40	95.42	$10.94	$0.19	$8.72	811.52
	2016	68	463	6.81	$15.11	$193.75	$6.67	$95.05	6	447.00	69.40	$11.95	$0.17	$5.67	537.12

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Table 2: Continued

		Crew positions[a]			Crew share[b]		Captain share		Processing labor hours[c]			Processing labor payment[d]			
	Year	Vessels	Total	Vessel median	Total $million	Vessel median $1,000	Total $million	Vessel median $1,000	Plants	Total 1,000 hrs	Plant median 1,000 hrs	Median $/hour	Median $/pound	Total $million	Plant median, $1,000
BST	2013	22	156	7.09	$0.46	$15.02	$0.21	$7.72	6	16.58	1.86	$9.97	$0.14	$0.17	16.13
	2014	41	279	6.80	$3.16	$70.83	$1.47	$31.74	7	122.27	8.51	$9.85	$0.12	$1.26	81.23
	2015	55	365	6.63	$5.99	$114.43	$2.89	$46.74	7	230.41	21.84	$10.59	$0.16	$2.50	210.24
	2016	46	296	6.42	$5.53	$80.15	$2.33	$39.20	6	144.87	18.44	$11.79	$0.17	$1.71	199.52
SMB	2012	17	106	6.24	$0.88	$45.56	$0.40	$23.22	6	21.12	0.76	$10.13	$0.13	$0.25	7.57
	2014	4	*	*	*	*	*	*	1	*	*	*	*	*	*
	2015	3	*	*	*	*	*	*	1	*	*	*	*	*	*

Notes: Data shown for all BSAI crab fisheries by calendar year. All dollar values are adjusted for inflation to 2016-equivalent value. Information suppressed for confidentiality where indicated by "*", and data not available where indicated by "-".

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

[b] 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.

[c] Processing labor hours reflect hours worked by processing-line employees working at shoreside and floating processor sectors only, excluding processing employees on catcher/processors and salaried workers employed in the processing sectors.

[d] Pay per hour statistics reflect only the shoreside and floating processing sectors; all other processing labor pay statistics are reported inclusive of catcher/processors

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

			Vessels[a]	Pounds Leased (1000lbs)			Cost ($1000)			Leased pounds % (leased IFQ as % of IFQ landed)[b]		Lease cost % (lease cost as % of ex-vessel gross)[c]		Lease rate (percent of ex-vessel price)[d]	
		Year		Total	Median	Mean	Total	Median	Mean	Wtd mean	Median	Wtd mean	Median	Wtd mean	Median
AIG	CVO A	2012	4	*	*	*	*	*	*	*	*	*	*	*	*
		2013	5	2,026	327.87	405.25	3,730	596.00	746.03	100%	94%	43%	39%	43%	35%
		2014	4	*	*	*	*	*	*	*	*	*	*	*	*
		2015	5	2,252	351.05	450.40	5,263	934.37	1,052.53	65%	82%	34%	41%	49%	49%
		2016	3	*	*	*	*	*	*	*	*	*	*	*	*
	CVO B + CPO	2012	4	*	*	*	*	*	*	*	*	*	*	*	*
		2013	6	1,285	83.15	142.76	1,905	239.64	211.66	105%	103%	40%	38%	37%	36%
		2014	4	*	*	*	*	*	*	*	*	*	*	*	*
		2015	5	1,375	24.30	196.47	2,044	73.56	291.97	95%	100%	34%	37%	36%	37%
		2016	4	*	*	*	*	*	*	*	*	*	*	*	*
	CVC + CPC	2012	4	*	*	*	*	*	*	*	*	*	*	*	*
		2013	5	151	27.36	25.18	319	46.51	53.11	100%	100%	50%	41%	49%	41%
		2014	4	*	*	*	*	*	*	*	*	*	*	*	*
		2015	4	*	*	*	*	*	*	*	*	*	*	*	*
		2016	3	*	*	*	*	*	*	*	*	*	*	*	*
	CDQ + ACA	2012	4	*	*	*	*	*	*	*	*	*	*	*	*
		2013	2	*	*	*	*	*	*	*	*	*	*	*	*
		2014	3	*	*	*	*	*	*	*	*	*	*	*	*
		2015	3	*	*	*	*	*	*	*	*	*	*	*	*
		2016	3	*	*	*	*	*	*	*	*	*	*	*	*

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Table 3: Continued

			Vessels[a]	Pounds Leased (1000lbs)			Cost ($1000)			Leased pounds % (leased IFQ as % of IFQ landed)[b]		Lease cost % (lease cost as % of ex-vessel gross)[c]		Lease rate (percent of ex-vessel price)[d]	
		Year		Total	Median	Mean	Total	Median	Mean	Wtd mean	Median	Wtd mean	Median	Wtd mean	Median
BBR	CVO A	2012	50	3,619	65.48	72.38	18,819	322.68	376.38	75%	73%	47%	45%	62%	65%
		2013	51	4,425	78.75	86.77	21,073	357.10	413.19	77%	72%	50%	45%	65%	64%
		2014	50	5,229	88.41	104.58	22,743	381.64	454.87	85%	82%	54%	52%	64%	62%
		2015	49	5,129	90.14	104.66	26,266	441.47	536.04	79%	80%	50%	48%	64%	63%
		2016	50	4,433	75.26	88.67	29,677	493.65	593.53	80%	84%	49%	49%	62%	62%
	CVO B + CPO	2012	42	539	7.60	11.72	3,078	43.96	68.39	78%	80%	51%	53%	67%	65%
		2013	45	778	10.07	15.56	3,848	49.12	76.96	87%	84%	56%	49%	64%	65%
		2014	43	854	11.77	17.42	3,812	55.74	77.80	79%	97%	49%	50%	63%	64%
		2015	42	697	10.89	14.82	3,859	59.98	82.10	83%	100%	55%	61%	66%	63%
		2016	43	610	9.68	12.45	4,372	67.25	89.22	86%	83%	55%	49%	64%	64%
	CVC + CPC	2012	36	172	4.24	4.52	948	22.41	24.94	94%	100%	60%	63%	64%	63%
		2013	37	199	4.52	4.85	1,012	22.48	24.69	106%	100%	71%	62%	66%	66%
		2014	34	213	5.98	5.91	948	24.22	26.33	96%	100%	63%	66%	66%	65%
		2015	40	222	5.04	5.29	1,222	29.17	29.10	93%	100%	61%	62%	65%	63%
		2016	37	201	4.04	5.14	1,396	34.48	35.79	62%	100%	39%	62%	69%	64%
	CDQ + ACA	2012	5	369	70.68	73.72	2,304	457.11	460.83	124%	100%	88%	64%	72%	64%
		2013	8	713	77.40	89.18	3,599	389.18	449.84	113%	100%	74%	67%	66%	67%
		2014	7	826	117.86	118.06	3,780	514.32	540.02	139%	100%	90%	63%	66%	63%
		2015	5	468	99.74	93.58	2,633	549.12	526.62	100%	100%	68%	67%	68%	67%
		2016	5	550	120.52	110.08	4,005	846.14	801.08	101%	100%	67%	64%	67%	63%

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Table 3: Continued

			Vessels[a]	Pounds Leased (1000lbs)			Cost ($1000)			Leased pounds % (leased IFQ as % of IFQ landed)[b]		Lease cost % (lease cost as % of ex-vessel gross)[c]		Lease rate (percent of ex-vessel price)[d]	
		Year		Total	Median	Mean	Total	Median	Mean	Wtd mean	Median	Wtd mean	Median	Wtd mean	Median
BSS	CVO A	2012	55	42,796	640.32	778.11	44,955	693.36	817.36	79%	75%	36%	36%	46%	46%
		2013	56	34,353	486.63	613.44	38,362	534.65	685.04	80%	84%	37%	37%	47%	46%
		2014	57	29,683	442.04	520.75	33,061	499.72	580.02	82%	82%	38%	37%	46%	46%
		2015	55	30,362	523.30	552.04	29,848	490.45	542.69	76%	89%	37%	36%	48%	46%
		2016	54	19,640	337.36	363.70	25,954	402.58	480.63	79%	91%	39%	39%	49%	46%
	CVO B + CPO	2012	47	6,990	83.97	131.88	8,247	105.93	155.60	87%	85%	41%	43%	48%	46%
		2013	50	7,741	78.48	133.46	9,918	98.37	170.99	96%	100%	48%	46%	50%	47%
		2014	48	5,988	69.15	106.92	7,343	95.85	131.12	88%	100%	43%	46%	56%	47%
		2015	47	6,289	69.80	118.66	6,541	75.80	123.41	96%	100%	46%	45%	48%	46%
		2016	45	3,868	44.16	77.36	5,463	65.39	109.25	92%	100%	46%	46%	50%	46%
	CVC + CPC	2012	39	1,880	47.96	45.85	2,119	53.17	52.97	84%	100%	38%	46%	46%	46%
		2013	41	1,767	35.03	40.16	2,163	41.49	49.16	99%	100%	47%	46%	48%	46%
		2014	37	1,258	29.13	31.46	1,496	35.19	38.36	105%	100%	48%	46%	47%	46%
		2015	37	1,516	32.75	36.97	1,574	37.36	39.34	138%	100%	66%	46%	49%	46%
		2016	36	925	21.91	25.01	1,271	31.05	34.36	120%	100%	54%	46%	47%	46%
	CDQ + ACA	2012	11	6,464	563.35	587.60	7,699	699.44	699.95	116%	100%	58%	49%	50%	49%
		2013	11	6,409	563.98	582.66	8,305	777.51	754.97	110%	100%	59%	52%	53%	54%
		2014	10	5,367	422.75	536.72	6,475	521.45	647.49	110%	101%	56%	49%	58%	49%
		2015	7	4,150	509.28	592.87	4,450	546.60	635.65	108%	100%	56%	50%	52%	51%
		2016	7	3,042	334.55	434.52	4,340	457.33	619.94	107%	100%	56%	50%	52%	51%

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Table 3: Continued

			Vessels[a]	Pounds Leased (1000lbs)			Cost ($1000)			Leased pounds % (leased IFQ as % of IFQ landed)[b]		Lease cost % (lease cost as % of ex-vessel gross)[c]		Lease rate (percent of ex-vessel price)[d]	
		Year		Total	Median	Mean	Total	Median	Mean	Wtd mean	Median	Wtd mean	Median	Wtd mean	Median
BST	CVO A	2013	16	777	52.73	48.54	566	26.24	35.35	90%	100%	26%	23%	29%	28%
		2014	32	5,256	94.55	128.19	3,508	66.82	85.55	95%	100%	26%	27%	27%	28%
		2015	43	9,487	130.54	163.57	7,262	90.36	125.21	93%	100%	27%	28%	30%	28%
		2016	37	7,478	126.71	169.96	6,732	108.51	153.00	109%	100%	34%	27%	31%	28%
	CVO B + CPO	2013	13	130	6.21	8.15	124	4.68	7.76	84%	100%	34%	28%	47%	28%
		2014	25	820	11.65	21.02	617	9.45	15.81	121%	100%	34%	28%	34%	28%
		2015	27	1,527	26.10	33.20	1,213	19.48	26.37	109%	100%	33%	28%	33%	28%
		2016	31	1,125	19.40	26.15	1,136	17.32	26.42	98%	99%	32%	27%	33%	28%
	CVC + CPC	2013	10	42	1.10	3.20	33	1.21	2.53	137%	100%	41%	28%	31%	28%
		2014	24	428	2.64	11.25	186	2.05	4.90	225%	100%	36%	28%	17%	28%
		2015	24	382	5.93	8.87	264	4.01	6.14	91%	100%	23%	28%	26%	28%
		2016	24	441	7.14	12.25	530	6.52	14.72	126%	100%	27%	28%	29%	28%
	CDQ + ACA	2013	5	88	24.87	17.60	77	16.26	15.45	110%	100%	40%	32%	34%	34%
		2014	6	729	29.61	80.95	597	31.92	66.31	87%	100%	28%	29%	38%	34%
		2015	8	1,342	125.15	149.08	1,194	93.13	132.61	120%	100%	43%	29%	35%	29%
		2016	7	830	80.60	103.73	765	73.81	95.67	100%	100%	32%	30%	32%	31%

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Table 3: Continued

		Year	Vessels[a]	Pounds Leased (1000lbs) Total	Pounds Leased (1000lbs) Median	Pounds Leased (1000lbs) Mean	Cost ($1000) Total	Cost ($1000) Median	Cost ($1000) Mean	Leased pounds % (leased IFQ as % of IFQ landed)[b] Wtd mean	Leased pounds % (leased IFQ as % of IFQ landed)[b] Median	Lease cost % (lease cost as % of ex-vessel gross)[c] Wtd mean	Lease cost % (lease cost as % of ex-vessel gross)[c] Median	Lease rate (percent of ex-vessel price)[d] Wtd mean	Lease rate (percent of ex-vessel price)[d] Median
SMB	CVO A	2012	17	1,149	49.07	67.61	1,720	69.85	101.17	100%	100%	34%	32%	34%	32%
		2014	3	*	*	*	*	*	*	*	*	*	*	*	*
		2015	3	*	*	*	*	*	*	*	*	*	*	*	*
	CVO B + CPO	2012	10	144	11.56	11.06	219	18.94	16.86	111%	100%	39%	33%	35%	32%
		2014	2	*	*	*	*	*	*	*	*	*	*	*	*
		2015	3	*	*	*	*	*	*	*	*	*	*	*	*
	CVC + CPC	2012	9	95	2.48	10.52	48	5.66	5.28	340%	100%	39%	37%	11%	34%
		2014	2	*	*	*	*	*	*	*	*	*	*	*	*
		2015	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.

[a] 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.

[b] 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.

[c] 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.

Contents

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 2016 was 64.03 million pounds, with an estimated gross ex-vessel revenue value of $259 million. Total finished pounds reported by processors in 2016 across all FMP crab species and product forms was 42.3 million pounds, with an estimated first wholesale value of $349 million (F.O.B Alaska). Of the 10 crab stocks managed under the FMP, six were open to targeted fishing during 2016, prosecuted by an active fleet of approximately 118 vessels, and landed and processed at 12 processing facilities throughout the region (a decline from 15 in 2015 and the fewest active plants since rationalization). In the rationalized fisheries that currently represent some 99 percent of the volume of these landings, there were an estimated 1,218 fishing crew positions across 89 active vessels in 2016, with labor share earnings totaling $36.3 million paid to deck crew members and $16 million to captains. Processing these landings for the first wholesale market is estimated to have accounted for some 788 thousand hours of line labor in 2016, generating $9.84 million in wages.

As an indicator of the relative economic importance of Alaska crab fisheries to the state and U.S. economies, the 54.2 million pounds (24.6 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 crab fisheries not managed under the FMP) during 2016 represented 0.56 percent of the total volume of U.S. commercial seafood landings, but accounted for 3.5 percent of total ex-vessel value; with respect to Alaska alone, these fisheries account for 0.97 percent of total catch volume and 11.9 percent of total ex-vessel value produced in the State's commercial fisheries (NMFS, 2017).

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 for which data are presented is two calendar years prior to the date of publication, or the crab fishery season prior to the current season as of the date of publication. All monetary values are inflation-adjusted to 2016-equivalent U.S. dollar terms using the GDP chain-type index (BEA; `https://fred.stlouisfed.org/series/GDPCTPI`). See below for additional introductory notes regarding data sources and reporting conventions used in this document.

1.1. Changes from Previous Additions

In addition to numerous editorial changes throughout the document intended to improve clarity of exposition, some content from previous editions of the report have been discontinued, and new content introduced. A summary of changes is as follows:

emphSection refsec:production:

The table reporting catch deadloss by IFQ type is not included in the 2017 report pending revisions to the data summary process.

emphSection refincome-and-employment:

Table 3.11 has been revised to incorporate median plant-level statistics for crab processing labor productivity in terms of labor hours input and labor cost per 1,000 pounds of raw crab processed.

emphSection refnet-indices:

Substantial new content has been added to provide an integrated 'income statement' of the crab harvesting sector, at the vessel and fleet levels. Figures 2.7 and 2.8 have been added, summarizing statistics reported in Tables 3.24 and 3.25.

1.2. 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.

The Eastern and Western Bering Sea Tanner (EBT, WBT) crab fisheries were closed for the 2016/17 season as a result of low survey abundance during 2016, and the EBT fishery remains closed for

the 2017/18 season. After being opened to targeted fishing in 2005/06, the EBT and WBT crab fisheries were designated overfished and closed to targeted fishing, beginning 2008/09 and 2009/10, respectively.[1] After reopening the fisheries for the 2012/13 season with 1.46 million and 1.65 million pound TACs for the Eastern and Western Tanner fisheries, respectively, TACs were greatly expanded for the following two seasons, reaching 11.27 and 8.4 million pounds in 2015/16. 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 and 2015/16 seasons; with low survey abundance again in 2016 and 2017, the fishery has been closed for the 2016/17 and 2017/18 seasons. 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, approving Amendment 103 to the FMP for Groundfish of the BSAI, prohibiting directed fishing for Pacific cod with pot gear within the Pribilof Islands Habitat Conservation Zone (already closed to all trawl fishing under the FMP), and Amendment 43 to the FMP for BSAI King and Tanner Crabs revising the rebuilding plan to acknowledge that the time required to rebuild the stock would likely exceed 10 years despite available management measures. The rule implementing the amendments became effective January 1, 2015 (79 FR 71344).

1.2.1 BSAI Crab Rationalization Program

In March 2005, NMFS issued a final rule to implement the Crab Rationalization Program (CRP) 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

[1] 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.

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). The Council completed its 10 Year Review of the CR Program during 2016, and readers are directed to the review for a comprehensive analysis of the performance of the CR program over the 2005 to 2014 period (NPFMC, 2017). Several elements of annual CR program administration of importance to economic status of the fisheries are publicly reported on the NMFS AKR CR program webpage, including annual reports of QS/PQS entity holdings, permanent transfers, and IFQ/IPQ annual allocation transfer activity; harvest cooperative formation, membership, 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 NOAA Fisheries Alaska Regional Office (AKRO), the North Pacific Fishery Management Council (NPFMC), and the Alaska Department of Fish & Game (ADF&G). 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`; see especially the Frequently Asked Questions for an overview of CR program provisions and definition of terms (`https://alaskafisheries.noaa.gov/sites/default/files/crabratfaq052616.pdf`)

- NPFMC
  - BSAI Crab FMP: http://www.npfmc.org/wp-content/PDFdocuments/fmp/CrabFMPOct11.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

1.3. Data Sources

The current report summarizes information available to-date, largely comprising data reported through 2017 for the 2016 calendar year, spanning the end of the 2015/16 and beginning of the 2016/17 crab seasons. 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. [2]

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

[2]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

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.

1.4. 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 values in the report, unless otherwise noted, are inflation-adjusted to 2016-equivalent dollars using the GDP: chain-type price index (`https://research.stlouisfed.org/fred2/series/GDPCTPI`). The GDP price index is used to adjust fishery production revenues and costs to account for the change in general US production prices. Index values from 1991 to 2016 are provided in Table 3.51 of Section 3. 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 t	Metric tons
obs or observations for measure of interest	Number of observations with value > 0
sd	Standard deviation
$	US dollars; inflation-adjusted to 2016-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.

2.5. Acknowledgements ESSRP wishes to thank the Alaska Fisheries Information Network (AKFIN) for database program- ming and data management services to support production of the Economic SAFE. Other parties who provided assistance or feedback in the assembly of this report or earlier versions include: Terry Hiatt, Ren Narita, Camille Kohler, Mike Fey (AKFIN); Jennifer Mondragon (NMFS Alaska Region Office, Sustainable Fisheries Division), Mary Furuness (NMFS Alaska Region Office, Sustainable Fisheries Division); David Latchman, David Keunzel, Sara Sutherland, Jami Larson.

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, 2016), or crab fishery year (spanning July-June and denoted, for example, as 2015/16). The current report summarizes information available in primary databases to-date, largely comprising data reported through 2016 for the 2015 calendar year and 2015/16 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 3.1 and summarized graphically in Figure 2.1. The most notable changes for the 2015/16 season were the sharp decline in TAC for the BSS fishery, reduced by 40% from the previous season, to 40.6 million pounds, the lowest level in the fishery since 2006/07. TAC levels in the 2015/16 Bering Sea Tanner crab fisheries increased substantially for a second year to 11.3 million pounds (+33%) in the Eastern district

fishery, and 8.4 million pounds (+22%) in the Western district fishery, after alternating between much lower TACs and closures following rationalization.

As described in the 2016 SAFE (NPFMC, 2016), mature male biomass estimates from the Summer 2016 NMFS trawl survey declined for most Bering Sea stocks. As a result of 2016 stocks assessments, fishery closures for the 2016/17 season were announced in both BST fisheries, SMB, and PIG fisheries (the latter for the first season since 2006), and reduced TAC levels were issued in nearly all remaining BSAI stocks. The TAC for the BBR fishery was reduced by 15% to 8.47 pounds, by 47% to 21.6 million pounds in the BSS fishery, and by 25% to 2.24 million in the WAG fishery. The 2016/17 BSS and WAG TACs were the lowest since 2004/05 Of all BSAI crab fisheries during 2016, only the TAC for the NSR fishery increased, to 520 thousand pounds (+33%).[1] The current report provides results for catch, production, sales, income, employment, and other indicators through the 2016 calendar year. As such, the effects of changing TAC levels in the 2016/17 BSS fishery, and closures in the EBT and WBT fisheries, which are prosecuted primarily beginning in January, are not reflected in the results presented in the rest of this report and will be published in the next volume of the report. The 2017/18 crab season, currently ongoing, opened with further reductions from Sexpry.cy(2017) in the BBR and BSS TACs, to 6.6 million pounds (-22%) and 18.96 million pounds (-15%), respectively. The SMB and EBT fisheries remain closed for the 2017/18 season, and the WBT fishery opened with a TAC of 2.5 million pounds.

Figures 2.3 and 2.4 summarize 1998 to 2016 annual (calendar year) values for total landed live catch and gross ex-vessel revenue (detailed in Tables 3.4 to 3.7), and finished production volume and first wholesale value (Tables 3.8 to 3.10), respectively, for all crab fisheries managed under the BSAI crab FMP. Figure 2.4 displays 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), Figure 2.3 displays values of revenue and volume, respectively, aggregated over all crab fisheries and color coded by fishery in proportional area of vertical bars. Figure 2.2 summarizes the corresponding time series of ex-vessel and first wholesale prices by crab fishery (excluding WAI, PIG, and PIK fisheries, for which two or fewer data points are available in the time series), represented

[1] Note that the annual NSR stock assessment is conducted in January, and the 2016 TAC was issued February 1, 2016; the TAC for the combined winter and summer 2017 commercial fishery was announced by ADF&G at 496,800 pounds, modestly reduced from 2016 (`http://www.adfg.alaska.gov/static/applications/dcfnewsrelease/762529950.pdf`).

as weighted average price per pound,[2] and displaying a relative comparison of ex-vessel and first wholesale prices (i.e., ex-vessel price as percentage of wholesale price) over time.

Across all fisheries managed under the BSAI Crab FMP, the total volume of ex-vessel landings commercially sold to processors during 2016 was 64 million pounds (29 thousand t), a 30% decline from the previous year.[3] The decline in aggregate ex-vessel production during 2016 was driven largely by the 35% decline in BSS landings from 2015 to 39.6 million pounds (11.76 thousand t). Landings of 10.5 million pounds (4.7 thousand t) in the BST fisheries declined by 30% from the previous year, landings of 5.6 million pounds (2.5 thousand t) in Aleutian Islands golden king (AIG) declined by 3.5% from the previous year, and landings of 8.4 million pounds (3.8 thousand t) in the Bristol Bay red king (BBR) fishery declined 14% from 2015.

Similar to ex-vessel production, the 30% year-on-year decline in 2016 processing sector output, to 42.3 million finished pounds (19.2 thousand t), aggregated over all active crab fisheries, was driven largely by a decline in finished production in the BSS fishery, to 25.9 million pounds (11.7 thousand t), with production also declining in the BST fisheries (7.2 million pounds), the BBR fishery (5.7 million pounds) and the AIG fisheries (3.56 million pounds) in similar proportions to ex-vessel landings.

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

Catch and production declines across most 2016 BSAI crab fisheries were partially offset by substantial increases in ex-vessel and first wholesale weighted average prices that occurred across

[2] 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 $i \ldots j$, is equivalent to the weighted arithmetic mean price calculated as $p = \frac{\sum_i v_i p_i}{\sum_i v_i} = \frac{\sum_i v_i \left(\frac{r_i}{v_i}\right)}{\sum_i v_i} = \frac{\sum_i r_i}{\sum_i v_i}$, 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 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.

[3] As of the 2016/17 crab season, 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), including the Western Bering Sea Tanner crab fishery (WBT), which had previously not exceeded 80% exploitation (Table 3.1). Since the 2010/11 crab season, all FMP crab fisheries that were in development following periods of extended closures (including both BST fisheries and the SMB fishery) have maintained greater than 75% exploitation of allowable catch; as such, recent inter-annual variation in volume of commercial landings largely reflects changes in stock assessment results and catch limits rather than substantially increasing trends in fishing capacity or exploitation rate.

all Alaska crab fisheries (as shown in Figure 2.2 and Tables 3.4 and 3.8. Average ex-vessel and wholesale price in the AIG fisheries increased to $5.38 (+23%) and $12.76 (+28%) per pound, respectively, and to $10.37 and $18.37 in the BBR fishery (up 32% and 26% from 2015, respectively). Ex-vessel price increased by 16% to $6.63 per pound for red king crab in the NSR fishery as well (wholesale price for NSR is confidential due to the small number of processors active in the fishery), increasing by 15% in the BST fisheries to $3.02 per pound, and by 17% to $5.33 per pound at first wholesale. The largest proportional increase in prices occurred in the BSS fishery, with with ex-vessel price of $2.73 and and wholesale price $5.97 increasing by 33% and 36%, respectively. Ex-vessel price received for BST (Tanner crab) in 2016 remained higher than BSS (opilio snow crab) price for a second year.

The mitigating effect of increased prices on reduced catch allocations and production levels across crab fisheries in 2016 produced an overall 3.6% decline in gross ex-vessel revenues in the BSAI crab harvesting sector, to $259.32 million, and a 3.9% fall in processing sector gross first wholesale revenues, to $349 million (Figure 2.3). Price increases were sufficient to increase gross revenues in the AIG and BBR fisheries despite reduced production. Gross ex-vessel revenue increased by 18% to $30.1 million in the AIG fishery, with wholesale revenue of $45.4 million increased by 24%. The BBR fishery produced gross ex-vessel revenue of $89.7 million (+13.4%) and first wholesale revenue of $103.7 million (+8.3%). The decline in production volume in the BSS and BST fisheries were not fully offset by price changes; ex-vessel revenue in the BSS the harvest sector declined to $108 million (-13.9%) and $154.8 million (-18.3%) in the processing sector, while BST fisheries produced $31.5 and $45.1 million gross revenue values in the harvest and processing sector, respectively, both declined by 19% from the previous year (Table 2.4). Time series for ex-vessel production volume, value, and prices are reported in Tables 3.4 through 3.7, and for the processing sector in and 3.8 through 3.10.

As illustrated in both Figures 2.2 and 2.4, 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 non-binding price formula for Class A IFQ in each CR fishery is made by an independent third-party Formula Arbitrator. Although the formula is non-binding, 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% to a high in 2014 of 51%, and from a low of 39% in the 2010 BSS fishery to a high of 48% in 2013. In the BBR fishery, the ratio reached a high of 58% during 2016 from a low of 51% in 2009 (Figure 2.2). A general upward shift in the ratio beginning with the 2010/11 season (i.e., the 2010 BBR fishery and the 2011 BSS fishery) appears to have been a lasting adjustment toward a greater division of earnings per pound to the harvest sector, particularly in the BBR and BSS fisheries.

Production volume, value, and price statistics for the processing sector are summarized in Figures 2.2 and 2.4 are displayed by CR program fishery in Table 3.8. Similar statistics for aggregate statewide processed crab production by species is presented in Table 3.9, and disaggregated by primary product type (whole crab, sections, and other) in Table 3.10. 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, with whole (including live) crab comprising 5% or less of the total. In the golden king crab and Tanner (bairdi) crab fisheries, however, a relatively large proportion of product sales are in the form of whole crab. Sales of whole golden king crab comprised more than 16% of total sales volume and 19% 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% of sales volume, but increased to 12% and 13%, respectively, in 2015. Sales of whole bairdi crab have represented as much as 17% of sales revenue and 23% of sales volume (during 2010), but have declined to smaller proportions during the most recent two years.

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 most recent *Market Profiles for Alaska Groundfish and Crab*(AFSC, 2016).[4]

2.2. Income and Employment

2.2.1 Processing Sector Employment and Wages

Table 3.11 presents 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 2016, it is estimated that processing employees worked over 788 thousand paid hours on crab CR program fisheries during the year, an 33% fewer hours than in 2015, and generating $9.8 million in wages, 28% lower than than the previous year. Processing labor in the BBR fishery during 2016 accounted for 130 thousand hours and $1.7 million (a slight increase in hours and a 5% increase in earnings). Processing labor hours in the 2016 BST fisheries declined 37% to 145 thousand hours, and wages declined 32% to $1.7 million. Also corresponding to reduced production volume in the BSS fishery, hours and wages declined by 40% and 35%, respectively, to 447 thousand hours and $5.7 million.

As indicated in Figure 2.5, inter-annual variation in aggregate processing labor hours and gross earnings indicates general consistency with catch and production volume fluctuations, while hourly wages (represented as daily earnings in Figure 2.5 assuming 12-hour daily shifts per employee) indicate declining real wage rates over the 2005-2014 period, and increasing in both 2015 and 2016. Estimated hourly wage rates across fisheries shown in Table 3.11 varied between $9.78 and and $11.23 over the 2009-2014 period, but increased to $12.15 and $11.95 in the 2016 BBR and BSS fisheries. Observed annual and between-fishery variation in average hourly rates prior to 2014 are likely substantially attributable to the relative amount of overtime labor required by processors in a given fishery and year, with the associated overtime wage premium increasing the estimation of average wage rate. With the Alaska State minimum wage increase beginning January 1, 2015 under Alaska Statute 23.10.050 - 23.10.150, minimum hourly wage increased from $7.75 to $8.75 for 2015, $9.75 for 2016, and $9.80 as of January 1, 2017.

Table 3.11 also provides median plant-level statistics for crab processing labor productivity in terms of labor hours input and labor cost per 1,000 pounds of raw crab processed (note that statistics show for pro-rata indices of processing labor input and costs use data from shore-based processing plants,

[4]Available at `https://www.afsc.noaa.gov/News/pdfs/Wholesale_Market_Profiles_for_Alaskan_Groundfish_and_Crab_Fisheries.pdf`

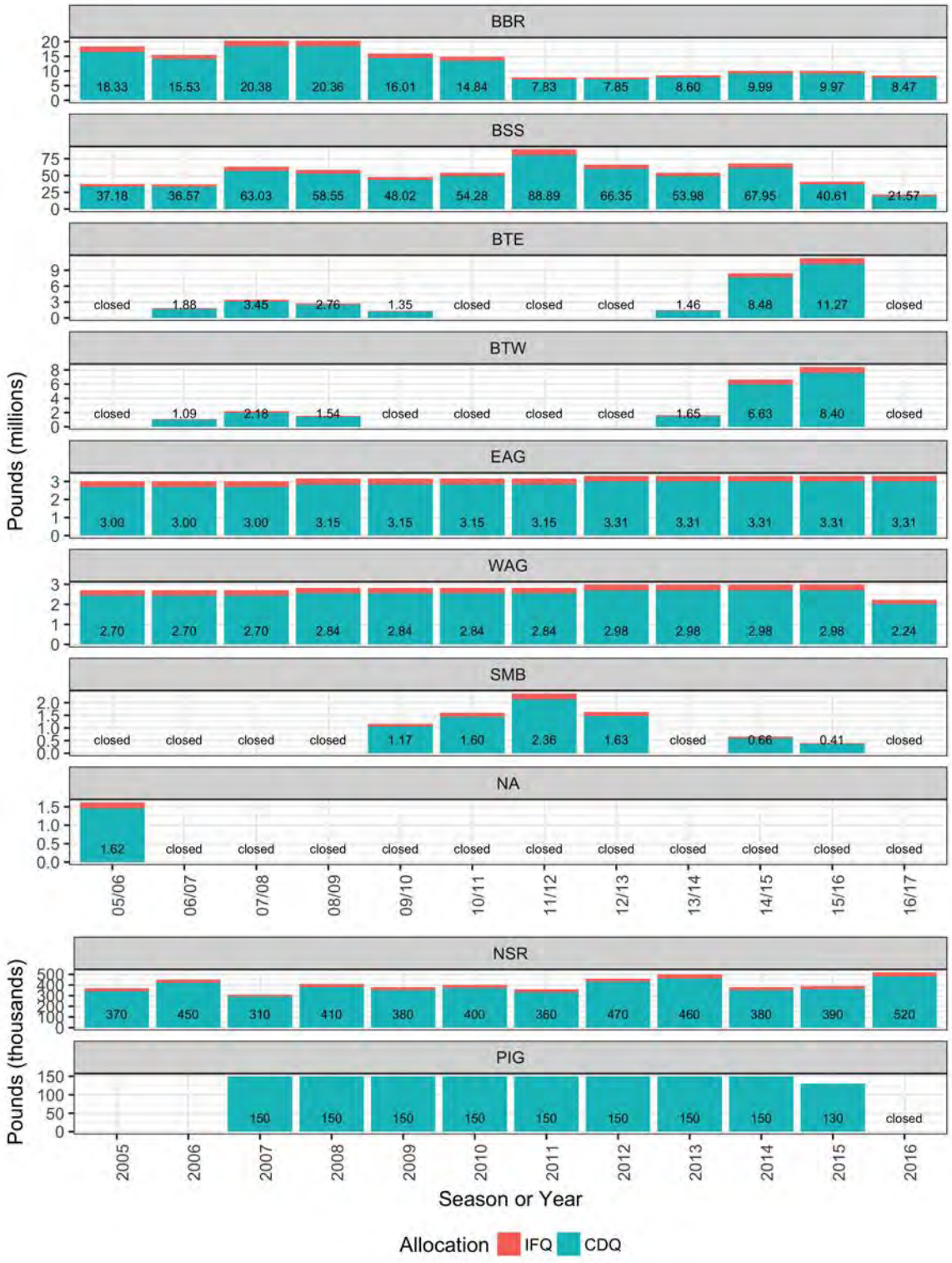
and do not include catcher-processor labor data; see table notes for additional details). Aggregating over all crab fisheries and active plants, median labor hours per 1,000 pounds of raw crab processed ranged between 11.1 and 15.89 over the 2012-2016 period, while labor cost per 1,000 pound ranged between $125 and $188. A more detailed analysis of processing labor productivity is beyond the scope of this report, but could be included as an addition in future development of the Economic SAFE report.

Table 3.13 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, increased from 2,609 in 2015, to 2,809 in 2016, with 8 plants actively processing, down from 9 in 2015 and from 17 in 2005. The number of Alaska state residents employed in crab processing increased to 731 in 2016, approximately 26% of to total. This is consistent with the general; distribution of residence, with the proportion of Alaska and Northwest state residents each representing between 25-34 percent of total processing workers reported by residence over the 2005-2015 period, and other US State residents representing between 34-52 percent of the total, and non-US residents representing less than one percent most years.

Employment and payroll expenditures for personnel other than processing line workers (supervisory and administrative personnel) in the crab processing sector are presented in Table 3.12 for the 1998/01/04 baseline period through 2011, and for 2012 to 2016[5] Data reported for 2012 to 2016 represent all supervisory and administrative personnel (all positions other than hourly processing line workers) employed by crab processing operations annually, inclusive of all processing and sales activity in all fisheries, not exclusive to crab. The count of employed personnel by the 8 processing plants that actively processed in crab fisheries during 2016 totaled 1,473 individuals, and 174 per plant (median). Total wage and salary expenditures of $60.3 million (exclusive of non-wage benefits, taxes, and other payroll and employment expenses) were reported, minimaxlly changed from 2015; median cost per plant increased, however, from $4.9 million to $7.9 million, and median cost per position (pro-rated at the plant-level by number of positions) increased from $32 thousand to $39 thousand.

[5]See table notes regarding dicontinuities in processor sector satary cost data.

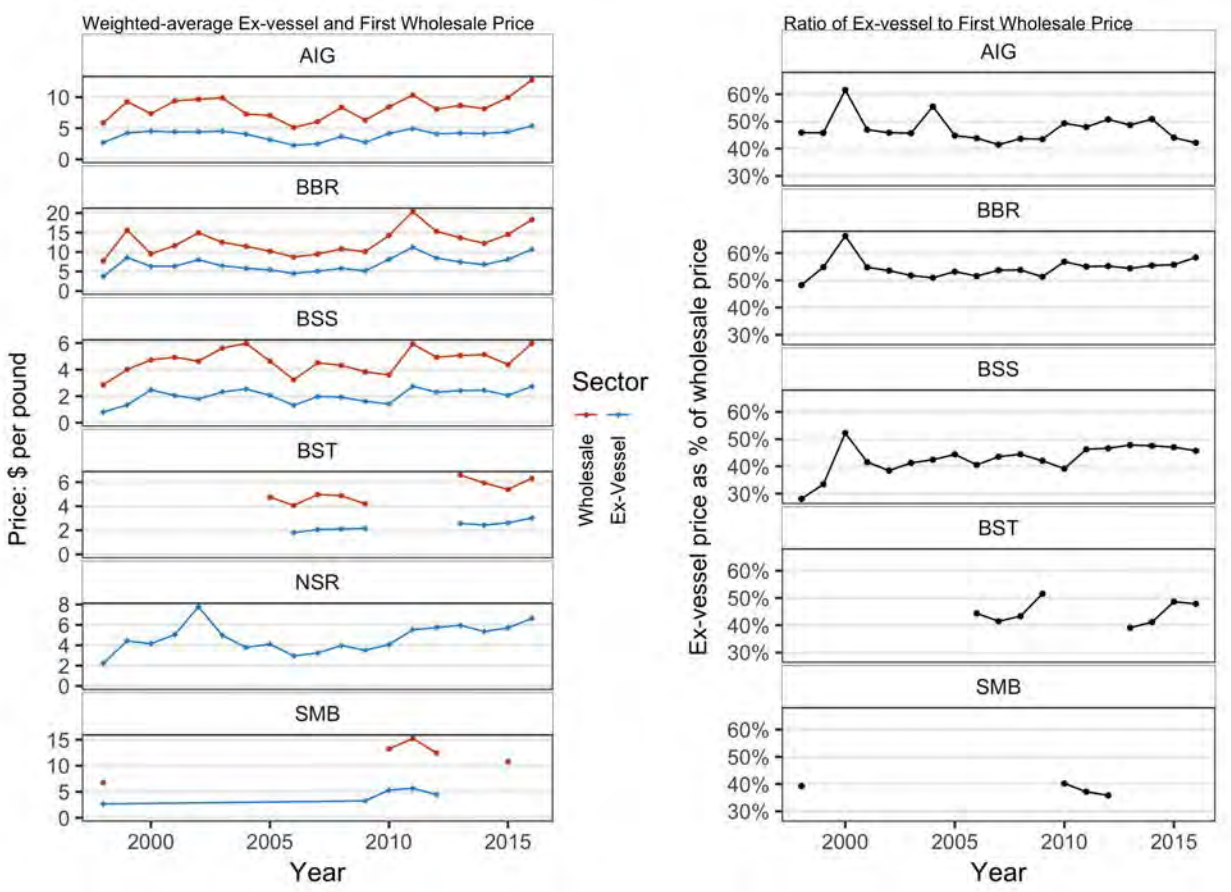
Figure 2.1: TACs/GHLs and Management Program Allocations, BSAI Crab Fisheries



Source: ***ADF&G.*** Tabular data available in Table 3.1.

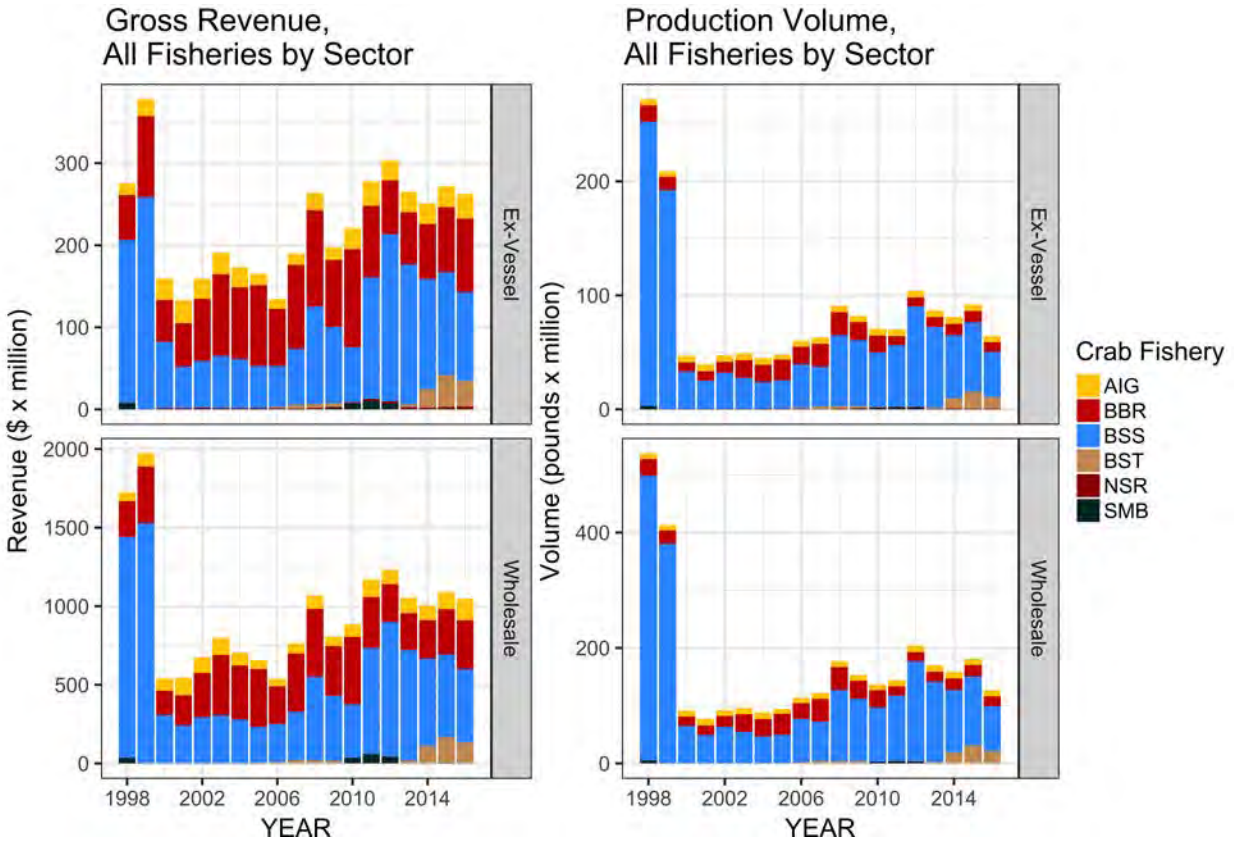
Numeric values above bars indicate total quantity (in million pounds) of TAC/GHL allocations to directed fishing, 10% of which is allocated to CDQ/Adak Community Allocation.

Figure 2.2: Ex-Vessel and First Wholesale Prices, Selected Fisheries



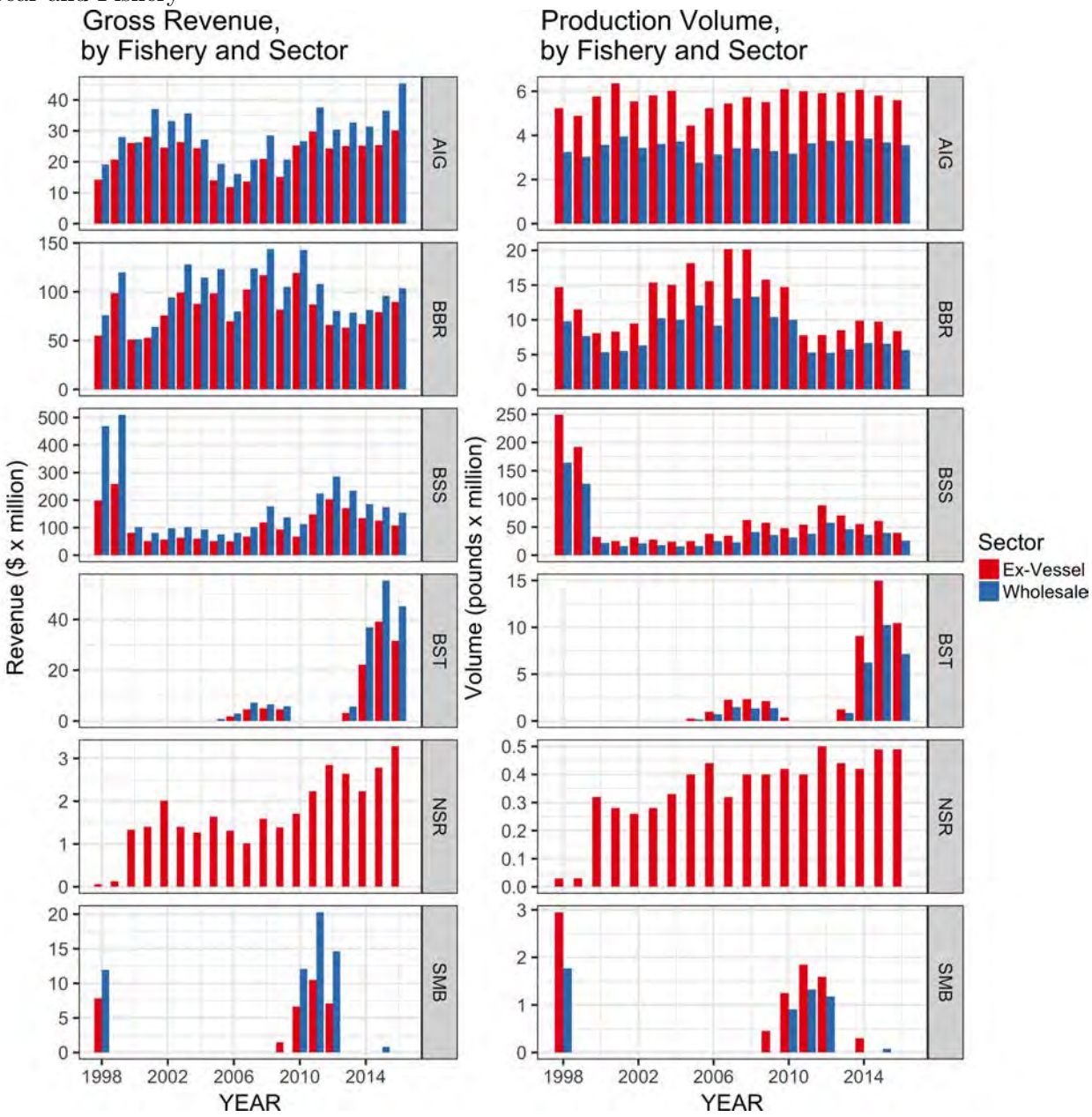
Source: ADF&G fish tickets, eLandings, CFEC pricing based on COAR buying reports. Data shown by calendar year. Tabular results are shown in Tables 3.4 and 3.8. Includes commercial harvest from general, IFQ, and CDQ management programs and commercial pounds harvested by catcher/processors.

Figure 2.3: Ex-Vessel and First Wholesale Gross Revenue and Production Volume, by Calendar Year, FMP Crab Fisheries



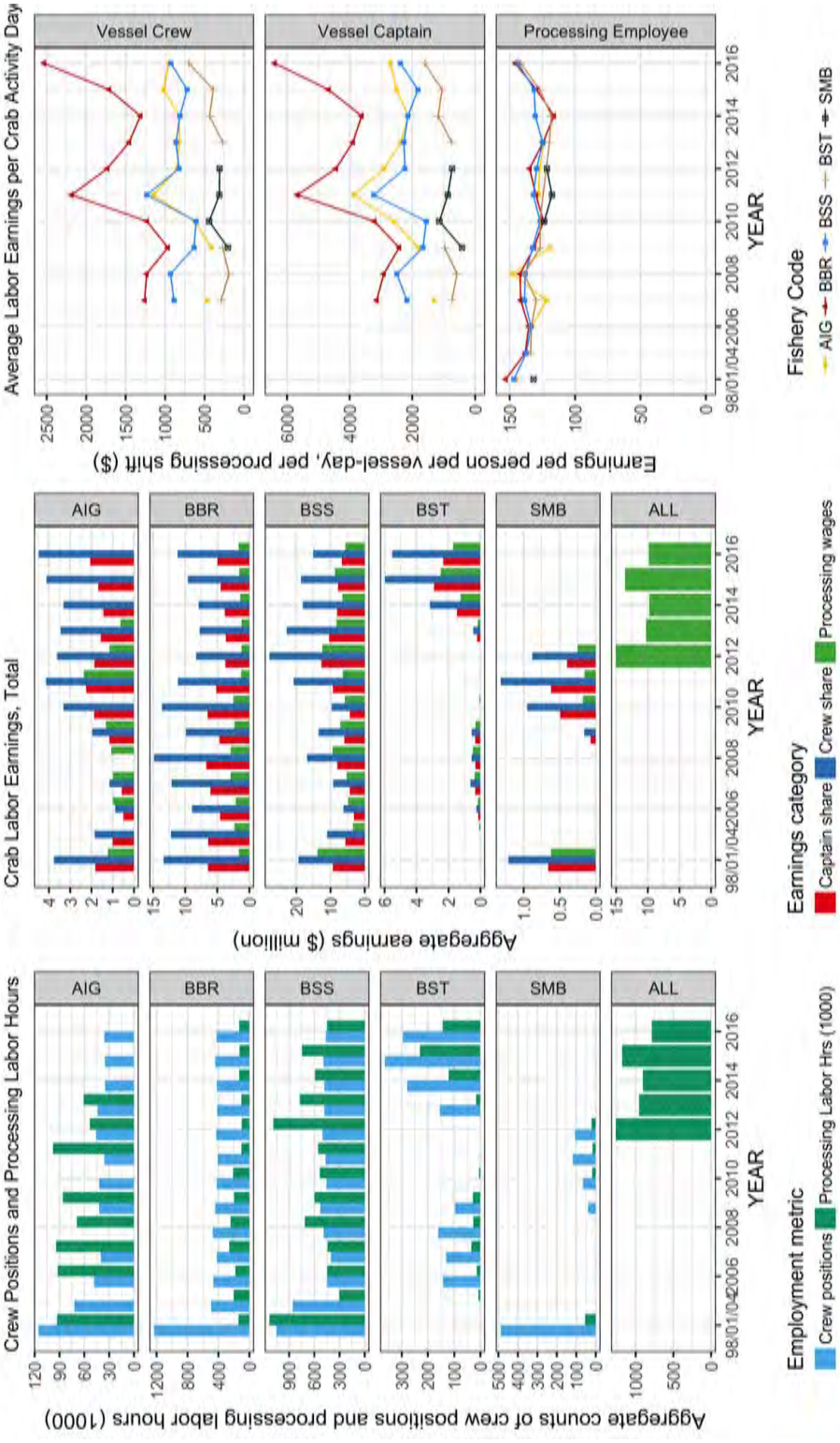
Source: ADF&G fish tickets, eLandings, CFEC pricing based on COAR buying reports. Data shown by calendar year. Tabular results are shown in Tables 3.4 and 3.8. Includes commercial harvest from general, IFQ, and CDQ management programs and commercial pounds harvested by catcher/processors.

Figure 2.4: Ex-Vessel and First Wholesale Gross Revenue and Production Volume, by Calendar Year and Fishery



Source: ADF&G fish tickets, eLandings, CFEC pricing based on COAR buying reports. Data shown by calendar year. Tabular results are shown in Tables 3.4 and 3.8. Includes commercial harvest from general, IFQ, and CDQ management programs and commercial pounds harvested by catcher/processors.

Figure 2.5: 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 3.11, 3.17, and 3.19. Values shown for 98/01/04 represent the annual average over the three-year series. Data for PIK, WAI, and 2008 data for AIG fisheries 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.

2.2.2 Harvest Sector Employment and Compensation

Consolidation in the crab-harvesting sector following rationalization in 2005 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.[6] A summary of selected indicators from the most recent employment and labor earnings data available for CR program fisheries are presented in Tables 3.17 to 3.18 and summarized in Figure 2.5. 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.[7] 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 3.15 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 2016 fell to 80, two fewer than the previous year. 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 1,218 crew positions across all vessels in CR fisheries in 2016, compared to 1,332 during 2015.[8] Crew positions declined most substantially in the BBR fishery, with 423 positions reduced by 18 from a relatively high level of 441 in 2015, and in the BST fisheries, with 296 (69 fewer than 2015 as a result of 9 fewer vessels participating in the 2015/16 BST fishery). Using counts of individual captains and crew members identified by license or permit number in EDR records, it is estimated that 731 unique individuals worked on board crab fishing vessels during 2016 CR fisheries, a decline of 106 from 2016, somewhat higher than average for the post-rationalization period (Table 3.16). Of the 631 commercial crew license holders participating in CR crab fisheries during 2016, 186 (32%), and 27 (30%) of the 100 CFEC gear operator permit holders, were identified as Alaska state residents, a slight increase in the proportion of Alaska resident gear operator permit holders and a slight decrease in the proportion of Alaska resident crew license holders.

[6]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.

[7]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 2.5 and Table 3.14 show counts of distinct crew participants through 2011 only.

[8]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.

Total labor payments[9] to crab vessel captains and crews totaled $16 million and $36.3 million during 2016, both declining by approximately 5% from 2015 earnings (Figure 2.5 and Table 3.17). At the level of individual fisheries, increased captain and crew labor earnings in the BBR and AIG fisheries were offset by similar proportional declines in the BSS and BST fisheries. Captains received total share payments of $2.05 million (+22%) and $4.95 million (+11%) in the AIG and BBR fisheries, with total crew shares of $4.48 million (+9%) and $11.2 million (+17%), respectively. In the 2016 BSS fishery, captain and crew labor earnings declined from the previous year to $6.7 million (-14%) and $15.1 million (-19%), respectively, while captain and crew shares in the BST fisheries declined 19% and 7.8%, to $2.33 million and $5.53 million, respectively.

As shown in Figure 2.5 (right panel), average daily earnings for crew and captains across all CR fisheries were in a declining trend from 2011 to 2014. In 2015 and 2016, daily earnings have increased sharply in the BBR fishery, by 30% from 2014 for both captain and crew in the 2015 ($4700/day and $1700/day), and by 31% for captains and and 48% for crew members for the 2016 BBR fishery ($6400 and $2500 per day, respectively). More modest increases in daily earnings were realized in AIG, BSS, and BBR fisheries in 2016, with crew members earning on average $925 per day in the BSS, $950 per day in AIG, and $700 per day in the BST fisheries, and captains earning $2700, $2400, and $1600 on average per day in the BSS, AIG, and BST fisheries.[10]. In the BBR fishery, estimated total active vessel-days at sea were reduced by 180 days over the fleet in aggregate (-18%) (see Table 3.19), approximately commensurate with the 18% decline in catch, both with strongly increasing ex-vessel price. In contrast, total days active in the BSS fishery during 2016 were reduced by 1489 days (-35%), relatively greater than the decline in gross annual crew earnings and resulting in modest increases in average daily earnings.

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.

Table 3.18) reports median-vessel crab crew earnings in terms of "gross-share" (value of payments to the captain and crew as a share of gross ex-vessel revenue), and median "net share" (share of ex-vessel revenue less deducted operating costs) for years prior to 2011. Median seasonal settlement payments to vessel crews in the BBR fishery initially increased substantially following rationalization, from $60 thousand on average during the pre-rationalization reference years (1998, 2001, and 2004), to $120

[9]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).

[10]See Figure 2.13 and Table 3.19 and associated footnotes for details on data sources for vessel activity-days used for daily pro-rata earnings calculations.

thousand in 2005, and have varied between $100 thousand to $200 thousand during the following 10 years, and increasing from $110 thousand in 2014 to $140 thousand in 2015, and $160 thousand in 2016. Median seasonal crew settlement payments per vessel in the BSS fishery declined slightly during 2005 (prior to rationalization) and 2006 to $70 thousand per vessel, but have subsequently remained above $120 thousand, peaking at $380 thousand during 2010, and reaching $240 thousand per vessel in both 2014 and 2015, and declining to $190 thousand in 2016. The variability of crew settlements, from 1.5 to over 3 times the median earnings in the BBR fishery prior to to the CR program, and from 1.5 to 5 times the pre-CR levels in the BSS fishery, correspond to variability in catch levels and ex-vessel prices. In contrast, gross revenue share percentage values (calculated as the ratio of reported captain and crew payments to gross ex-vessel revenue reported by fishery have remained relatively constant over the CR period, but have shown a modest decline over the 10-year period, from 22-23 percent combined in both fisheries during the initial seasons under CR program management, to 18% and 20% in the BBR and BSS fisheries during the most recent three seasons. Limited data for both gross and net share values is available prior to 2005,[11] but vessel owners reported an average 40% net share percentage over all fisheries in which they participated as the basis for crew settlement payments, and median crew payment as gross share was 35%, averaged over all vessels and crab fisheries.

2.3. Harvest Sector Operating and Production Costs, and Net Earnings Indices

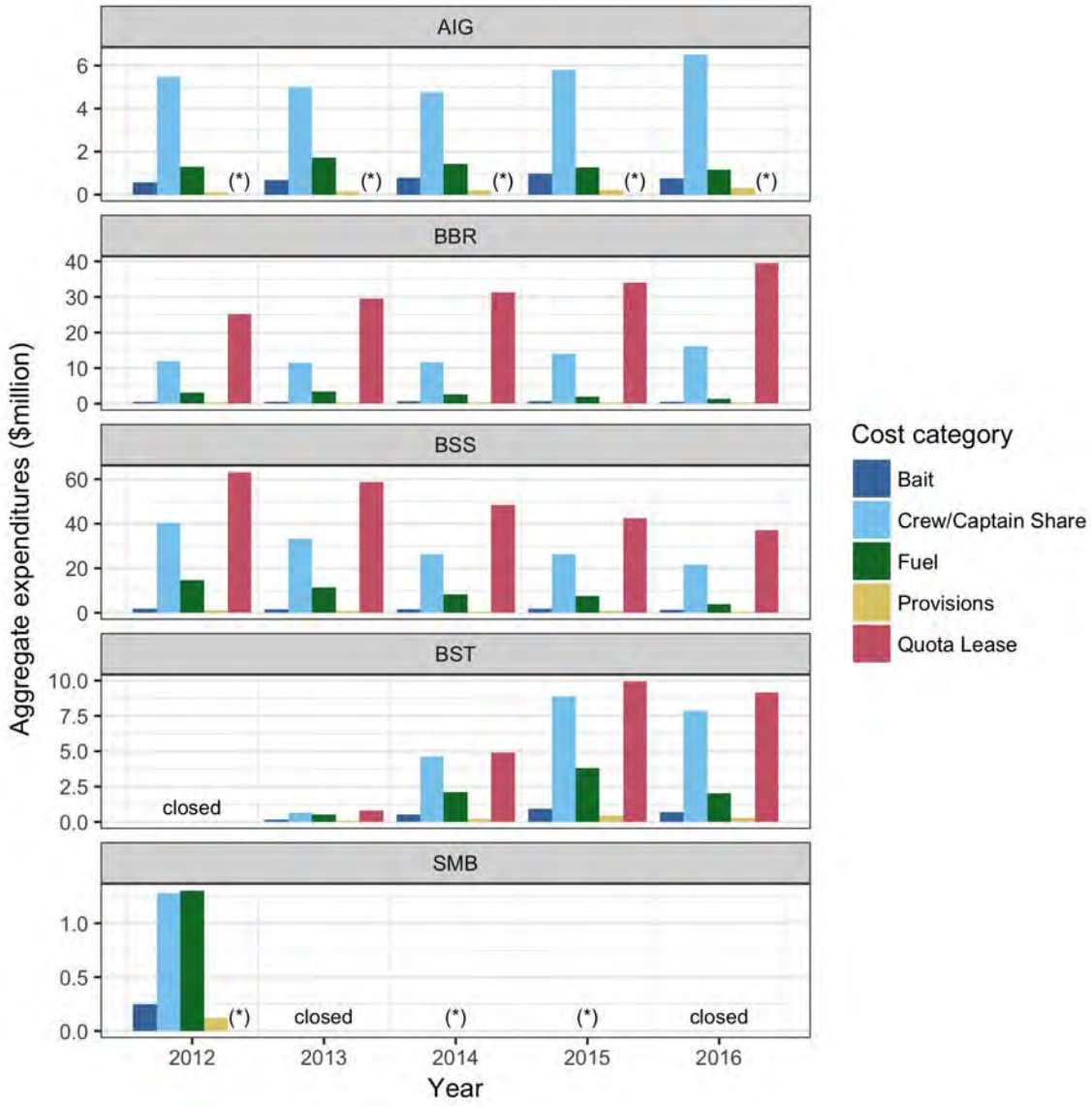
Statistics reporting information available for crab vessel operating expenditures are summarized in Figure 2.6; in addition to tables and figures reporting vessel crew labor and quota costs presented in other sections, Tables 3.20, 3.21, and 3.22 provide summary statistics for available data on food and provisions, bait, and fuel costs in the harvest sector over the baseline-to-current period. Total aggregated expenditure by fishery sector and per-vessel or per-plant median expenditure are presented for cost data elements where data of sufficient quality to warrant dissemination are available through the current period.[12] 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 these 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.

Total bait expenditures across all fisheries and vessels (excluding the SMB fishery, for which data is not reported for 2014 and 2015 due to confidentiality) reached $4.6 million during 2015, and declined 27% for 2016 calendar year fisheries, to $3.3 million; the BSS fishery typically accounts

[11] where "net" refers to the revenue residual after operating expenses shared between vessel share contracts. Revenue net share percentages over all crab fisheries were collected in Crab EDR forms 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.

[12] Cost elements that were discontinued in the crab EDR data collection program as of 2012 are not included; see the 2013 edition of this report for additional detail on discontinued harvest and processing cost data collected prior to 2012.

Figure 2.6: Aggregate Crab Vessel Operating Costs, by Cost Item and Fishery



Source: NMFS AFSC BSAI Crab Economic Data. Tabular data available in Tables 3.17, 3.20, 3.22 and 3.26. Values shown represent total annual expenditures by cost item for calendar years 1998-2016 where available, or 2012-2016 otherwise, aggregated over all vessel entities reporting except where data are suppressed for confidentiality (as indicated by "(*)"). 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.

for the majority of bait expenditures, with $1.3 million during 2016 compared to $600 thousand in the BBR fishery. Reported expenditures for food and provisions costs totaled $1.5 million over all fisheries during 2016, 26% less than in 2015. The largest share of provisions costs accrued to the BSS fishery, with $560 thousand, followed by $325 thousand in the BBR fishery. Total fuel expenditures reached $8.5 million over all fisheries and vessels in 2016, 41% more than in 2015.

Fuel cost in the BSS fishery of $4 million declined 47% from the previous year, while fuel costs in the BBR fishery declined to $1.3 million. Table 3.22 also reports median and total vessel fuel consumption (gallons purchased) by fishery, and average fuel cost per gallon.[13]

2.3.1 Harvest Sector Net Earnings Indices

In order to provide some degree of integration of the costs and revenue results reported for crab vessels in the previous sections, the following section provides a limited analysis of both financial performance of crab vessel operations and net economic benefits produced by the harvest sector in CR fisheries. Gross revenue estimates presented in 2.1.2 are based on ex-vessel sale information reported for each vessel in EDR records, which provide the most complete accounting of gross ex-vessel revenue inclusive of post-season adjustments received by vessel owners in available data sources. The following uses available vessel operating cost data discussed above, and harvest quota lease expense information discussed in more detail in 2.4.1 to derive estimates of the revenue residual retained by vessel operators after payment of onboard labor expenses, vessel operating costs (fuel, bait, and provisions), and harvesting quota (IFQ/CDQ) lease expenses. Data limitations[14] prevent a more comprehensive and continuous analysis of financial performance and net economic benefit over the full period since the CR Program was implemented. As such, the following provides the equivalent of an abridged annual income statement for the median crab vessel and for the the crab harvest sector as a whole: available cost data is used to calculate approximate 'total cost of production available for sale' and gross profit for the median vessel, and for the fleet as a whole.

Tables 3.24 and 3.25 present simple tabulations of vessel- and sector-level cost and earnings analyses using the most complete cost and revenue data available for vessels operating in the Bering Sea snow crab and Bristol Bay red king crab fisheries, as well as aggregate results calculated over all CR fisheries, during 2012 through 2016. Results presented as gross ex-vessel profit in the tables, and illustrated in Figures 2.7 and 2.8 are intended to provide relative indices of gross profitability of vessels operating in the respective crab fisheries, recognizing that additional costs not accounted for in available data are substantial, including other direct vessel operating costs, maintenance and repair, overhead, finance, and other fixed costs. As such, the estimated gross profit residual does not directly measure, and is greater than, vessel operating profit.

In the vessel-level analysis shown in Figure 2.7 and Table 3.24, quota lease (royalty) costs are represented as a vessel cost of crab harvest in order to account for the diversion of sales revenue from a vessel owner's balance sheet. Quota lease royalties are commonly paid to the quota holder as a share of gross ex-vessel value of the leased quota pounds, and share payments to crew and captain are typically paid on the basis of the gross residual revenue after lease royalties are paid, with additional deductions for fuel, provisions, and other vessel and/or personal expenses. In the context of gauging the economic benefits generated by the fishery, however, it should be understood that crab harvest quota is not an economic input that could be redirected to alternate productive use outside of the crab fishery; as such, it's use by a particular crab vessel doesn't represent an economic opportunity cost in the same sense that crew labor or vessel capital does. Rather, quota lease royalties represent transfer payments within the assemblage of crab vessels and QS holders

[13]Table 3.23 provides a compilation of diesel prices per gallon from 1999 to current for the five principal fueling ports for Alaska fishing vessels.

[14]Comprehensive reporting of capital investment costs and additional annual expense categories was suspended by revisions to crab EDR data collection in 2012, and data quality limitations in fuel and IFQ lease cost EDR data collected prior to 2012 are such that these data are available only for the period beginning in 2012

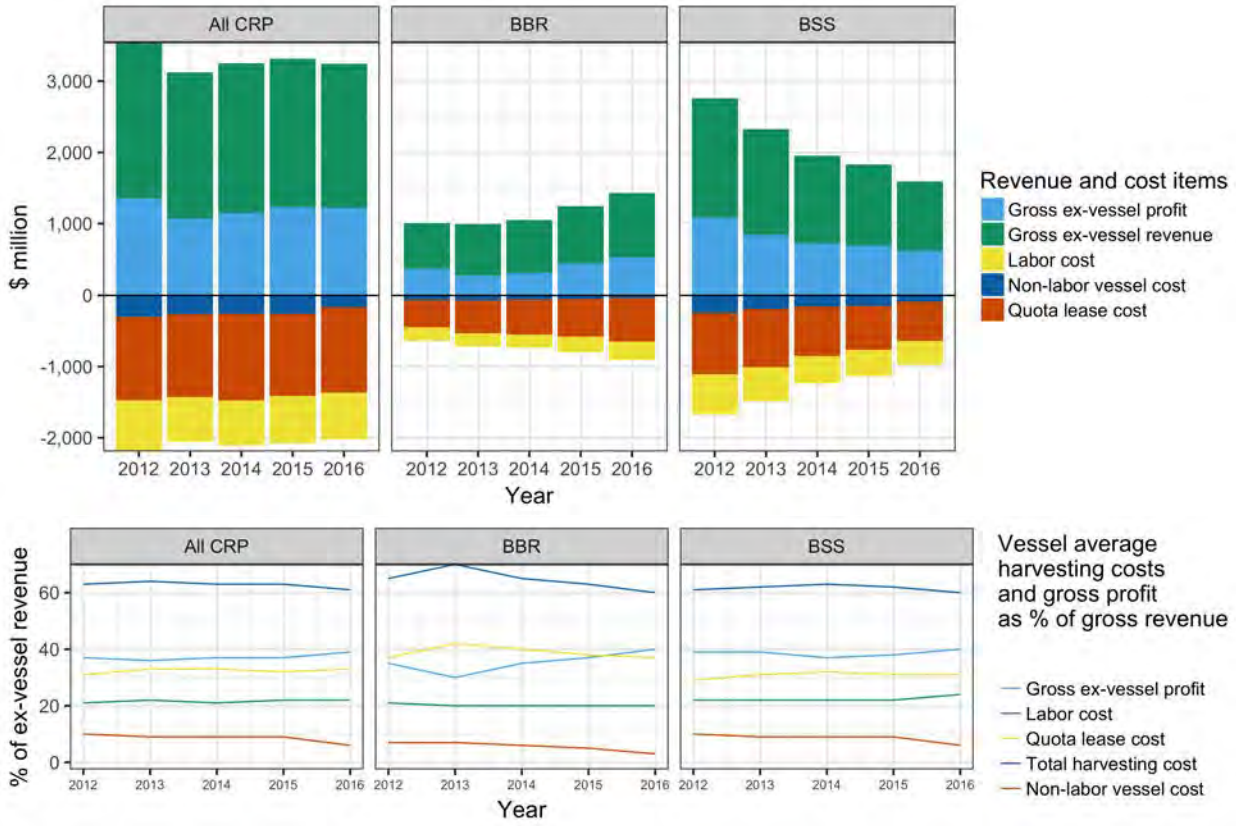
rather than an economic cost of ex-vessel production. Reflecting this distinction, the harvest sector level analysis shown in Figure 2.8 and 3.25 treats quota lease royalties as a distribution of gross ex-vessel profit from the vessel sector to the quota sector, treating only vessel labor and materials expenses as operating costs.ch

CR fisheries in aggregate generated median gross ex-vessel revenues ranging from $3.1 to $3.5 million per-vessel between 2012-2016, from landings ranging from 794 thousand pounds (in 2016) to 1.25 million pounds in 2012. As a proportion of total CR crab pounds landed per vessel, quota leased from QS holders ranges from 64% to 69% at median per-vessel over the period; 2016 saw the lowest volume of leased quota over the 5-year period at 598 thousand pounds, but represented the highest proportion of total landings at 69%. Associated median lease royalty costs represent from 31% to 34% of gross ex-vessel revenue over the period; in 2016 with median vessel-level gross revenue of $3.24 million over all CR landings, quota royalty cost increased to $1.2 million in 2016, 34% of gross revenue, leaving a gross revenue residual after lease cost of $2.02 million. Median non-labor operating costs of $164 thousand per vessel during 2016 accounted for 6% of gross revenue, with fuel costs at $106 thousand, bait costs at $41 thousand, and provisions totaling $18 thousand, representing 3.3%, 1.3% and 0.6% of gross revenue, respectively, leaving a gross revenue residual of 60%. Crew and captain share payments in 2016 totaled $679 thousand per vessel (24% of ex-vessel revenue, up from 21% - 22% during the previous three years), bringing total operating costs, including lease royalties, to $2.06 million during. This represented 64% of 2016 median vessel-level gross revenue, with the remaining gross profit of $1.18 million, at 36% of gross revenue, consistent in percentage terms with performance over the previous four years.

Results shown in Figure 2.7 for the BBR and BSS fisheries indicate that over the 2012 to 2016 period, average economic performance of vessels in the BBR fishery in gross profit percentage terms (i.e., gross profit margin) was below that of the BSS and CR fisheries overall. Labor and materials expenses in the BBR fishery over the period, at approximately 20% and 7% of gross revenue respectively, were somewhat lower in proportional terms than in CR fisheries overall, and compared to approximately 22% and 9% in the Bering Sea snow crab fishery. A slightly smaller proportion of landed pounds in the BBR fishery are reported as leased in EDR data than in BSS and CR fisheries overall (from 1 to 5 percentage points greater in BSS than in BBR (Table 3.24), median quota lease costs in the BBR fishery represent substantially greater cost as a percentage of gross revenue at 40% on average over the period (exceeding the gross profit margin by more than 12% on average in 2013), compared to 31% in the BSS fishery. On this basis, over the 5 year period, the gross profit margin of the median vessel in the BSS fishery appears to out-perform that of the median vessel in the BBR fishery by 2 to 4 percentage points.

Figure 2.8 demonstrates an alternative perspective on harvest sector economic performance of CR Program fisheries, treating quota lease royalties as a distribution of aggregate gross profit in the harvest sector reported at the fishery level in aggregate. Over all CR fisheries, accounting for labor and materials operating costs captured in EDR data, gross profit ranged from a low of $181 million in 2013, to a high of $209 million in 2012, with a margin of 71% to 74% trending slightly upward over the period. Lease royalty transfers averaged 50% of the gross profit margin over the period, ranging from $92 million in 2014 (51% of gross profit) to $97 million in 2012 (46% of gross profit). Aggregate gross revenue in the BBR fishery ranged from $62 million in 2013 to a high in 2016 of $88 million, corresponding to gross profits of $47 and $68 million, respectively, and with the gross profit margin increasing by three percentage points over the period to 78 percent in 2016 (comparable to the 2 percentage point increase at the median vessel level). In the Bering Sea snow crab fishery,

Figure 2.7: Vessel-level mean operating costs and gross revenue residuals, BBR, BSS, and all CR fisheries in aggregate, 2012 through 2015



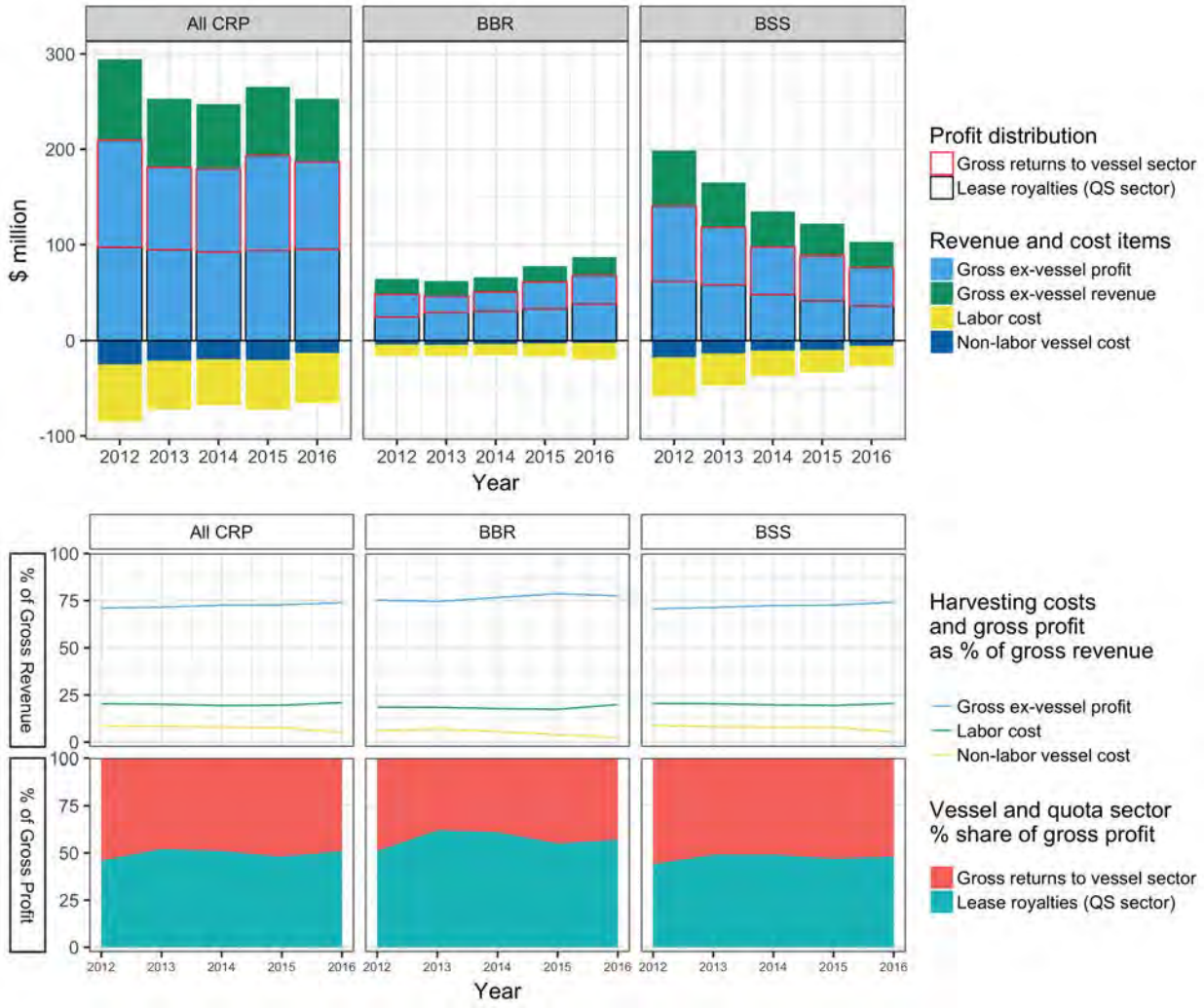
Source: NMFS AFSC BSAI Crab Economic Data. Tabular data available in Table 3.24. Values shown represent mean vessel-level earnings and expenditures by cost item for calendar years 2012-2015, averaged over all vessel entities reporting except where data are suppressed for confidentiality. Cost data shown include all cost items for which data are available, but do not represent a comprehensive accounting of operating expenditures.

fleet-aggregate gross revenue has declined each year over the period, from $199 million in 2012 to $103 million in 2016, corresponding to gross profit decline from $141 million to $76 million; in gross profit margin terms, a slight increasing trend from 71% to 74% is apparent. The share of gross profit accruing to BSS QS owners remained close to an average of 47% over the last three years, while the QS sector share of gross profit in the BBR fishery ranged from 51% to 62%, averaging 58% over the period as a whole, and consistent with the higher IFQ lease rates in the BBR fishery (discussed in greater detail below in Section 2.4.1).

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

The following section provides information regarding lease market activity associated with transfers of Individual Fishing Quota (IFQ) and Individual Processing Quota (IPQ) annual permits in the CRP, and several indices measuring changes in the status of crab harvesting and processing quota share (QS and PQS, respectively) holdings among eligible shareholder entities under the CR program.

Figure 2.8: Fleet-level aggregate operating costs and gross revenue residuals, BBR, BSS, and all CR fisheries in aggregate, 2012 through 2015



Source: NMFS AFSC BSAI Crab Economic Data. Tabular data available in Table 3.25. Values shown represent aggregate earnings and expenditures by cost item for calendar years 2012-2015, summed 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.

2.4.1 Harvest Quota Lease Activity and Average Prices

Table 3.26, summarized in Figure 2.9 displays aggregated results for crab fishing quota lease volume (in pounds) and cost reported for crab vessels active during 2012 through 2016 calendar year CR fisheries[15], by fishing quota type category, with total quantities summed over all reporting vessels,

[15]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 and later fisheries, revised EDR forms

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 (i.e., a right-skewed data distribution). Harvest quota types are categorized as the following: Catcher Vessel Owner Class A (CVOA) IFQ; 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 2016 BBR fishery range from 50 vessels leasing CVO Class A shares to 5 vessels leasing CDQ shares (out of 63 crab vessels active during the 2016/17 BBR fishery), and from 54 vessels leasing CVO Class A BSS IFQ allocation to 7 vessels leasing CDQ allocation (out of 67 active vessels) in the BSS fishery. Total volume and cost over all vessels leasing the respective quota types during 2016 range from 4.43 million pounds and $29.7 million for BBR CVO Class A IFQ, to 201 thousand pounds and $1.4 million for BBR CVO and CPC crew IFQ allocation; BSS lease volume and cost ranged from 19.6 million pounds and $26 million for CVO Class A IFQ to 925 thousand pounds and $1.3 million for crew share IFQ allocation.

Median vessel-level values[16] for 2016 BBR quota leased volume and cost ranged from 121 thousand pounds and $846 thousand per vessel for the five vessels leasing BBR CDQ allocation, 75 thousand pounds and $494 thousand for BBR CVO-A shares, and 4.0 thousand pounds and $34 thousand for BBR CVO and CPO crew IFQ. BSS per-vessel averages ranged from 337 thousand pounds and $404 thousand per vessel for BSS CVO- Class A allocation to 22 thousand pounds and $31 thousand for BSS crew share allocation.

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.[17] Correspondingly, since 2008/09, virtually all IFQ lease transactions registered with NMFS (Table 3.27) have taken place within harvest

employ revised instructions specifying quota lease data elements as market-rate or negotiated-price transfers. Also note again that CR crab fisheries are managed on a July-June seasonal calendar, such that statistics shown for 2015 BBR and BSS calendar year fisheries are based primarily on data reported for the 2014/15 BSS season and 2015/16 BBR season.

[16]Differences between median and mean average values shown in Table 3.26 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), resulting in right-skewed distributions in associated vessel-level quota lease metrics.

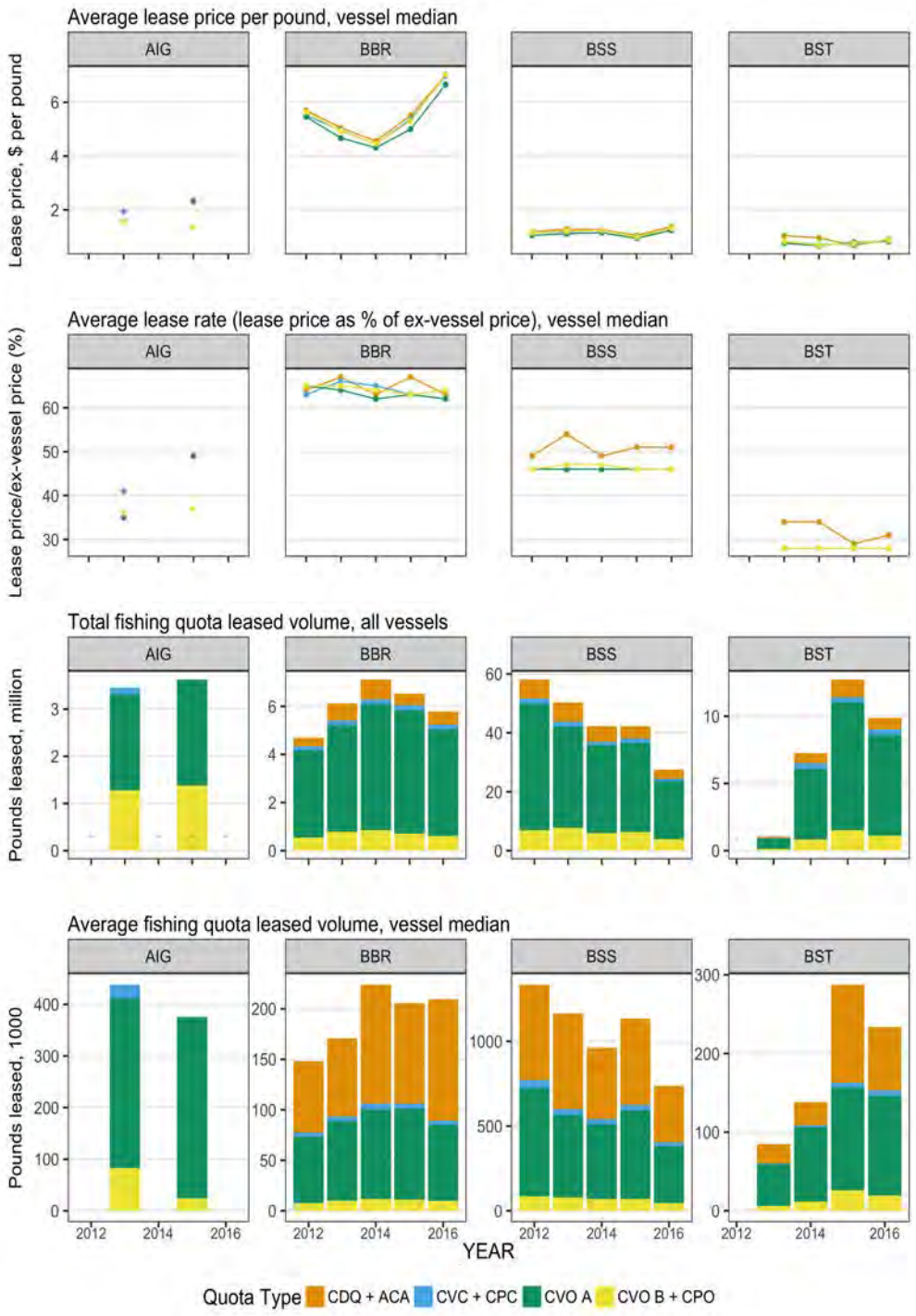
[17]For the 2009/10 crab season, the Inter-Cooperative Exchange (ICE) harvest cooperative was formed. As of the 2012/13 season, 65% of crab IFQ was issued to ICE, with the remaining IFQ issued to eight other cooperatives; the Alternative Crab Exchange (ACE) harvest cooperative was formed for the 2013/14 season out of concerns regarding ICE membership compliance with the Fishermen's Collective Marketing Act of 1934 (FCMA; 15 U.S.C. SS 521 et seq.), and the membership of the two have held approximately 31.5 and 34% of the total QS pool respectively, aggregated over all CR program fisheries. Nine other harvest cooperatives that participated over the course of the CR Program represent smaller QS pools, between 1.7 and 7.9% of the total allocation during recent seasons. Among other effects of formation of the ICE and ACE cooperatives, administrative requirements related to IFQ transfer applications were largely obviated, facilitating assignment of 100% of issued IFQ to harvest cooperatives. See the Crab Cooperative Permits and Information section of NMFS AKRO Crab Rationalization webpage for more information: https://alaskafisheries.noaa.gov/fisheries/bsai-crab-rationalization.

cooperatives, primarily in the form of IFQ assignment to a cooperative by member QS holders. Since 2005, leases registered by cooperatives have ranged from 144 during 2005/06, to 342 in 2014/15, declining to 255 leases registered in 2015/16. Noncooperative IFQ leases were most common in the first year, with 113 in total, declining to 16 by 2007/08, and four in 2011/12, the last year such transfers occurred. Processing quota permit (IPQ) leases have varied between a low of 25 in 2010/11 to a high of 55 in 2015/16, averaging 36 per season over the CR Program period to-date.

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 a peak of 329 during 2006/07 to a low of 86 registered in 2015/16, increasing to 140 sales in 2016/17 (Table 3.27). 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. No PQS sales occurred for 2015/16 and 2016/17, with 55 and 28 leases registered in the most recent two seasons spanning the long-term range of variation.

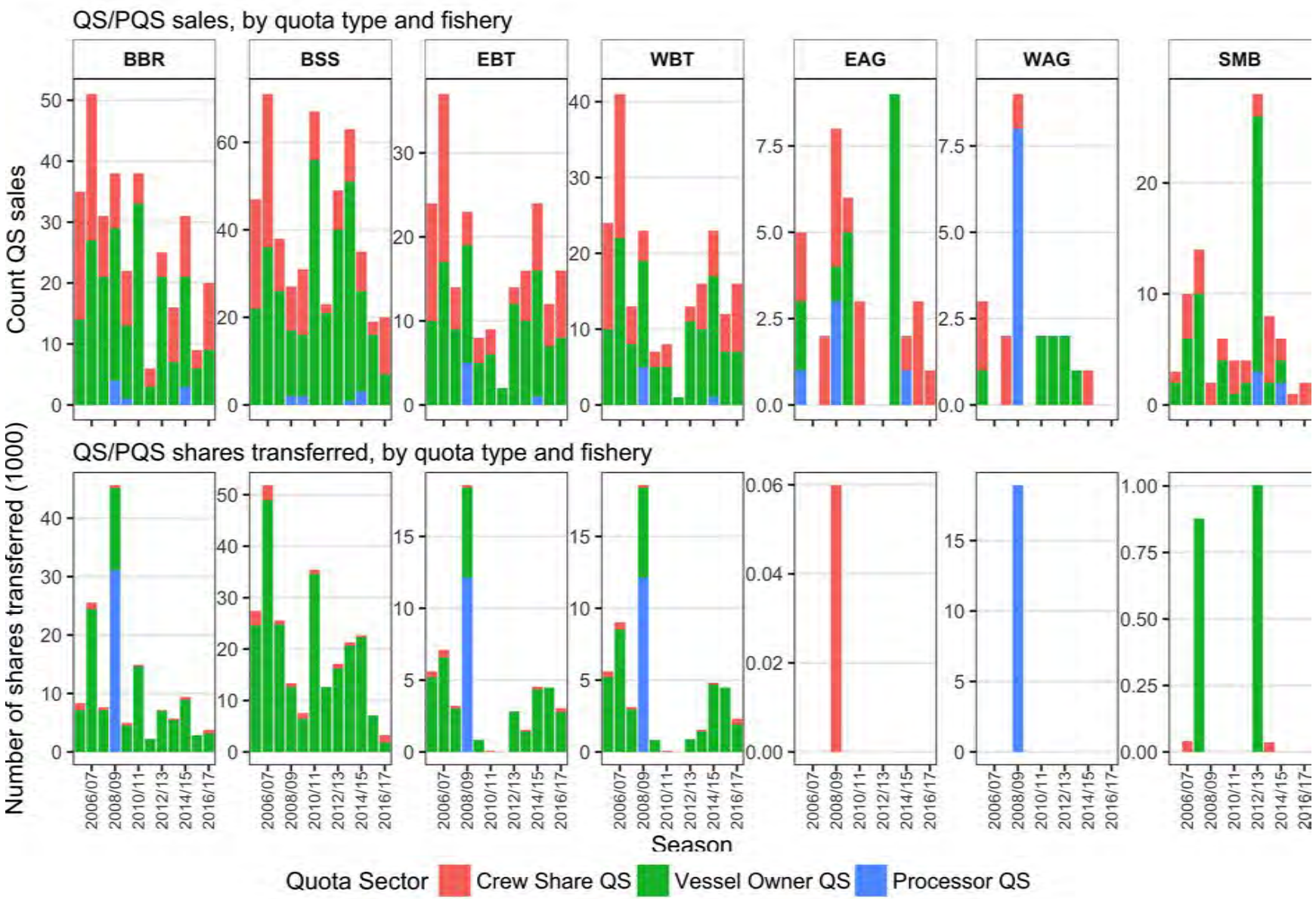
Figure 2.9: Crab Harvest Quota Lease Activity; Lease Volume, Price, and Rate, Selected CR Fisheries



Source: NMFS AFSC BSAI Crab Economic Data. Tabular data available in Table 3.26. Lease data shown represent arm's length lease transactions reported for active crab fishing vessels in the 2012 through 2015 Crab EDR; data collected for earlier years is not reported due to data quality limitations.

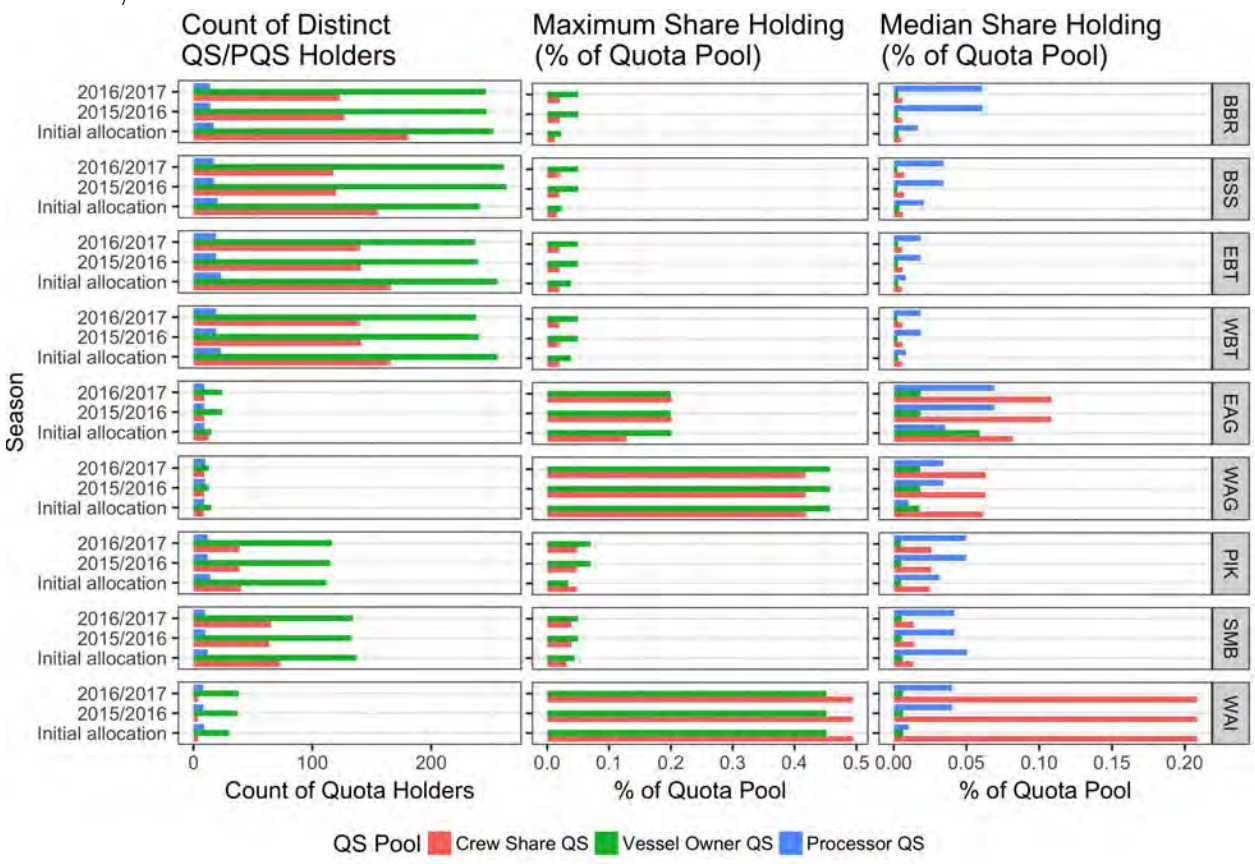
Harvest quota types are categorized in this report as the following: CVO A - catcher vessel owner Class A IFQ; CVO B + CPO - catcher vessel owner Class B IFQ and catcher/processor owner IFQ; CVC + CPC - catcher vessel crew IFQ and catcher/processor crew IFQ. Statistics reported represent results pooled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

Figure 2.10: QS and PQS Sales



Source: NMFS AKRO RAM division, Quota share transfer data. Tabular data presented in Table 3.28.

Figure 2.11: CR Program Harvest and Processing Quota Share Holdings, Initial Allocation, 2015/16, and 2016/2017 Seasons



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

Tabular data available in Tables 3.33 and 3.37.

Additional details on QS/PQS sale transfers is shown in Table 3.28 and Figure 2.10, with counts of entities transferring, total and median volume of QS units transferred, and median price per QS unit shown by fishery, season, and quota type. 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% of 210 sales in 2006/07, although the quantity of shares transferred as CVC was much less than the quantity of CVO shares. Subsequently, the relative proportion of CVC QS sales diminished, with catcher vessel owner (CVO) QS sales becoming the predominant type in most years; in 2016/17, however, the number of CVC QS sales increased across all CR fisheries, at 37 exceeding the 31 CVO QS sales during 2016/17. Ten sales of CVC QS in the BBS fishery totaled for 1.4 million QS units representing approximately 28% of the total BSS CVC QS share pools. In contrast, 7 sales of BSS CVO QS were completed for 2016/17, totaling 1.8 million QS units (less than 1% of the pool).

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 $1.01/unit in 2005/06; prices increased to $0.92 per unit during the most recent three years. 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, and declining to $0.69 in 2016/17; BSS CVC share price has

recently varied from $.73/unit to the peak value of $0.95/unit observed 2013, but declined ,to $0.34 per unit ini 2016/17.

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% of the PQS pool), 5 in the each of the EBT and WBT fisheries totaling 12.2 million units (6% of each pool), and 8 in the WAG fishery totaling 18.9 million units (47% 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.[18] Table 3.30 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 2011/12 through 2016/17 seasons are shown in Table 3.31. As a result of increasing BBR CVO QS price/unit over the 2012 to 2014 period noted above, concurrent with declining lease price, the IFQ:QS ratio values for BBR CVO quota dropped from 0.13 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 over the three-year period, from 0.15 to 0.05, while BSS CVC QS remained at 0.08. In the more recent two years, BBR IFQ lease prices have increased (reflecting higher ex-vessel values), increasing the price ratio to .10 in 2016. Avergage prices for BSS CVO QS have been more variable, increasing to $1.07/unit during 2014 and 2015, and declioning to $0.80/unit in 2016, with countervailing variation in IFQ lease prices, resulting in a relatively constant IFQ/QS price ratio of 0.05 to 0.06.[19] 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 trend in IFQ/QS price rates provides limited information, it does provide some indication of the

[18] 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

$$\mathrm{QS}_{\mathrm{price}} = \left(\frac{1}{r}\right) * \mathrm{IFQ}_{\mathrm{lease\ price}}$$

In this relation, the index $r = \frac{\mathrm{IFQ}_{\mathrm{lease\ price}}}{\mathrm{QS}_{\mathrm{price}}}$ 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.

[19] 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.

relative value of retaining QS shares and the associated stream of royalty revenue 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% and 9% , with only high risk (C-rated) investment bonds reaching yield rates as high as 15% (Federal Reserve Economic Data, 2013), the recent royalty yield rates for QS in the most recent 304 years haxve remained within the range of typical bond rates.

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 quota holder 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 3.33 to 3.40 of the report, and summarized in Figure 2.11 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% in BBR, BSS, EBT, and WBT fisheries, 2% in PIK and SMB, and 20% 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% to 6.3%). 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 2.11 and Table 3.33). 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 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% 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 QS holders (Table 3.34), 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 196 as of the start of the 2016/17 crab season. With respect to individual CFEC-permitted crab vessel operators active on-board crab vessels[20], 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.[21] CVC QS holders active as gear operators in or or more crab fishery as of the 2016/17 season have declined from 94 during the 2005/06 season to 60, representing 31% of the 196 individual CVC QS holders, and 40% of the aggregate pool of CVC shares across all fisheries.

Tables 3.39 and 3.40 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, 150 out of 532 (28%) of initial issuees have exited from holding QS in one or more fisheries since 2005, of which 16 exited after the end of the 2014/15 season. Within individual quota pools, higher proportional rates of attrition have occurred, including approximately 38% of initial QS issuees exiting from each of the BBR, BSS, BST, and SMB fisheries (162, 144, 125, and 63 exits as of 2016, respectively). Table 3.40 provides statistics on new entrants to respective QS/PQS pools in each fishery as of the end of the 2016/17 season, relative to initial issuance and to the previous season 2015/16. The table provides counts

[20]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.

[21]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.

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 newly entering the fishery between the 2015/16 and 2016/17 seasons by either measure was small for Crew QS and PQS. In the BBR fishery, 7 new Crew QS entrants acquired a total of 7% of the Crew QS pool. In the BSS fishery, 5 new Crew QS entrants (none of whom previously held CR shares in another pool) acquired a total of 4% 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 75 of 160 original BSS CVC and CPC crew share issuees since 2005, and 9 since the 2015/16 season, shown in Table 3.39. Entry to the Owner QS pools during 2016/17 was more limited, with 3-5 new entrants in the BBR, BSS, and EBT Owner QS pools, but less than 1% 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 issuees that have exited than is the case in the Crew QS pools, with 95 new entrants to the BSS owner QS pool compared to 78 initial issuees 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% 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 3.42, 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[22], 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.

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 3.42

[22]The index is calculated as $\frac{\sum_{i=1\ldots n}(2P_i - n - 1)x_i}{n^i u}$ 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.

displays Gini coefficient index values by calendar year for 1998-2016, 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 of the active vessels.

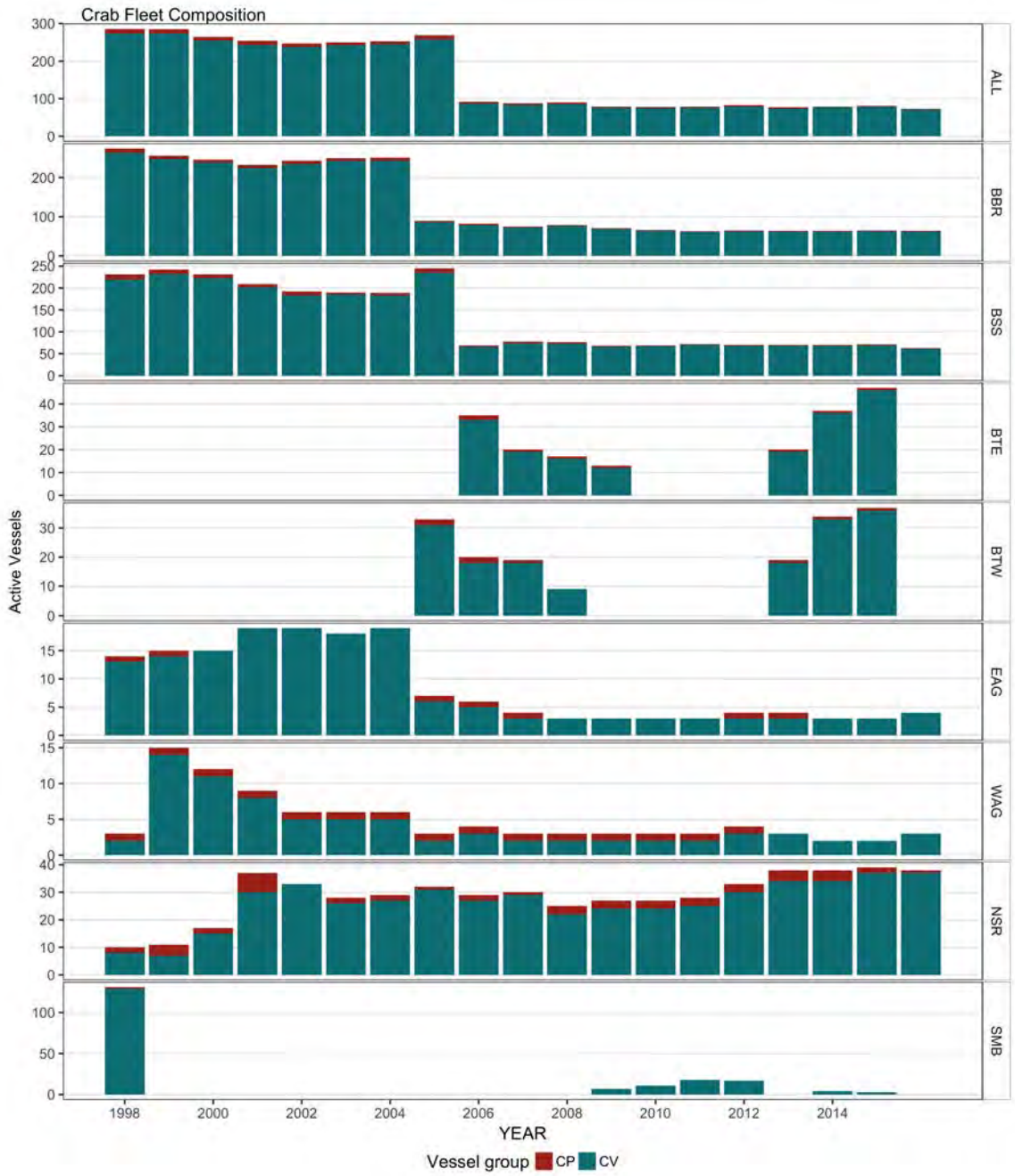
For purchasing of live-landed crab in the BBR fishery prior to the CR program (Table 3.43), concentration index values varied between 0.58 - 0.66, with the number of active buyers averaging 25 per year; following program implementation, index values have varied within a slightly lower range (0.54 - 0.61), 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 3.43 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 3.42, 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 1998-2016 period have been noted in a variety of contexts in the preceding discussion, including changes in size and composition of the active fleet (Table 3.3), 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 3.2). The substantial consolidation of fishing capacity following rationalization is clearly depicted in fleet composition (Figure 2.12), 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, pot lifts (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.

Figure 2.12: BSAI Crab Fishery Fleet Composition



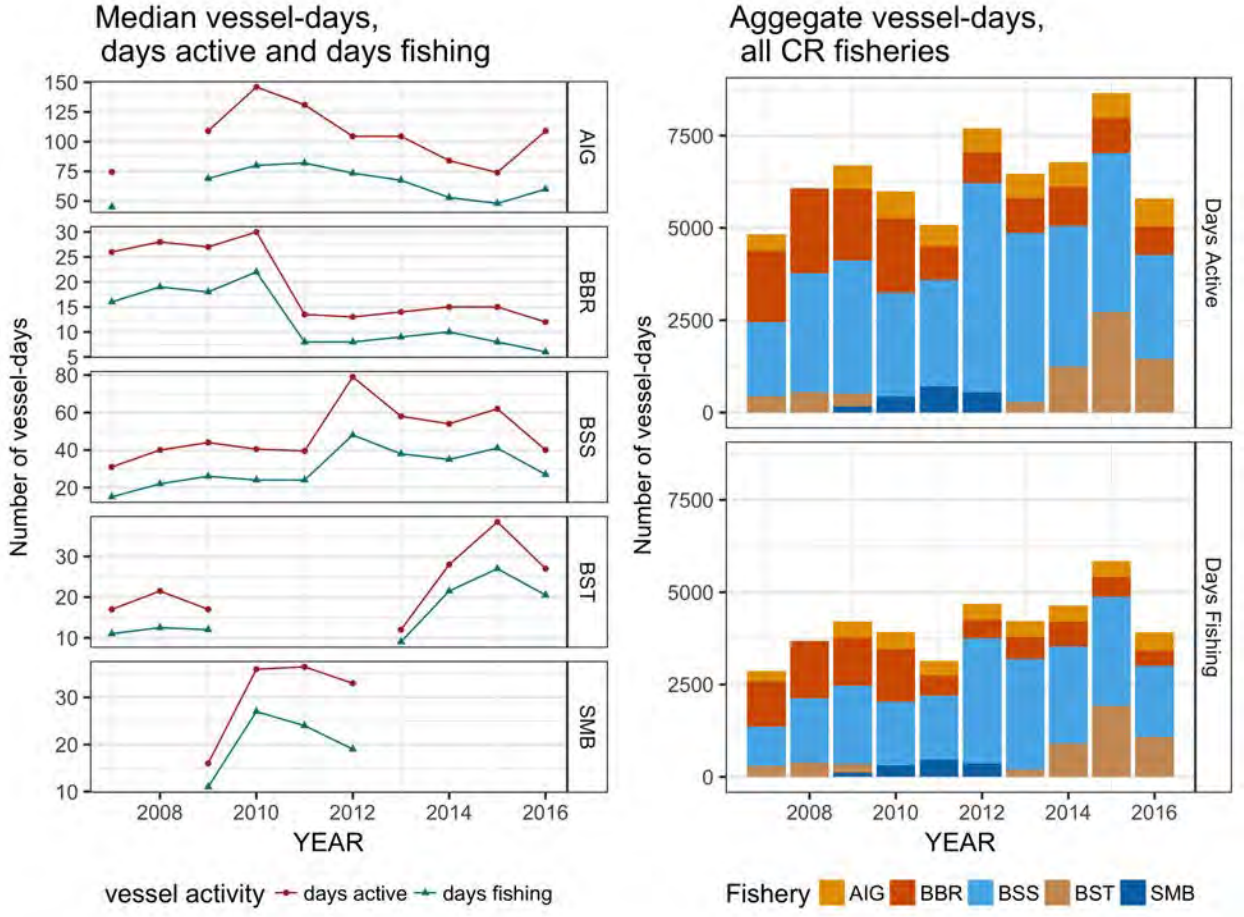
Source: ADF&G fish tickets, eLandings. Tabular data available in Tables 3.2 and 3.3. Gaps in time series for BST, PIG, PIK, SMB, and WAI indicate fishery closure years. All crab fishery total ("ALL" panel in figure) represents counts of distinct vessels fishing in one or more crab fisheries during the year, not including the NSR fishery.

Table 3.19[23] 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,

[23]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 3.19 and Figure 2.13

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 774 vessel days during 2016; 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 in 2011/12. 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 2016 BSS fishery declined from an estimated 2,947 in 2016 to 1,922 (with median days decreasing from 41 to 27).

Figure 2.13: Harvest Vessel Activity Days, Selected Fisheries



Source: ADF&G Shellfish Observer Program, Confidential Interview Form Data. Tabular data is presented in Table 3.19; the figure displays CIF vessel activity data only, from 2007 to 2016. Data for PIK and WAI fisheries not shown. Results for 2007 and 2008 show CV activity only, 2009-current shows activity aggregated over CV and CP sectors.

display results using eLandings and ADF&G 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.

Table 3.44 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.[24] Crab vessels often make deliveries to multiple processors following a single fishing trip, and Table 3.44 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 11 seasons have ranged from 237 total trips (3.0 per vessel) during the 2008/09 season to a low of 101 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) prior to 2016, 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 168 thousand pounds per trip in 2010/11 to a low of 125 thousand pounds per trip in 2015/16.

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 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 3.45, 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% 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% of the open season), with the shortest at 116 days (51% 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 3.45 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 2014/15 seasons.

Information on active season lengths as discussed above is shown for the BBR and BSS fisheries with additional detail in Tables 3.47 and 3.48 (summarized in Figure 2.14), 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). Since the 2011/12 BBR fishery, the fishery has been completed with all TAC landed between October 15 and November 12. The BSS season is more variable, given the late-season sea ice conditions that intermittently limit access to northern fishing grounds until April-May. As indicated in Figure 2.14) 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

[24]Note that trip-based metrics in 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.

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% of A-type IFQ remained to be landed as of the 28th week of the 35-week 2011/12 season, compared to 63% 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. The 2015/16 BSS season was completed earlier than recent years, with 100% IFQ-A quota landed by the 28th week of the season, and the remaining 13% of un-matched quota landed by the 30th week.

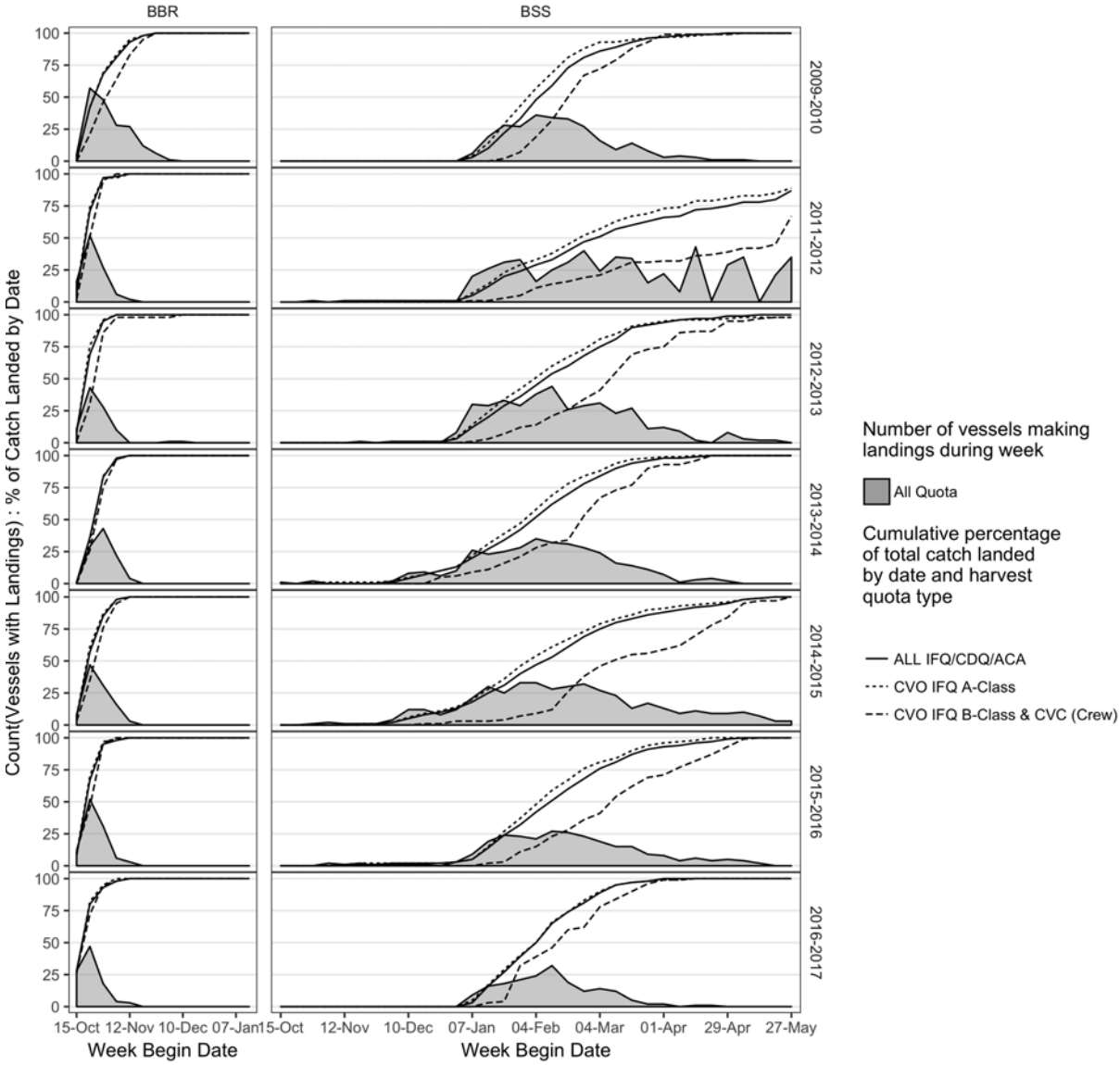
Finally, summary statistics for harvesting sector operating effort, measured as pot lifts per vessel are provided in Table 3.49 for all CR fishery seasons from 1998 to current, and BSS fisheries with derived productivity per-unit-effort metrics calculated as retained catch- and revenue-per pot lift. Statistics reported include total (aggregated over all vessels) and mean (sd) for pot lifts, 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 pot lifts are estimated at 38 thousand for 2013/14, the lowest number on record in the available time series; 58.5 thousand pot lifts during the most recent season were near the historical low. Pot lifts 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 2015/16, 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 pot lift during the pre-rationalization period (nominal dollars), compared to $699 - $1,920 subsequently. In the BSS fishery, total pot lifts 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 pot lifts per vessel averaging 1,300 over the period. Following rationalization, total pot lifts 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% 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% 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 pot lift 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 1991-2016 in Table 3.50 and depicted graphically in Figure 2.15. 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 750 metric tons (t) in 2015, and in value terms between $88.6 million in 2010 to a low of $17 million in 2015. 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 varing between 9.4 and 12.3 thousand t during the most recent years. 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, at $322 million in net imports of 29thousand t; in 2016, the snsow crab trade deficit reached a peak of $551 million and 43 thousand t.

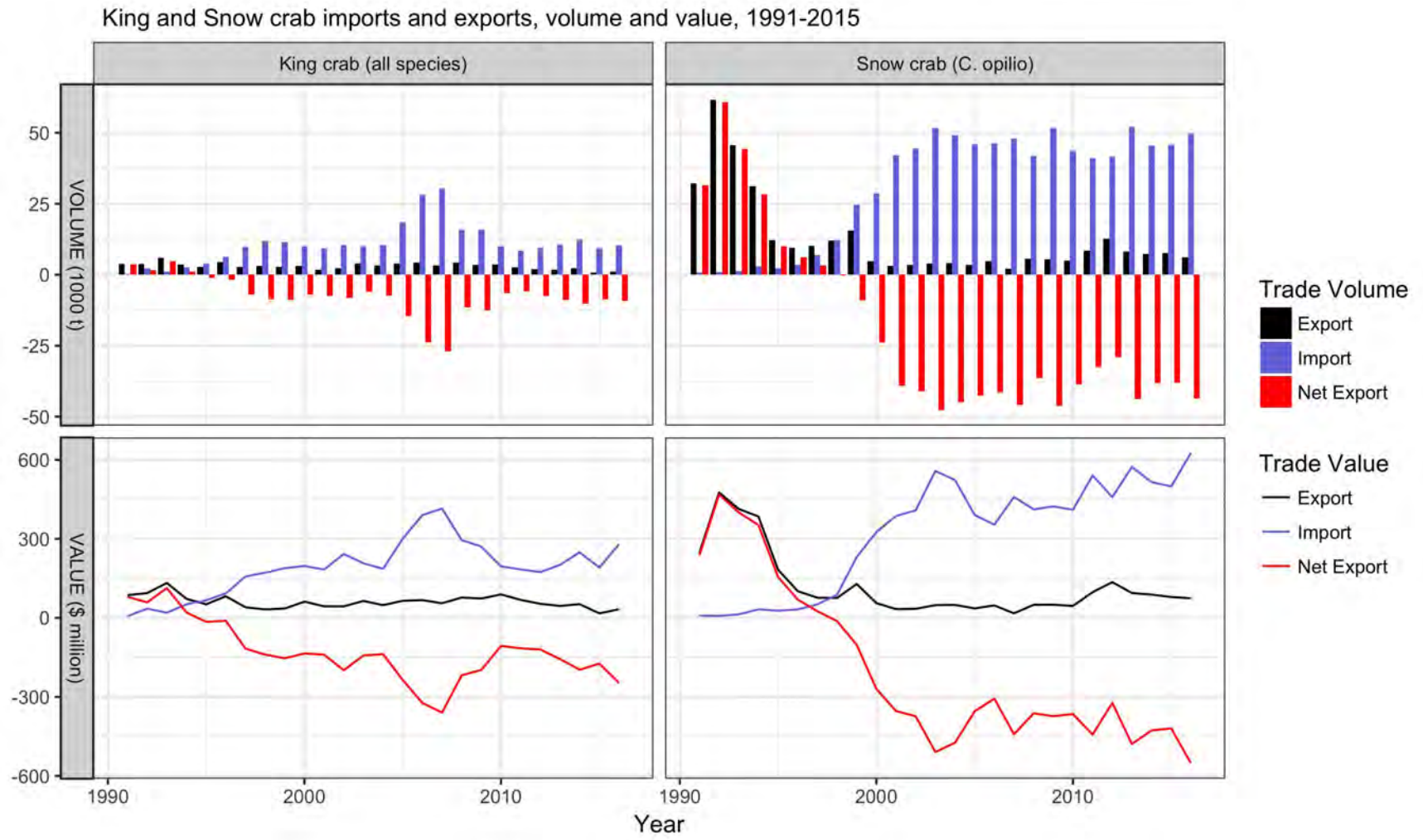
Figure 2.14: Crab Vessel Landing Activity and Cumulative Catch, by Quota Share Class and Week of Season: Bristol Bay Red King and Bering Sea Snow Crab



Source: ADF&G fish tickets via eLandings; NMFS RAM Division, IFQ accounting database. Tabular data available in Tables 3.47 and 3.48.

In the figure above, the plotted lines show cumulative percentage of fishing quota expended on landings over the course of the season, by quota type: ALL IFQ/CDQ/ACA includes all IFQ and CDQ programs quota landed by catcher vessels and catcher/processors; IFQ A-Class includes CVO A Class IFQ quota permits only; CVO IFQ B-Class & CVC (Crew) includes CVO B Class IFQ and CVC (crew) IFQ. The filled area in the graph indicates the count of vessels making landings each week. CDQ landings are not shown separately due to confidentiality restrictions. The vertical axis indicates count of vessels and percentage of quota share, both on a scale of 0-100, and the horizontal axis shows the end date of each week of the Bristol Bay red king (BBR) and Bering Seas snow (BSS) crab fishing season. 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 2.15: 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 3.50. Revenues are inflation-adjusted to 2015 equivalent dollars using the GDP index. Imports and exports shown are for TSUSA product codes 306144010 (frozen king crab) and 306144020 (frozen snow crab).

REFERENCES

Abbott, Joshua K.; Brian Garber-Yonts and James E. Wilen. 2010. "Employment and Remuneration Effects of IFQs in the Bering Sea/Aleutian Islands Crab Fisheries." Marine Resource Economics, 25(4), 333-54.

Alaska Department of Fish & Game. *Commercial Operators Annual Report data.* Accessed via Pacific States Marine Fisheries Commission, Alaska Fisheries Information Network database. Metadata available at `http://www.akfin.org/images/stories/Userguide_COMPREHENSIVE_ENCOAR-2-1.doc`.

Alaska Department of Fish & Game. *Fish ticket data.* Accessed via Pacific States Marine Fisheries Commission, Alaska Fisheries Information Network database. Metadata available at `http://www.akfin.org/images/stories/UserGuide_Comprehensive_FT2.1.doc`.

Alaska Department of Fish & Game. *Total allowable catch and crab seasons.* Accessed at `http://www.fakr.noaa.gov/sustainablefisheries/crab/crfaq.htm#tac`.

Alaska Fisheries Science Center. 2016. *Wholesale market profiles for alaska groundfish and crab fisheries.* Technical report, Alaska Fisheries Science Center, NOAA, National Marine Fisheries Service, 7600 Sand Point Way NE, Seattle WA 98115. 134p. Accessed May, 2017 at `https://www.afsc.noaa.gov/News/pdfs/Wholesale_Market_Profiles_for_Alaskan_Groundfish_and_Crab_Fisheries.pdf`.

Bowers, F.R., M. Schwenzfeier, K. Herring, M. Salmon, J. Shaishnikoff, H. Fitch, J. Alas and B. Baechler. 2011. *Annual Management Report for the Commercial and Subsistence Shellfish Fisheries of the Aleutian Islands, Bering Sea and the Westward Region's Shellfish Observer Program, 2009/10.* Alaska Department of Fish and Game, Fishery Management Report No. 11-05, Anchorage. Accessed December 2011 at `http://www.sf.adfg.state.ak.us/FedAidPDFs/fmr08-73.pdf`.

Menard, J., J. Soong, and S. Kent. 2011. *2009 Annual Management Report Norton Sound, Port Clarence, and Kotzebue.* Alaska Department of Fish & Game, Fishery Management Report, No. 11-46, Anchorage. Accessed December 2011 at `http://www.adfg.alaska.gov/FedAidPDFs/FMR11-46.pdf`.

National Marine Fisheries Service. 2004. *Final Environmental Impact Statement for Bering Sea and Aleutian Islands Crab Fisheries.* NMFS Alaska Region, Juneau, Alaska. August 2004. Accessed December 2011 at `http://www.alaskafisheries.noaa.gov/sustainablefisheries/crab/eis/default.htm`.

National Marine Fisheries Service (NMFS). 2016. *Fisheries of the United States – 2015.* NMFS Office of Science and Technology: Silver Spring, MD. September, 2016. `http://www.st.nmfs.noaa.gov/Assets/commercial/fus/fus15/FUS2015.pdf`

NOAA Fisheries, Alaska Fisheries Science Center, 2011. *BSAI crab economic data.* Accessed via Pacific States Marine Fisheries Commission, Alaska Fisheries Information Network database. Metadata available at `http://www.afsc.noaa.gov/REFM/Socioeconomics/Metadata/crabEDR_metadata_080811.xls`.

NOAA Fisheries, Alaska Fisheries Science Center, 2011. *BSAI Crab EDR Database: Data Quality Summary.* Accessed December 2011 at http://www.afsc.noaa.gov/REFM/Socioeconomics/PDFs/EDR_data%20_quality_summary.pdf.

NOAA Fisheries, Alaska Region, Restricted Access Management. *BSAI crab rationalization IFQ landings data.* Accessed via Pacific States Marine Fisheries Commission, Alaska Fisheries Information Network database.

NOAA Fisheries, Alaska Region, Restricted Access Management. *BSAI crab rationalization permits and quota share holder files.* Accessed at http://www.fakr.noaa.gov/sustainablefisheries/crab/rat/ram/permits.htm.

NOAA Fisheries, Alaska Region, Restricted Access Management. 2009. *Bering Sea and Aleutian Islands Crab Rationalization Program Report, 2008/2009.* Available at http://www.fakr.noaa.gov/sustainablefisheries/crab/rat/ram/0809crabrpt.pdf.

NOAA Fisheries, Office of Science and Technology. 2012. *Fisheries of the United States (FUS) 2011.*Available at http://www.st.nmfs.noaa.gov/commercial-fisheries/fus/fus11/index.

North Pacific Fisheries Management Council. 2017. *Ten-Year Program Review for the Crab Rationalization Management Program in the Bering Sea/ Aleutian Islands (Final Draft).* North Pacific Fisheries Management Council. Anchorage, Alaska. January, 2017. Available at http://http://www.npfmc.org/wp-content/PDFdocuments/catch_shares/Crab/Crab10yrReview_Final2017.pdf

North Pacific Fisheries Management Council. 2012. *News and Notes (newsletter), October 2012.* Available at http://www.fakr.noaa.gov/npfmc/PDFdocuments/newsletters/news1012.pdf.

North Pacific Fisheries Management Council. 2011. *Fishery Management Plan for Bering Sea/Aleutian Islands King and Tanner Crabs.* North Pacific Fisheries Management Council. Anchorage, Alaska. October, 2011. Available at http://www.fakr.noaa.gov/npfmc/PDFdocuments/fmp/CrabFMPOct11.pdf.

North Pacific Fisheries Management Council. 2008. *Three-Year Review of the Crab Rationalization Management Program for Bering Sea and Aleutian Islands Crab Fisheries.* Available at http://www.fakr.noaa.gov/npfmc/current_issues/crab/BSAIcrab3year908.pdf.

Pacific States Marine Fisheries Commission. *EFIN monthly marine fuel price data.* Accessed at http://www.psmfc.org/efin/data/fuel.html#Data.

U.S. Bureau of Economic Analysis (BEA). *Gross Domestic Product: Chain-type Price Index (GDPCTPI)*, retrieved from FRED, Federal Reserve Bank of St. Louis; https://fred.stlouisfed.org/series/GDPCTPI, January 8, 2017.

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

Table 3.1: 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%
	15/16	2.98	0.33	3.31	*	100%
	16/17	2.98	0.33	3.31	*	100%
	17/18	2.98	0.33	3.31	-	-
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	*	*
	15/16	2.68	0.30	2.98	*	*
	16/17	2.01	0.22	2.24	*	*
	17/18	2.01	0.22	2.24	-	-

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Table 3.1: 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
	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%
BBR	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%
	15/16	8.98	1.00	9.97	100%	100%
	16/17	7.62	0.85	8.47	100%	100%
	17/18	5.94	0.66	6.60	-	-
	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%
BSS	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%
	15/16	36.55	4.06	40.61	100%	100%
	16/17	19.41	2.16	21.57	100%	100%
	17/18	17.06	1.90	18.96	-	-
BST	05/06	1.46	0.16	1.62	54%	100%
	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%
EBT	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%
	15/16	10.14	1.13	11.27	100%	100%
	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%	1%
WBT	13/14	1.48	0.16	1.65	81%	73%
	14/15	5.96	0.66	6.63	78%	93%
	15/16	7.56	0.84	8.40	100%	100%
	17/18	2.25	0.25	2.50	-	-

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Table 3.1: 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
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	*	*
	15/16	0.37	0.04	0.41	*	0%
NSR	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%
	2015	0.36	0.03	0.39	102%	100%
	2016	0.48	0.04	0.52	96%	100%
	2017	0.46	0.04	0.50	98%	100%
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	*	-
	2015	0.13	-	0.13	0%	-
	2016	0.13	-	0.13	0%	-
	2017	0.13	-	0.13	*	-

Notes: Adak Community Allocation (ACA) applies to Western Aleutian Islands golden king crab fishery only. Values shown for the Norton Sound Red king crab fishery for 2005 through 2015 are for the summer commercial fishery only; prior to 2016, the winter commercial fishery was not managed with a GHL or TAC. 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.

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 3.2: BSAI Crab Fishery Participation by Calendar Year

	Active	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
EAG	CFEC permits	15	15	16	19	20	18	19	9	12	7	8	9	8	9	9	8	8	7	8
	Vessels	14	15	15	19	19	18	19	6	6	4	4	3	3	3	3	3	3	3	3
	Buyers/processors	7	7	4	4	4	4	4	4	6	5	6	6	7	10	11	10	8	7	9
WAG	CFEC permits	13	15	22	20	13	8	8	7	7	6	6	4	7	6	6	7	3	5	7
	Vessels	8	12	15	13	8	7	6	4	3	4	3	2	3	3	4	4	2	2	3
	Buyers/processors	6	5	7	7	6	5	4	5	3	4	5	6	5	9	9	8	9	8	8
BBR	CFEC permits	281	266	255	240	253	264	268	115	100	85	98	86	79	71	74	73	72	71	70
	Vessels	274	256	244	230	241	250	251	89	81	73	79	70	65	62	64	63	63	64	63
	Buyers/processors	28	24	22	23	24	26	25	16	15	18	17	16	17	18	17	17	17	15	17
BSS	CFEC permits	276	298	244	219	205	202	200	178	106	89	108	103	87	88	109	92	92	94	86
	Vessels	230	241	231	207	191	190	189	167	78	68	78	77	68	68	72	71	70	70	68
	Buyers/processors	44	37	28	23	26	21	23	20	13	18	17	18	13	16	16	15	13	14	12
EBT	CFEC permits	-	-	-	-	-	-	-	-	22	32	27	21	5	-	-	22	44	51	34
	Vessels	-	-	-	-	-	-	-	-	21	23	19	15	4	-	-	19	33	41	25
	Buyers/processors	-	-	-	-	-	-	-	-	6	9	10	11	7	-	-	12	12	11	11
WBT	CFEC permits	-	-	-	-	-	-	-	5	41	22	18	9	-	-	-	4	26	51	39
	Vessels	-	-	-	-	-	-	-	4	32	18	18	9	-	-	-	3	22	38	31
	Buyers/processors	-	-	-	-	-	-	-	5	9	8	8	7	-	-	-	3	13	13	10
SMB	CFEC permits	136	-	-	-	-	-	-	-	-	-	-	7	14	23	22	-	5	3	-
	Vessels	131	-	-	-	-	-	-	-	-	-	-	7	11	18	17	-	4	3	-
	Buyers/processors	16	-	-	-	-	-	-	-	-	-	-	6	9	11	11	-	6	4	-

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Table 3.2: Continued

	Active	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
PIK	CFEC permits	58	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Vessels	58	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Buyers/processors	17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WAI	CFEC permits	1	0	-	-	33	30	0	-	-	-	-	-	-	-	-	-	-	-	-
	Vessels	1	0	-	-	33	30	0	-	-	-	-	-	-	-	-	-	-	-	-
	Buyers/processors	1	0	-	-	9	10	0	-	-	-	-	-	-	-	-	-	-	-	-
NSR	CFEC permits	16	13	29	36	54	53	41	44	41	42	34	29	37	38	64	52	65	72	75
	Vessels	8	10	15	29	32	25	26	30	26	28	22	23	23	24	29	33	33	36	36
	Buyers/processors	2	2	7	4	4	4	2	3	2	4	2	3	3	2	3	5	4	3	2
PIG	CFEC permits	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	-	-
	Buyers/processors	3	2	4	3	3	2	2	2	-	-	-	-	2	1	1	1	1	-	-
	CFEC permits	790	607	562	529	576	570	538	355	272	232	262	242	232	235	284	238	256	270	263
	Vessels	294	293	277	280	280	278	281	212	128	114	116	112	102	102	113	115	109	117	118
	Buyers/processors	54	43	39	36	37	37	34	30	20	27	23	27	24	27	26	29	25	22	21

Notes: Data shown by calendar year. Cells displaying '-' indicate fishery closure years. CFEC permits 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.

[a] 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.

[b] Count of buyers/processors for Norton Sound red king crab excludes catcher seller operations.

[c] 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 3.3: 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
	2005/06	7	6	1
	2006/07	6	5	1
	2007/08	4	3	1
	2008/09	3	3	0
	2009/10	3	3	0
	2010/11	3	3	0
	2011/12	3	3	0
	2012/13	3	3	1
	2013/14	3	3	1
	2014/15	3	3	0
	2015/16	3	3	0
	2016/17	4	4	0
WAG	1998/99	3	2	1
	1999/00	15	14	1
	2000/01	12	11	1
	2001/02	9	8	1
	2002/03	6	5	1
	2003/04	6	5	1
	2004/05	6	5	1
	2005/06	3	2	1
	2006/07	4	3	1
	2007/08	3	2	1
	2008/09	3	2	1
	2009/10	3	2	1
	2010/11	3	2	1
	2011/12	3	2	1
	2012/13	4	3	1
	2013/14	3	3	0
	2014/15	2	2	0
	2015/16	2	2	0
	2016/17	3	3	0

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Table 3.3: Continued

	Season	Total vessels	Catcher vessels	Catcher/processors
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
	2005/06	89	86	4
	2006/07	81	79	3
	2007/08	74	72	3
	2008/09	78	76	3
	2009/10	70	69	2
	2010/11	65	64	2
	2011/12	62	61	2
	2012/13	64	63	2
	2013/14	63	62	2
	2014/15	63	62	2
	2015/16	64	63	2
	2016/17	63	62	2
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
	2005/06	78	74	4
	2006/07	69	65	4
	2007/08	78	74	4
	2008/09	77	73	4
	2009/10	68	66	2
	2010/11	68	67	2
	2011/12	72	70	2
	2012/13	70	68	2
	2013/14	70	68	2
	2014/15	70	68	2
	2015/16	70	69	2
	2016/17	63	61	2

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Table 3.3: Continued

	Season	Total vessels	Catcher vessels	Catcher/processors
EBT	2006/07	35	33	2
	2007/08	20	19	1
	2008/09	17	16	1
	2009/10	13	12	1
	2013/14	20	19	1
	2014/15	37	36	1
	2015/16	47	46	1
WBT	2005/06	33	31	2
	2006/07	20	18	2
	2007/08	19	18	1
	2008/09	9	9	0
	2013/14	19	18	1
	2014/15	34	33	1
	2015/16	37	36	1
PIK	1998	58	58	0
SMB	1998	131	129	2
	2009/10	7	7	0
	2010/11	11	11	0
	2011/12	18	18	0
	2012/13	17	17	0
	2014/15	4	4	0
	2015/16	3	3	0
WAI	1998/99	1	0	1
	2002/03	33	31	2
	2003/04	30	28	2

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Table 3.3: Continued

	Season	Total vessels	Catcher vessels	Catcher/processors
All CR Fisheries	1998	285	274	12
	1999	283	274	11
	2000	261	254	11
	2001	249	243	11
	2002	245	237	10
	2003	250	242	8
	2004	253	245	8
	2005	167	161	6
	2005/06	101	97	5
	2006/07	91	87	5
	2007/08	87	83	5
	2008/09	89	85	5
	2009/10	78	76	3
	2010/11	77	75	3
	2011/12	78	76	3
	2012/13	81	79	4
	2013/14	75	74	3
	2014/15	78	77	2
	2015/16	80	79	2
	2016/17	72	71	2
NSR	1998	9	8	2
	1999	11	7	4
	2000	16	15	2
	2001	30	30	7
	2002	33	33	0
	2003	26	26	2
	2004	27	27	2
	2005	31	31	1
	2006	27	27	2
	2007	29	29	1
	2008	23	22	3
	2009	24	24	3
	2010	24	24	3
	2011	25	25	3
	2012	30	30	3
	2013	34	34	4
	2014	34	34	4
	2015	37	37	2
	2016	37	37	1

Notes: Data shown for all FMP crab fisheries by season; 'All CR Fisheries' shows counts of distinct vessels participating in one or more of the FMP fisheries that were rationalized beginning in 2005 (i.e., excluding NSR and PIG fisheries).
Vessel counts shown for the Norton Sound Red king (NSR) crab fishery for 1998 through 2015 include only vessels participating in the summer commercial fishery; 2016 and later counts include vessels in both summer and/or winter commercial fisheries [a] 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 and eLandings.

Table 3.4: 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	5.24	$14.17	$2.70	$2.74(0.19)
	1999	4.89	$20.71	$4.24	-
	2000	5.76	$26.06	$4.53	-
	2001	6.36	$28.08	$4.41	$4.46(0.49)
	2002	5.54	$24.55	$4.43	-
	2003	5.82	$26.33	$4.52	-
	2004	6.02	$24.40	$4.05	$4.05(0.10)
	2005	4.44	$14.02	$3.16	$3.13(0.27)
	2006	5.24	$11.82	$2.25	$2.41(0.39)
	2007	5.44	$13.64	$2.51	$2.53(0.34)
	2008	5.73	$20.94	$3.66	*
	2009	5.51	$15.12	$2.74	*
	2010	6.09	$25.33	$4.16	*
	2011	6.00	$29.72	$4.96	*
	2012	5.92	$24.28	$4.10	$4.05(0.36)
	2013	5.94	$25.06	$4.22	$4.20(0.37)
	2014	6.07	$25.16	$4.14	$4.28
	2015	5.80	$25.39	$4.38	$4.53
	2016	5.60	$30.13	$5.38	$5.72
BBR	1998	14.70	$54.96	$3.74	$3.77(0.69)
	1999	11.53	$98.67	$8.56	-
	2000	8.07	$51.05	$6.32	-
	2001	8.30	$52.87	$6.37	$6.38(0.53)
	2002	9.48	$75.76	$7.99	-
	2003	15.39	$99.38	$6.46	-
	2004	15.02	$87.59	$5.83	$5.86(0.29)
	2005	18.14	$98.45	$5.43	$5.39(0.16)
	2006	15.55	$69.75	$4.49	$4.51(0.21)
	2007	20.17	$102.36	$5.08	$5.15(0.61)
	2008	20.13	$117.01	$5.81	$5.76(0.32)
	2009	15.78	$81.72	$5.18	$5.22(0.19)
	2010	14.73	$119.35	$8.10	$8.16(0.70)
	2011	7.79	$87.15	$11.19	$11.27(1.50)
	2012	7.80	$65.90	$8.44	$8.52(0.42)
	2013	8.52	$63.33	$7.43	$7.55(0.52)
	2014	9.87	$66.93	$6.78	$6.87(0.61)
	2015	9.77	$79.05	$8.09	$8.19(0.36)
	2016	8.41	$89.66	$10.67	$10.94(0.87)

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Table 3.4: Continued

	Year	Sold weight (million lbs)	Ex-vessel value ($million)	Weighted average, price ($/lb)	Mean(sd), price ($/lb)
BSS	1998	249.05	$198.35	$0.80	$0.80(0.05)
	1999	192.41	$258.35	$1.34	-
	2000	32.81	$80.97	$2.47	-
	2001	24.78	$50.67	$2.05	$2.05(0.12)
	2002	31.94	$56.82	$1.78	-
	2003	27.51	$63.88	$2.32	-
	2004	23.69	$59.96	$2.53	$2.54(0.10)
	2005	24.86	$51.17	$2.06	$2.17(0.21)
	2006	38.02	$49.70	$1.31	$1.32(0.17)
	2007	34.76	$68.05	$1.96	$1.95(0.23)
	2008	62.23	$119.27	$1.92	$2.01(0.50)
	2009	57.68	$93.02	$1.61	$1.63(0.24)
	2010	47.84	$67.53	$1.41	$1.42(0.21)
	2011	54.05	$148.22	$2.74	$2.76(0.35)
	2012	88.23	$203.21	$2.30	$2.34(0.24)
	2013	70.69	$170.83	$2.42	$2.48(0.11)
	2014	55.22	$134.47	$2.44	$2.56(0.43)
	2015	60.91	$125.35	$2.06	$2.07(0.13)
	2016	39.57	$107.97	$2.73	$2.82(0.71)
BST	2005	0.26	*	*	*
	2006	0.99	$1.79	$1.80	$1.72(0.41)
	2007	2.25	$4.64	$2.06	$2.05(0.67)
	2008	2.33	$4.92	$2.11	$2.08(0.26)
	2009	2.14	$4.61	$2.16	$2.13(0.19)
	2010	0.37	*	*	*
	2013	1.25	$3.21	$2.57	$2.57(0.71)
	2014	9.09	$22.20	$2.44	$2.51(0.33)
	2015	14.98	$39.19	$2.62	$2.70(0.41)
	2016	10.45	$31.56	$3.02	$2.99(0.19)
PIK	1998	1.03	$3.43	$3.33	$3.40(0.54)
SMB	1998	2.95	$7.82	$2.65	$2.68(0.21)
	2009	0.45	$1.46	$3.25	$3.30(0.28)
	2010	1.25	$6.67	$5.32	$5.41(0.28)
	2011	1.85	$10.48	$5.66	$6.05(0.64)
	2012	1.59	$7.11	$4.46	$4.48(0.27)
	2014	0.30	*	*	*
	2015	*	*	*	*
WAI	1998	*	*	*	*
	2002	0.50	$4.00	$7.96	-
	2003	0.48	$3.07	$6.45	-

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Table 3.4: Continued

	Year	Sold weight (million lbs)	Ex-vessel value ($million)	Weighted average, price ($/lb)	Mean(sd), price ($/lb)
NSR	1998	0.03	$0.06	$2.23	-
	1999	0.03	$0.13	$4.43	-
	2000	0.32	$1.33	$4.15	-
	2001	0.28	$1.40	$5.05	-
	2002	0.26	$2.01	$7.77	-
	2003	0.28	$1.40	$4.97	-
	2004	0.33	$1.27	$3.79	-
	2005	0.40	$1.64	$4.11	-
	2006	0.44	$1.31	$2.96	-
	2007	0.32	$1.02	$3.24	-
	2008	0.40	$1.59	$3.97	-
	2009	0.40	$1.39	$3.51	-
	2010	0.42	$1.71	$4.06	-
	2011	0.40	$2.23	$5.53	-
	2012	0.50	$2.85	$5.73	-
	2013	0.44	$2.64	$5.95	-
	2014	0.42	$2.23	$5.35	-
	2015	0.49	$2.78	$5.70	-
	2016	0.49	$3.28	$6.63	-
PIG	1998	*	*	*	-
	1999	*	*	*	-
	2000	0.12	$0.57	$4.65	-
	2001	*	*	*	-
	2002	*	*	*	-
	2003	*	*	*	-
	2004	*	*	*	-
	2005	*	*	*	-
	2010	*	*	*	-
	2011	*	*	*	-
	2012	*	*	*	-
	2013	*	*	*	-
	2014	*	*	*	-

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 2005-2014 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.
[a] Landings and ex-vessel revenue suppressed in years where CDQ fishery landings are confidential.
[b] Excludes landings in Petrel Bank test fishery in 2001.
[c] 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 (COAR) data, NMFS AFSC BSAI Crab Economic Data Report (EDR) database.

Table 3.5: 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	98/01/04	AK	3(2)	-	-	*	*
		WA	43(18)	-	-	$3.78	$3.86(0.81)
		Other	6(2)	-	-	*	*
	2005	WA	8	80%	80%	$3.18	$3.09(0.24)
		Other	2	*	*	*	*
	2006	WA	5	80%	80%	$2.25	$2.35(0.20)
		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	1	*	*	*	*
		WA	4	*	*	*	*
		Other	1	*	*	*	*
	2013	AK	1	*	*	*	*
		WA	4	*	*	*	*
		Other	1	*	*	*	*
	2014	WA	4	*	*	*	*
		Other	1	*	*	*	*
	2015	WA	4	*	*	*	*
		Other	1	*	*	*	*
	2016	WA	4	*	*	*	*
		Other	1	*	*	*	*

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Table 3.5: Continued

		State	Vessels	Share of ex-vessel volume	Share of ex-vessel revenue	Weighted average price ($/lb)	Mean(sd) price ($/lb)
BSS	98/01/04	AK	100(41)	-	-	$1.06	$1.78(0.76)
		WA	354(143)	-	-	$1.06	$1.80(0.74)
		Other	70(30)	-	-	$1.06	$1.77(0.74)
	2005	AK	29	16%	17%	$2.19	$2.19(0.04)
		WA	103	73%	71%	$2.01	$2.16(0.25)
		Other	18	11%	12%	$2.20	$2.21(0.10)
	2006	AK	17	20%	20%	$1.28	$1.30(0.08)
		WA	48	67%	67%	$1.31	$1.32(0.19)
		Other	9	13%	13%	$1.33	$1.33(0.16)
	2007	AK	14	23%	23%	$1.93	$1.95(0.21)
		WA	43	66%	66%	$1.97	$1.95(0.25)
		Other	7	11%	11%	$1.94	$1.88(0.15)
	2008	AK	15	22%	21%	$1.87	$1.90(0.29)
		WA	50	66%	69%	$1.98	$2.06(0.54)
		Other	9	12%	11%	$1.67	$1.87(0.46)
	2009	AK	19	32%	33%	$1.64	$1.68(0.35)
		WA	45	59%	59%	$1.61	$1.61(0.17)
		Other	9	9%	9%	$1.56	$1.59(0.23)
	2010	AK	14	23%	23%	$1.42	$1.43(0.08)
		WA	40	65%	65%	$1.42	$1.42(0.26)
		Other	12	11%	11%	$1.38	$1.39(0.11)
	2011	AK	15	24%	24%	$2.74	$2.79(0.17)
		WA	40	62%	63%	$2.75	$2.74(0.42)
		Other	11	14%	13%	$2.72	$2.81(0.21)
	2012	AK	21	29%	29%	$2.27	$2.30(0.36)
		WA	44	62%	62%	$2.32	$2.37(0.16)
		Other	6	9%	9%	$2.27	$2.35(0.16)
	2013	AK	22	30%	30%	$2.41	$2.49(0.11)
		WA	41	62%	62%	$2.42	$2.48(0.11)
		Other	6	8%	8%	$2.41	$2.48(0.09)
	2014	AK	22	31%	32%	$2.50	$2.59(0.32)
		WA	39	60%	60%	$2.41	$2.52(0.31)
		Other	7	9%	9%	$2.36	$2.80(1.11)
	2015	AK	22	34%	34%	$2.05	$2.06(0.12)
		WA	39	58%	58%	$2.05	$2.08(0.08)
		Other	7	8%	9%	$2.13	$2.03(0.36)
	2016	AK	21	31%	31%	$2.74	$2.93(1.20)
		WA	39	63%	63%	$2.72	$2.76(0.14)
		Other	5	6%	6%	$2.71	$2.76(0.09)

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Table 3.5: Continued

		State	Vessels	Share of ex-vessel volume	Share of ex-vessel revenue	Weighted average price ($/lb)	Mean(sd) price ($/lb)
BBR	98/01/04	AK	122(49)	-	-	$5.29	$5.32(1.24)
		WA	429(174)	-	-	$5.20	$5.34(1.24)
		Other	82(33)	-	-	$5.10	$5.39(1.18)
	2005	AK	19	16%	16%	$5.39	$5.35(0.19)
		WA	53	69%	70%	$5.44	$5.41(0.14)
		Other	13	14%	14%	$5.43	$5.38(0.20)
	2006	AK	24	24%	23%	$4.46	$4.48(0.23)
		WA	48	66%	67%	$4.50	$4.53(0.21)
		Other	8	10%	10%	$4.44	$4.44(0.20)
	2007	AK	17	22%	23%	$5.10	$5.17(1.12)
		WA	44	67%	68%	$5.07	$5.14(0.39)
		Other	9	10%	10%	$4.91	$5.12(0.23)
	2008	AK	17	20%	20%	$5.99	$5.85(0.58)
		WA	51	71%	71%	$5.77	$5.73(0.20)
		Other	8	9%	9%	$5.81	$5.75(0.13)
	2009	AK	19	28%	28%	$5.14	$5.19(0.15)
		WA	40	62%	62%	$5.20	$5.24(0.15)
		Other	9	10%	10%	$5.13	$5.21(0.34)
	2010	AK	12	25%	24%	$7.97	$8.02(0.77)
		WA	38	62%	63%	$8.20	$8.30(0.65)
		Other	13	14%	13%	$7.88	$7.90(0.70)
	2011	AK	12	23%	22%	$10.64	$10.57(1.15)
		WA	36	60%	61%	$11.48	$10.97(1.52)
		Other	11	17%	17%	$10.94	$9.86(2.32)
	2012	AK	18	32%	33%	$8.53	$8.57(0.45)
		WA	39	61%	61%	$8.42	$8.50(0.39)
		Other	6	7%	7%	$8.19	$8.37(0.66)
	2013	AK	19	37%	37%	$7.42	$7.46(0.36)
		WA	35	55%	55%	$7.46	$7.66(0.60)
		Other	7	9%	8%	$7.34	$7.26(0.40)
	2014	AK	18	34%	32%	$6.51	$6.80(0.48)
		WA	35	58%	59%	$6.93	$6.93(0.59)
		Other	7	8%	9%	$6.86	$6.75(1.09)
	2015	AK	19	35%	35%	$8.15	$8.19(0.37)
		WA	36	57%	56%	$8.04	$8.19(0.37)
		Other	7	8%	9%	$8.13	$8.22(0.35)
	2016	AK	18	36%	35%	$10.31	$10.82(1.48)
		WA	36	56%	57%	$10.88	$11.01(0.24)
		Other	7	8%	8%	$10.77	$10.86(0.32)

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Table 3.5: 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%	$1.85	$1.70(0.30)
		WA	30	81%	81%	$1.80	$1.76(0.43)
		Other	5	7%	7%	$1.73	$1.43(0.23)
	2007	AK	7	26%	25%	$1.99	$1.98(0.28)
		WA	17	55%	57%	$2.17	$2.07(0.80)
		Other	3	*	*	*	*
	2008	AK	6	5%	4%	$1.86	$1.73(0.48)
		WA	19	61%	61%	$2.10	$2.12(0.17)
		Other	4	*	*	*	*
	2009	AK	5	17%	17%	$2.17	$2.15(0.12)
		WA	10	43%	41%	$2.06	$2.10(0.21)
		Other	2	*	*	*	*
	2010	AK	1	*	*	*	*
		WA	1	*	*	*	*
		Other	2	*	*	*	*
	2013	AK	7	29%	24%	$2.11	$2.20(0.99)
		WA	9	45%	47%	$2.67	$2.67(0.38)
		Other	3	*	*	*	*
	2014	AK	12	20%	20%	$2.48	$2.53(0.29)
		WA	20	55%	53%	$2.39	$2.45(0.34)
		Other	6	25%	26%	$2.51	$2.63(0.36)
	2015	AK	15	27%	27%	$2.66	$2.71(0.39)
		WA	31	53%	54%	$2.66	$2.75(0.42)
		Other	7	20%	19%	$2.45	$2.40(0.24)
	2016	AK	10	24%	24%	$2.99	$3.03(0.11)
		WA	26	53%	55%	$3.12	$2.98(0.18)
		Other	6	23%	21%	$2.83	$2.92(0.35)

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Table 3.5: 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)	-	-	$3.39	$3.57(0.75)
		WA	28(28)	-	-	$3.62	$3.47(0.67)
		Other	5(5)	-	-	$3.23	$3.25(0.06)
SMB	98/01/04	AK	20(20)	-	-	$2.62	$2.63(0.08)
		WA	61(61)	-	-	$2.67	$2.71(0.24)
		Other	14(14)	-	-	$2.63	$2.64(0.10)
	2009	AK	1	*	*	*	*
		WA	5	71%	72%	$3.31	$3.35(0.30)
		Other	1	*	*	*	*
	2010	AK	3	*	*	*	*
		WA	5	47%	49%	$5.53	$5.52(0.07)
		Other	2	*	*	*	*
	2011	AK	6	25%	26%	$5.95	$6.19(0.68)
		WA	9	50%	50%	$5.67	$6.05(0.58)
		Other	3	*	*	*	*
	2012	AK	6	30%	31%	$4.50	$4.47(0.25)
		WA	9	50%	50%	$4.39	$4.44(0.30)
		Other	2	*	*	*	*
	2014	WA	3	*	*	*	*
		Other	1	*	*	*	*
	2015	AK	1	*	*	*	*
		WA	1	*	*	*	*
		Other	1	*	*	*	*
WAI	98/01/04	WA	2(2)	-	-	*	*
		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.

[a] Landings in 2001 Petrel Bank test fishery; 1998 fishery data unavailable.

[b] 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 3.6: 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)
AIG	98/01/04	85'-99'	12(5)	0%	0%	$3.61	$3.70(0.75)
		100'-124'	16(7)	0%	0%	$4.01	$4.11(0.89)
		125' and over	24(10)	0%	0%	$3.79	$3.76(0.71)
	2005	85'-99'	1	*	*	*	*
		100'-124'	3	*	*	*	*
		125' and over	6	0.57%	0.57%	$3.16	$3.18(0.30)
	2006	100'-124'	2	*	*	*	*
		125' and over	4	*	*	*	*
	2007	100'-124'	4	*	*	*	*
		125' and over	2	*	*	*	*
	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 3.6: Continued

		Length	Vessels	Share of ex-vessel volume	Share of ex-vessel revenue	Weighted average price ($/lb)	Mean(sd) price ($/lb)
BBR	98/01/04	Under 85'	44(23)	0%	0%	$5.11	$5.29(1.18)
		85'-99'	129(59)	0%	0%	$5.28	$5.34(1.25)
		100'-124'	298(118)	0%	0%	$5.18	$5.37(1.21)
		125' and over	162(69)	0%	0%	$5.21	$5.31(1.26)
	2005	Under 85'	3	*	*	*	*
		85'-99'	12	0.11%	0.10%	$5.41	$5.36(0.17)
		100'-124'	46	0.44%	0.44%	$5.42	$5.39(0.19)
		125' and over	24	0.42%	0.42%	$5.44	$5.42(0.10)
	2006	Under 85'	3	*	*	*	*
		85'-99'	12	0.10%	0.10%	$4.48	$4.59(0.18)
		100'-124'	44	0.46%	0.46%	$4.47	$4.49(0.23)
		125' and over	21	0.41%	0.42%	$4.51	$4.52(0.19)
	2007	Under 85'	1	*	*	*	*
		85'-99'	9	0.10%	0.10%	$5.00	$4.89(1.10)
		100'-124'	40	0.49%	0.49%	$5.06	$5.17(0.48)
		125' and over	20	0.39%	0.39%	$5.08	$5.21(0.54)
	2008	Under 85'	2	*	*	*	*
		85'-99'	10	0.09%	0.10%	$6.17	$5.67(0.29)
		100'-124'	43	0.50%	0.50%	$5.81	$5.80(0.39)
		125' and over	21	0.37%	0.37%	$5.74	$5.73(0.13)
	2009	Under 85'	3	*	*	*	*
		85'-99'	9	0.11%	0.11%	$5.15	$5.16(0.21)
		100'-124'	35	0.46%	0.46%	$5.19	$5.25(0.18)
		125' and over	21	0.39%	0.39%	$5.18	$5.21(0.18)
	2010	Under 85'	1	*	*	*	*
		85'-99'	8	0.09%	0.09%	$7.87	$8.07(0.61)
		100'-124'	33	0.45%	0.45%	$8.06	$8.10(0.83)
		125' and over	21	0.44%	0.44%	$8.18	$8.28(0.50)
	2011	Under 85'	1	*	*	*	*
		85'-99'	8	0.12%	0.10%	$10.07	$10.22(0.74)
		100'-124'	29	0.39%	0.39%	$11.34	$10.67(1.62)
		125' and over	21	0.48%	0.48%	$11.32	$10.82(2.12)
	2012	Under 85'	3	*	*	*	*
		85'-99'	22	0.30%	0.29%	$8.34	$8.47(0.51)
		100'-124'	32	0.59%	0.59%	$8.52	$8.57(0.37)
		125' and over	6	0.09%	0.09%	$8.23	$8.35(0.42)
	2013	Under 85'	2	*	*	*	*
		85'-99'	21	0.26%	0.26%	$7.35	$7.51(0.44)
		100'-124'	34	0.62%	0.62%	$7.46	$7.57(0.61)
		125' and over	4	*	*	*	*
	2014	Under 85'	2	*	*	*	*
		85'-99'	21	0.29%	0.30%	$6.85	$6.84(0.76)
		100'-124'	33	0.59%	0.59%	$6.73	$6.90(0.53)
		125' and over	4	*	*	*	*

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Table 3.6: Continued

		Length	Vessels	Share of ex-vessel volume	Share of ex-vessel revenue	Weighted average price ($/lb)	Mean(sd) price ($/lb)
BSS	98/01/04	Under 85'	25(14)	0%	0%	$1.03	$1.83(0.77)
		85'-99'	103(51)	0%	0%	$1.00	$1.71(0.76)
		100'-124'	245(98)	0%	0%	$1.07	$1.80(0.73)
		125' and over	151(63)	0%	0%	$1.08	$1.83(0.75)
	2005	Under 85'	5	0.02%	0.02%	$2.18	$2.18(0.00)
		85'-99'	25	0.20%	0.15%	$1.60	$2.11(0.40)
		100'-124'	77	0.48%	0.51%	$2.18	$2.19(0.19)
		125' and over	43	0.30%	0.32%	$2.17	$2.17(0.06)
	2006	Under 85'	2	*	*	*	*
		85'-99'	8	0.08%	0.07%	$1.27	$1.30(0.41)
		100'-124'	39	0.41%	0.41%	$1.32	$1.32(0.10)
		125' and over	25	0.49%	0.49%	$1.30	$1.31(0.14)
	2007	Under 85'	2	*	*	*	*
		85'-99'	7	0.09%	0.08%	$1.90	$1.84(0.18)
		100'-124'	35	0.44%	0.43%	$1.93	$1.94(0.23)
		125' and over	20	0.45%	0.46%	$1.99	$1.98(0.25)
	2008	Under 85'	1	*	*	*	*
		85'-99'	9	0.09%	0.09%	$1.90	$2.27(1.34)
		100'-124'	43	0.51%	0.51%	$1.94	$1.98(0.19)
		125' and over	21	0.39%	0.38%	$1.89	$1.96(0.28)
	2009	Under 85'	2	*	*	*	*
		85'-99'	8	0.09%	0.09%	$1.56	$1.61(0.08)
		100'-124'	40	0.46%	0.45%	$1.59	$1.61(0.20)
		125' and over	23	0.43%	0.44%	$1.65	$1.67(0.34)
	2010	Under 85'	2	*	*	*	*
		85'-99'	9	0.08%	0.08%	$1.40	$1.43(0.08)
		100'-124'	33	0.43%	0.44%	$1.42	$1.42(0.28)
		125' and over	22	0.47%	0.47%	$1.40	$1.40(0.13)
	2011	Under 85'	1	*	*	*	*
		85'-99'	9	0.08%	0.10%	$3.34	$2.84(0.14)
		100'-124'	33	0.44%	0.43%	$2.68	$2.74(0.42)
		125' and over	23	0.46%	0.45%	$2.70	$2.76(0.30)
	2012	Under 85'	2	*	*	*	*
		85'-99'	26	0.32%	0.31%	$2.23	$2.28(0.33)
		100'-124'	36	0.54%	0.55%	$2.34	$2.39(0.13)
		125' and over	7	0.13%	0.13%	$2.32	$2.36(0.14)
	2013	Under 85'	2	*	*	*	*
		85'-99'	26	0.30%	0.30%	$2.44	$2.50(0.10)
		100'-124'	34	0.57%	0.57%	$2.41	$2.47(0.12)
		125' and over	7	0.12%	0.12%	$2.40	$2.47(0.08)
	2014	Under 85'	2	*	*	*	*
		85'-99'	25	0.28%	0.28%	$2.47	$2.51(0.34)
		100'-124'	36	0.60%	0.60%	$2.43	$2.60(0.52)
		125' and over	5	0.12%	0.11%	$2.39	$2.58(0.21)

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Table 3.6: Continued

		Length	Vessels	Share of ex-vessel volume	Share of ex-vessel revenue	Weighted average price ($/lb)	Mean(sd) price ($/lb)
BST	2005	85'-99'	1	*	*	*	*
		100'-124'	1	*	*	*	*
		125' and over	2	*	*	*	*
	2006	Under 85'	2	*	*	*	*
		85'-99'	5	0.12%	0.12%	$1.77	$1.67(0.26)
		100'-124'	22	0.70%	0.69%	$1.79	$1.67(0.26)
		125' and over	12	0.16%	0.16%	$1.81	$1.65(0.30)
	2007	Under 85'	2	*	*	*	*
		85'-99'	2	*	*	*	*
		100'-124'	16	0.52%	0.49%	$1.94	$1.96(0.32)
		125' and over	7	0.33%	0.34%	$2.11	$1.91(0.50)
	2008	Under 85'	3	*	*	*	*
		85'-99'	4	*	*	*	*
		100'-124'	17	0.60%	0.60%	$2.11	$2.06(0.24)
		125' and over	5	0.13%	0.13%	$2.06	$2.15(0.20)
	2009	Under 85'	2	*	*	*	*
		85'-99'	1	*	*	*	*
		100'-124'	11	0.77%	0.80%	$2.21	$2.19(0.19)
		125' and over	3	*	*	*	*
	2010	Under 85'	1	*	*	*	*
		100'-124'	3	*	*	*	*
	2013	85'-99'	7	0.37%	0.41%	$2.84	$2.82(0.33)
		100'-124'	11	0.56%	0.53%	$2.40	$2.41(0.84)
		125' and over	1	*	*	*	*
	2014	85'-99'	15	0.38%	0.39%	$2.51	$2.58(0.33)
		100'-124'	21	0.52%	0.51%	$2.42	$2.46(0.33)
		125' and over	2	*	*	*	*

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Table 3.6: 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%	$3.65	$3.80(0.97)
		85'-99'	12(12)	0%	0%	$3.40	$3.36(0.29)
		100'-124'	17(17)	0%	0%	$3.34	$3.33(0.40)
		125' and over	7(7)	0%	0%	$3.88	$3.60(1.02)
SMB	98/01/04	Under 85'	2(2)	0%	0%	*	*
		85'-99'	17(17)	0%	0%	$2.67	$2.69(0.27)
		100'-124'	48(48)	0%	0%	$2.63	$2.67(0.21)
		125' and over	28(28)	0%	0%	$2.68	$2.70(0.15)
	2009	100'-124'	5	0.90%	0.90%	$3.25	$3.34(0.25)
		125' and over	2	*	*	*	*
	2010	100'-124'	8	0.89%	0.88%	$5.30	$5.38(0.30)
		125' and over	2	*	*	*	*
	2011	Under 85'	1	*	*	*	*
		85'-99'	1	*	*	*	*
		100'-124'	9	0.71%	0.69%	$5.54	$5.90(0.71)
		125' and over	7	0.24%	0.26%	$5.99	$6.28(0.50)
	2012	85'-99'	5	0.36%	0.36%	$4.48	$4.52(0.19)
		100'-124'	11	0.59%	0.59%	$4.47	$4.49(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.

[a] Landings in 2001 Petrel Bank test fishery; 1998 fishery data unavailable.

[b] 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 3.7: 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)
AIG	2006	ALL	6	-	-	$2.25	$2.41(0.39)
		CVOA	6	75%	72%	$2.15	$2.21(0.16)
		CVOB/CPO/CDQ/ADAK	5	23%	27%	$2.60	$2.62(0.56)
		CVC/CPC	3	*	*	*	*
	2007	ALL	6	-	-	$2.51	$2.53(0.34)
		CVOA	5	81%	81%	$2.52	$2.55(0.32)
		CVOB/CPO/CDQ/ADAK	6	17%	16%	$2.42	$2.46(0.40)
		CVC/CPC	3	*	*	*	*
	2008	ALL	4	-	-	*	*
		CVOA	4	*	*	*	*
		CVOB/CPO/CDQ/ADAK	4	*	*	*	*
		CVC/CPC	4	*	*	*	*
	2009	ALL	4	-	-	*	*
		CVOA	4	*	*	*	*
		CVOB/CPO/CDQ/ADAK	4	*	*	*	*
		CVC/CPC	4	*	*	*	*
	2010	ALL	4	-	-	*	*
		CVOA	4	*	*	*	*
		CVOB/CPO/CDQ/ADAK	4	*	*	*	*
		CVC/CPC	4	*	*	*	*
	2011	ALL	4	-	-	*	*
		CVOA	4	*	*	*	*
		CVOB/CPO/CDQ/ADAK	4	*	*	*	*
		CVC/CPC	4	*	*	*	*
	2012	ALL	6	-	-	$4.10	$4.05(0.36)
		CVOA	4	*	*	*	*
		CVOB/CPO/CDQ/ADAK	6	36%	35%	$4.00	$4.02(0.28)
		CVC/CPC	4	*	*	*	*
	2013	ALL	6	-	-	$4.22	$4.20(0.37)
		CVOA	4	*	*	*	*
		CVOB/CPO/CDQ/ADAK	6	41%	39%	$4.00	$4.08(0.32)
		CVC/CPC	5	3%	3%	$4.17	$4.16(0.49)
	2014	ALL	5	-	-	$4.14	$4.28
		CVOA	5	69%	69%	$4.16	$4.17(0.35)
		CVOB/CPO/CDQ/ADAK	5	29%	28%	$4.09	$4.26(0.27)
		CVC/CPC	5	2%	2%	$4.43	$4.40(0.22)
	2015	ALL	5	-	-	$4.38	$4.53
		CVOA	5	60%	61%	$4.45	$4.58(0.47)
		CVOB/CPO/CDQ/ADAK	5	36%	35%	$4.24	$4.39(0.62)
		CVC/CPC	5	3%	4%	$4.48	$4.62(0.69)
	2016	ALL	5	-	-	$5.38	$5.72
		CVOA	4	*	*	*	*
		CVOB/CPO/CDQ/ADAK	5	38%	40%	$5.69	$5.88(0.67)
		CVC/CPC	4	*	*	*	*

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Table 3.7: Continued

		Type	Vessels	Share of ex-vessel volume	Share of ex-vessel revenue	Weighted average price ($/lb)	Mean(sd) price ($/lb)
BBR	2006	ALL	80	-	-	$4.49	$4.51(0.21)
		CVOA	77	77%	77%	$4.47	$4.47(0.19)
		CVOB/CPO/CDQ/ADAK	65	19%	19%	$4.54	$4.54(0.21)
		CVC/CPC	49	4%	3%	$4.44	$4.53(0.25)
	2007	ALL	70	-	-	$5.08	$5.15(0.61)
		CVOA	69	78%	78%	$5.07	$5.09(0.29)
		CVOB/CPO/CDQ/ADAK	53	19%	19%	$5.06	$5.13(0.86)
		CVC/CPC	41	3%	3%	$4.96	$5.28(0.60)
	2008	ALL	76	-	-	$5.81	$5.76(0.32)
		CVOA	73	76%	76%	$5.83	$5.75(0.44)
		CVOB/CPO/CDQ/ADAK	56	22%	22%	$5.77	$5.74(0.20)
		CVC/CPC	38	2%	2%	$5.80	$5.80(0.17)
	2009	ALL	68	-	-	$5.18	$5.22(0.19)
		CVOA	68	77%	77%	$5.16	$5.16(0.11)
		CVOB/CPO/CDQ/ADAK	53	20%	20%	$5.22	$5.26(0.21)
		CVC/CPC	39	3%	3%	$5.24	$5.28(0.22)
	2010	ALL	63	-	-	$8.10	$8.16(0.70)
		CVOA	63	76%	76%	$8.02	$8.00(0.52)
		CVOB/CPO/CDQ/ADAK	52	20%	21%	$8.41	$8.24(0.88)
		CVC/CPC	33	4%	4%	$7.99	$8.34(0.64)
	2011	ALL	59	-	-	$11.19	$11.27(1.50)
		CVOA	58	79%	78%	$11.09	$11.03(1.00)
		CVOB/CPO/CDQ/ADAK	48	19%	20%	$11.65	$10.01(2.23)
		CVC/CPC	34	2%	2%	$10.65	$9.26(2.87)
	2012	ALL	63	-	-	$8.44	$8.52(0.42)
		CVOA	61	77%	76%	$8.38	$8.37(0.43)
		CVOB/CPO/CDQ/ADAK	47	21%	21%	$8.66	$8.61(0.37)
		CVC/CPC	33	3%	3%	$8.69	$8.64(0.43)
	2013	ALL	61	-	-	$7.43	$7.55(0.52)
		CVOA	58	76%	76%	$7.36	$7.34(0.33)
		CVOB/CPO/CDQ/ADAK	51	21%	22%	$7.67	$7.72(0.68)
		CVC/CPC	30	2%	3%	$7.64	$7.68(0.36)
	2014	ALL	60	-	-	$6.78	$6.87(0.61)
		CVOA	59	75%	75%	$6.85	$6.85(0.33)
		CVOB/CPO/CDQ/ADAK	48	23%	22%	$6.55	$6.87(0.69)
		CVC/CPC	32	3%	3%	$6.88	$6.91(0.85)
	2015	ALL	62	-	-	$8.09	$8.19(0.36)
		CVOA	60	76%	75%	$8.01	$7.99(0.38)
		CVOB/CPO/CDQ/ADAK	47	21%	22%	$8.34	$8.31(0.29)
		CVC/CPC	33	3%	3%	$8.42	$8.41(0.21)
	2016	ALL	61	-	-	$10.67	$10.94(0.87)
		CVOA	59	74%	75%	$10.83	$10.82(0.15)
		CVOB/CPO/CDQ/ADAK	46	20%	21%	$11.04	$11.13(0.20)
		CVC/CPC	28	6%	4%	$7.60	$10.87(1.86)

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Table 3.7: Continued

		Type	Vessels	Share of ex-vessel volume	Share of ex-vessel revenue	Weighted average price ($/lb)	Mean(sd) price ($/lb)
BSS	2006	ALL	74	-	-	$1.31	$1.32(0.17)
		CVOA	73	80%	79%	$1.30	$1.30(0.13)
		CVOB/CPO/CDQ/ADAK	63	18%	18%	$1.32	$1.32(0.25)
		CVC/CPC	52	3%	3%	$1.34	$1.33(0.10)
	2007	ALL	64	-	-	$1.96	$1.95(0.23)
		CVOA	62	80%	80%	$1.95	$1.96(0.16)
		CVOB/CPO/CDQ/ADAK	53	17%	18%	$1.99	$1.94(0.27)
		CVC/CPC	41	3%	3%	$1.90	$1.93(0.28)
	2008	ALL	74	-	-	$1.92	$2.01(0.50)
		CVOA	73	75%	75%	$1.92	$1.90(0.22)
		CVOB/CPO/CDQ/ADAK	62	22%	22%	$1.87	$2.10(0.79)
		CVC/CPC	42	3%	3%	$2.08	$2.06(0.05)
	2009	ALL	73	-	-	$1.61	$1.63(0.24)
		CVOA	73	78%	78%	$1.61	$1.59(0.16)
		CVOB/CPO/CDQ/ADAK	59	19%	19%	$1.61	$1.61(0.22)
		CVC/CPC	40	2%	3%	$1.75	$1.72(0.34)
	2010	ALL	66	-	-	$1.41	$1.42(0.21)
		CVOA	66	73%	73%	$1.41	$1.43(0.22)
		CVOB/CPO/CDQ/ADAK	53	24%	24%	$1.42	$1.40(0.18)
		CVC/CPC	38	3%	3%	$1.31	$1.42(0.24)
	2011	ALL	66	-	-	$2.74	$2.76(0.35)
		CVOA	63	75%	74%	$2.72	$2.65(0.26)
		CVOB/CPO/CDQ/ADAK	60	23%	23%	$2.83	$2.85(0.38)
		CVC/CPC	37	2%	2%	$2.77	$2.84(0.37)
	2012	ALL	71	-	-	$2.30	$2.34(0.24)
		CVOA	68	76%	75%	$2.26	$2.27(0.11)
		CVOB/CPO/CDQ/ADAK	64	21%	22%	$2.42	$2.36(0.32)
		CVC/CPC	41	3%	4%	$2.48	$2.45(0.18)
	2013	ALL	69	-	-	$2.42	$2.48(0.11)
		CVOA	68	74%	73%	$2.38	$2.39(0.07)
		CVOB/CPO/CDQ/ADAK	58	23%	24%	$2.50	$2.53(0.10)
		CVC/CPC	38	3%	3%	$2.55	$2.55(0.06)
	2014	ALL	68	-	-	$2.44	$2.56(0.43)
		CVOA	67	74%	73%	$2.42	$2.44(0.24)
		CVOB/CPO/CDQ/ADAK	56	23%	24%	$2.46	$2.68(0.63)
		CVC/CPC	40	3%	3%	$2.61	$2.62(0.28)
	2015	ALL	68	-	-	$2.06	$2.07(0.13)
		CVOA	68	74%	74%	$2.04	$2.01(0.16)
		CVOB/CPO/CDQ/ADAK	58	23%	24%	$2.11	$2.11(0.10)
		CVC/CPC	32	2%	3%	$2.14	$2.12(0.09)
	2016	ALL	65	-	-	$2.73	$2.82(0.71)
		CVOA	65	73%	72%	$2.69	$2.68(0.13)
		CVOB/CPO/CDQ/ADAK	57	24%	25%	$2.81	$2.81(0.12)
		CVC/CPC	33	3%	3%	$3.02	$3.12(1.49)

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Table 3.7: Continued

		Type	Vessels	Share of ex-vessel volume	Share of ex-vessel revenue	Weighted average price ($/lb)	Mean(sd) price ($/lb)
BST	2006	ALL	41	-	-	$1.80	$1.72(0.41)
		CVOA	39	75%	74%	$1.78	$1.69(0.49)
		CVOB/CPO/CDQ/ADAK	14	23%	24%	$1.89	$1.78(0.16)
		CVC/CPC	12	2%	2%	$1.70	$1.72(0.29)
	2007	ALL	27	-	-	$2.06	$2.05(0.67)
		CVOA	28	87%	87%	$2.06	$2.13(0.80)
		CVOB/CPO/CDQ/ADAK	14	12%	12%	$2.08	$2.04(0.33)
		CVC/CPC	9	1%	1%	$1.94	$1.80(0.61)
	2008	ALL	29	-	-	$2.11	$2.08(0.26)
		CVOA	26	73%	72%	$2.08	$2.06(0.27)
		CVOB/CPO/CDQ/ADAK	12	26%	27%	$2.18	$2.07(0.30)
		CVC/CPC	5	2%	2%	$2.17	$2.17(0.07)
	2009	ALL	17	-	-	$2.16	$2.13(0.19)
		CVOA	17	75%	74%	$2.13	$2.10(0.18)
		CVOB/CPO/CDQ/ADAK	9	22%	23%	$2.24	$2.21(0.21)
		CVC/CPC	9	3%	3%	$2.06	$2.10(0.17)
	2010	ALL	4	-	-	*	*
		CVOA	4	*	*	*	*
		CVOB/CPO/CDQ/ADAK	2	*	*	*	*
		CVC/CPC	2	*	*	*	*
	2013	CVOA	17	76%	76%	$2.59	$2.42(0.72)
		CVOB/CPO/CDQ/ADAK	15	21%	20%	$2.46	$2.67(0.67)
		CVC/CPC	11	3%	4%	$2.81	$2.65(0.76)
	2014	CVOA	36	76%	76%	$2.43	$2.45(0.22)
		CVOB/CPO/CDQ/ADAK	28	21%	22%	$2.46	$2.53(0.37)
		CVC/CPC	23	3%	3%	$2.60	$2.56(0.42)
	2015	CVOA	52	75%	75%	$2.61	$2.68(0.33)
		CVOB/CPO/CDQ/ADAK	38	21%	21%	$2.60	$2.63(0.52)
		CVC/CPC	25	3%	3%	$2.79	$2.84(0.34)
	2016	CVOA	42	74%	71%	$2.90	$2.90(0.18)
		CVOB/CPO/CDQ/ADAK	36	21%	21%	$3.01	$3.02(0.21)
		CVC/CPC	24	4%	7%	$5.14	$3.10(0.10)

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Table 3.7: Continued

		Type	Vessels	Share of ex-vessel volume	Share of ex-vessel revenue	Weighted average price ($/lb)	Mean(sd) price ($/lb)
SMB	2009	ALL	7	-	-	$3.25	$3.30(0.28)
		CVOA	7	95%	95%	$3.23	$3.20(0.21)
		CVOB/CPO/CDQ/ADAK	1	*	*	*	*
		CVC/CPC	1	*	*	*	*
	2010	ALL	10	-	-	$5.32	$5.41(0.28)
		CVOA	10	79%	78%	$5.28	$5.32(0.36)
		CVOB/CPO/CDQ/ADAK	8	19%	20%	$5.49	$5.48(0.18)
		CVC/CPC	5	2%	2%	$5.37	$5.47(0.23)
	2011	ALL	18	-	-	$5.66	$6.05(0.64)
		CVOA	18	79%	78%	$5.53	$5.66(0.42)
		CVOB/CPO/CDQ/ADAK	15	17%	19%	$6.18	$6.23(0.52)
		CVC/CPC	9	4%	4%	$5.94	$6.53(0.77)
	2012	ALL	17	-	-	$4.46	$4.48(0.27)
		CVOA	17	77%	77%	$4.45	$4.42(0.20)
		CVOB/CPO/CDQ/ADAK	14	21%	21%	$4.51	$4.51(0.32)
		CVC/CPC	12	2%	2%	$4.48	$4.51(0.29)
	2014	ALL	4	-	-	*	*
		CVOA	4	*	*	*	*
		CVOB/CPO/CDQ/ADAK	4	*	*	*	*
		CVC/CPC	1	*	*	*	*
	2015	ALL	3	-	-	*	*
		CVOA	3	*	*	*	*
		CVOB/CPO/CDQ/ADAK	2	*	*	*	*
		CVC/CPC	1	*	*	*	*

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.
[a] Landings in 2001 Petrel Bank test fishery; 1998 fishery data unavailable.
[b] 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 3.8: Estimated Finished Production, First Wholesale Value, and Price, CR Program Fisheries.

	Year	Processors	Finished weight (million lbs)	First wholesale value ($million)	Weighted average price ($/lb)	Mean(sd) price ($/lb)
AIG	1998	6	3.25	$19.13	$5.88	$5.85(0.25)
	1999	8	3.03	$28.09	$9.26	$9.01(2.18)
	2000	6	3.57	$26.29	$7.36	$8.22(2.81)
	2001	5	3.95	$37.05	$9.39	$9.33(0.23)
	2002	5	3.44	$33.20	$9.66	$9.46(0.98)
	2003	5	3.61	$35.71	$9.89	$9.98(0.43)
	2004	5	3.73	$27.26	$7.30	$7.88(1.37)
	2005	6	2.75	$19.40	$7.05	$6.95(0.44)
	2006	6	3.13	$16.05	$5.13	$4.85(0.43)
	2007	6	3.42	$20.70	$6.05	$6.00(0.59)
	2008	7	3.41	$28.58	$8.38	$8.13(0.69)
	2009	8	3.30	$20.75	$6.30	$6.75(1.95)
	2010	8	3.17	$26.71	$8.43	$8.93(1.51)
	2011	14	3.64	$37.68	$10.34	$10.64(2.44)
	2012	13	3.76	$30.38	$8.08	$8.89(2.62)
	2013	12	3.77	$32.69	$8.67	$7.84(2.91)
	2014	10	3.85	$31.38	$8.14	$7.38(3.18)
	2015	8	3.68	$36.59	$9.94	$8.88(3.46)
	2016	10	3.56	$45.36	$12.76	$11.99(3.92)
BBR	1998	22	9.79	$75.93	$7.75	$7.59(1.22)
	1999	21	7.68	$119.87	$15.61	$15.55(1.87)
	2000	20	5.38	$51.29	$9.54	$11.66(2.16)
	2001	20	5.53	$64.26	$11.63	$12.20(1.58)
	2002	20	6.32	$94.25	$14.92	$14.94(1.97)
	2003	25	10.25	$127.92	$12.48	$12.27(1.24)
	2004	23	10.01	$114.60	$11.45	$11.61(0.65)
	2005	16	12.08	$123.33	$10.21	$10.37(0.90)
	2006	15	9.17	$79.87	$8.71	$8.41(1.05)
	2007	17	13.09	$123.84	$9.46	$9.37(0.79)
	2008	16	13.31	$143.70	$10.80	$10.26(2.78)
	2009	15	10.40	$105.06	$10.10	$9.72(1.24)
	2010	16	10.03	$142.89	$14.25	$14.21(1.83)
	2011	18	5.30	$107.86	$20.33	$18.90(3.81)
	2012	16	5.27	$80.58	$15.29	$15.48(4.50)
	2013	17	5.75	$78.58	$13.66	$13.48(4.03)
	2014	17	6.66	$81.49	$12.23	$11.77(4.07)
	2015	15	6.60	$95.79	$14.52	$14.30(3.30)
	2016	17	5.68	$103.72	$18.27	$17.94(4.57)

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Table 3.8: Continued

	Year	Processors	Finished weight (million lbs)	First wholesale value ($million)	Weighted average price ($/lb)	Mean(sd) price ($/lb)
BSS	1998	33	164.27	$468.09	$2.85	$2.77(0.40)
	1999	31	126.92	$509.50	$4.01	$3.85(0.79)
	2000	24	21.64	$102.45	$4.73	$5.42(1.31)
	2001	21	16.34	$80.62	$4.93	$4.87(0.38)
	2002	21	21.06	$97.58	$4.63	$4.71(0.57)
	2003	19	18.15	$102.06	$5.62	$5.61(0.30)
	2004	21	15.62	$93.10	$5.96	$5.89(0.36)
	2005	20	16.40	$76.11	$4.64	$4.41(0.60)
	2006	13	24.92	$80.56	$3.23	$3.22(0.22)
	2007	18	22.66	$102.05	$4.50	$4.63(0.39)
	2008	16	41.02	$177.26	$4.32	$4.21(1.20)
	2009	16	35.97	$137.83	$3.83	$3.83(0.18)
	2010	12	31.41	$113.14	$3.60	$3.69(0.32)
	2011	16	37.89	$224.45	$5.92	$6.11(0.80)
	2012	15	57.79	$284.95	$4.93	$4.67(1.61)
	2013	15	46.31	$234.49	$5.06	$4.86(1.45)
	2014	13	36.17	$185.45	$5.13	$4.85(1.56)
	2015	14	39.90	$174.86	$4.38	$4.20(1.39)
	2016	12	25.92	$154.82	$5.97	$5.78(1.91)
BST	2005	4	0.18	$0.85	$4.75	$4.30(0.66)
	2006	9	0.72	$2.92	$4.06	$3.93(0.33)
	2007	9	1.46	$7.25	$4.97	$4.95(0.34)
	2008	10	1.34	$6.50	$4.87	$4.88(0.25)
	2009	10	1.39	$5.81	$4.19	$4.17(0.76)
	2010	7	*	*	*	*
	2013	12	0.86	$5.63	$6.58	$7.02(1.42)
	2014	12	6.23	$36.91	$5.93	$5.45(2.15)
	2015	13	10.26	$55.29	$5.39	$4.83(1.58)
	2016	12	7.15	$45.15	$6.31	$5.95(1.99)

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Table 3.8: Continued

	Year	Processors	Finished weight (million lbs)	First wholesale value ($million)	Weighted average price ($/lb)	Mean(sd) price ($/lb)
PIK	1998	12	0.67	$5.21	$7.81	$7.68(0.93)
SMB	1998	13	1.77	$11.93	$6.75	$6.84(0.27)
	2009	6	*	*	*	*
	2010	8	0.91	$12.10	$13.23	$11.46(3.20)
	2011	11	1.33	$20.28	$15.23	$14.78(2.94)
	2012	10	1.18	$14.63	$12.45	$11.55(4.51)
	2014	6	*	*	*	*
	2015	4	0.08	$0.83	$10.77	$10.87(1.67)
WAI	1998	1	*	*	*	*
	2002	9	0.34	$5.07	$14.86	$14.50(2.89)
	2003	9	0.32	$4.03	$12.49	$12.26(0.50)

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. Counts of processors in Tables 3.9, 3.10, and 3.11 identify number of entities reporting crab production in the Commercial Operators Annual Report, including buyers of landed crab that employed custom processing services of other crab processors for all purchased crab; where noted, processor counts in other tables show the number of active crab processing plants exclusive of custom-only buyers. 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 >=1000 lbs. in the relevant BSAI crab fishery. Annual production volume for 2006-2011 is sourced from EDR data.

[a]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 (COAR) data, NMFS AFSC BSAI Crab Economic Data Report (EDR) database.

Table 3.9: 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)
Red king	1998	29	9.23	$71.57	$7.75	$7.59(1.88)
	1999	31	7.05	$109.93	$15.59	$14.33(3.89)
	2000	22	6.58	$62.73	$9.54	$11.39(3.56)
	2001	30	6.35	$73.84	$11.63	$10.80(3.74)
	2002	32	6.93	$102.03	$14.73	$13.25(5.26)
	2003	38	10.50	$130.35	$12.41	$11.25(4.00)
	2004	26	9.73	$111.78	$11.49	$10.64(2.57)
	2005	23	12.50	$126.95	$10.15	$9.88(4.00)
	2006	16	10.40	$90.66	$8.71	$7.84(3.20)
	2007	19	13.32	$129.65	$9.73	$8.47(2.61)
	2008	17	13.18	$143.33	$10.88	$9.55(2.76)
	2009	18	10.96	$105.00	$9.58	$8.45(2.92)
	2010	18	9.27	$138.32	$14.92	$13.01(4.46)
	2011	25	6.03	$114.33	$18.96	$17.86(6.63)
	2012	19	5.25	$82.57	$15.72	$14.07(4.33)
	2013	22	6.50	$85.14	$13.09	$13.23(3.19)
	2014	21	7.36	$87.93	$11.95	$11.87(3.07)
	2015	19	7.26	$99.38	$13.70	$13.54(2.93)
	2016	18	5.59	$102.96	$18.43	$16.18(5.18)
Snow (opilio)	1998	34	157.20	$448.36	$2.85	$2.62(0.80)
	1999	31	116.91	$469.47	$4.02	$3.33(1.24)
	2000	23	22.78	$107.96	$4.74	$4.85(1.87)
	2001	20	15.15	$74.64	$4.93	$4.42(1.48)
	2002	25	20.84	$95.95	$4.60	$4.13(1.22)
	2003	19	17.38	$97.77	$5.62	$5.68(2.52)
	2004	22	15.30	$91.19	$5.96	$5.58(1.29)
	2005	20	16.29	$75.59	$4.64	$4.28(0.98)
	2006	13	27.89	$94.22	$3.38	$3.34(0.88)
	2007	16	20.38	$91.27	$4.48	$4.55(1.08)
	2008	16	31.35	$141.97	$4.53	$4.31(1.01)
	2009	16	35.89	$136.42	$3.80	$3.68(0.50)
	2010	12	29.91	$107.31	$3.59	$3.57(1.11)
	2011	16	35.58	$204.73	$5.75	$5.47(1.41)
	2012	15	59.05	$294.27	$4.98	$4.72(1.16)
	2013	16	47.53	$245.50	$5.17	$5.15(2.67)
	2014	14	37.28	$198.93	$5.34	$6.14(5.35)
	2015	14	40.18	$176.95	$4.40	$4.34(1.19)
	2016	12	29.02	$154.70	$5.33	$5.08(2.92)

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Table 3.9: Continued

	Year	Processors	Finished weight (million lbs)	First wholesale value	Weighted average price ($/lb)	Mean(sd) price ($/lb)
Tanner (bairdi)	1998	16	1.65	$10.37	$6.28	$6.07(3.13)
	1999	11	1.48	$8.09	$5.48	$5.98(2.64)
	2000	10	1.00	$7.89	$7.86	$7.11(1.73)
	2001	17	1.27	$8.44	$6.67	$6.12(1.49)
	2002	12	0.74	$5.06	$6.82	$5.80(1.91)
	2003	13	0.81	$6.33	$7.86	$6.86(2.57)
	2004	12	0.94	$7.73	$8.22	$7.85(1.58)
	2005	19	2.22	$11.51	$5.18	$6.01(3.28)
	2006	21	2.94	$13.51	$4.59	$4.38(1.40)
	2007	18	2.49	$12.56	$5.04	$5.72(3.39)
	2008	22	2.44	$12.92	$5.30	$5.21(1.87)
	2009	17	2.25	$9.62	$4.27	$4.73(2.06)
	2010	17	1.90	$8.04	$4.22	$4.54(1.11)
	2011	15	3.88	$27.49	$7.08	$7.28(1.64)
	2012	15	3.08	$20.17	$6.55	$7.19(2.76)
	2013	20	1.89	$12.17	$6.42	$7.16(2.67)
	2014	17	6.86	$39.38	$5.74	$6.85(3.12)
	2015	19	11.63	$54.77	$4.71	$5.70(3.08)
	2016	20	8.66	$49.21	$5.68	$6.44(2.91)
Golden (brown) king	1998	13	2.92	$17.52	$6.00	$7.71(1.97)
	1999	16	3.44	$31.53	$9.16	$8.60(3.56)
	2000	16	4.92	$37.99	$7.73	$9.18(3.19)
	2001	16	4.30	$39.23	$9.13	$8.53(3.16)
	2002	16	3.82	$36.86	$9.66	$10.73(4.18)
	2003	16	3.93	$39.19	$9.98	$10.68(3.60)
	2004	13	4.65	$34.89	$7.50	$9.17(3.27)
	2005	13	2.85	$20.55	$7.20	$8.20(3.97)
	2006	14	3.65	$19.83	$5.44	$7.21(3.83)
	2007	11	3.75	$24.17	$6.44	$7.61(3.23)
	2008	13	3.89	$29.95	$7.70	$8.18(2.82)
	2009	15	4.09	$24.80	$6.06	$7.23(3.46)
	2010	17	5.13	$42.82	$8.35	$8.66(2.97)
	2011	20	4.16	$49.17	$11.82	$12.01(4.52)
	2012	21	3.95	$36.94	$9.36	$11.76(5.20)
	2013	19	4.20	$37.88	$9.02	$10.80(4.98)
	2014	16	4.50	$37.91	$8.43	$11.58(4.58)
	2015	12	3.36	$34.66	$10.32	$11.62(2.73)
	2016	15	3.38	$43.20	$12.79	$14.28(5.04)

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Table 3.9: Continued

	Year	Processors	Finished weight (million lbs)	First wholesale value	Weighted average price ($/lb)	Mean(sd) price ($/lb)
	1998	19	2.08	$14.06	$6.76	$6.75(0.89)
	1999	4	0.01	$0.07	$12.50	$10.09
	2000	2	*	*	*	*
	2001	1	*	*	*	*
	2002	1	*	*	*	*
	2003	1	*	*	*	*
Blue king	2005	1	*	*	*	*
	2009	4	0.19	$1.38	$7.21	$6.45
	2010	7	0.67	$8.57	$12.86	$11.37(3.26)
	2011	12	1.25	$18.31	$14.71	$13.67(5.26)
	2012	11	1.12	$14.67	$13.15	$11.29(3.17)
	2014	6	0.22	$2.09	$9.52	$9.11(3.03)
	2015	5	0.08	$0.68	$8.45	$8.84(4.26)

Notes: Data shown by calendar year. Includes processing of crab taken from stocks/fisheries other than those managed under the BSAI crab FMP. Counts of processors in Tables 3.9, 3.10, and 3.11 identify number of entities reporting crab production in the Commercial Operators Annual Report, including buyers of landed crab that employed custom processing services of other crab processors for all purchased crab; where noted, processor counts in other tables show the number of active crab processing plants exclusive of custom-only buyers.

Source: ADF&G Commercial Operator's Annual Report (COAR) data.

Table 3.10: Statewide Crab Production by Product for Selected Species

		Product	Processors	Finished weight (million lbs)	First wholesale value ($ million)	Weighted average price ($/lb)	Mean(sd) price ($/lb)
Red king	2007	Sections	19	12.86	126.36	9.82	9.89(0.91)
		Whole crab	10	0.36	2.96	8.22	8.39(1.98)
		Other	8	0.10	0.33	3.40	3.46(1.23)
	2008	Sections	17	12.58	137.73	10.95	10.83(1.26)
		Whole crab	8	0.44	4.87	11.00	9.57(2.45)
		Other	7	0.16	0.73	4.62	4.41(1.51)
	2009	Sections	17	10.34	103.00	9.97	9.77(2.09)
		Whole crab	11	0.51	1.55	3.05	8.18(2.50)
		Other	8	0.12	0.45	3.88	4.10(1.74)
	2010	Sections	17	8.91	134.75	15.12	15.42(2.83)
		Whole crab	11	0.22	2.94	13.41	12.64(3.37)
		Other	8	0.14	0.63	4.52	6.15(2.75)
	2011	Sections	23	5.72	109.74	19.17	20.68(3.40)
		Whole crab	15	0.23	4.09	18.13	16.41(4.38)
		Other	11	0.08	0.50	6.36	12.03(11.07)
	2012	Sections	18	4.93	78.04	15.84	16.39(2.68)
		Whole crab	10	0.29	4.31	14.62	12.93(3.46)
		Other	6	0.03	0.21	7.22	6.91(2.46)
	2013	Sections	19	6.15	80.82	13.14	14.50(2.46)
		Whole crab	13	0.31	3.90	12.55	12.05(3.53)
		Other	7	0.04	0.42	10.46	10.71(2.90)
	2014	Sections	19	6.95	83.07	11.95	12.61(2.73)
		Whole crab	13	0.35	4.43	12.50	12.03(2.29)
		Other	7	0.05	0.43	8.39	9.11(4.13)
	2015	Sections	17	6.87	94.32	13.73	13.95(3.07)
		Whole crab	10	0.30	4.07	13.49	14.13(2.60)
		Other	8	0.09	0.99	11.42	11.45(2.15)
	2016	Sections	18	5.36	100.29	18.70	18.36(2.98)
		Whole crab	6	0.14	1.71	12.40	17.64(3.87)
		Other	8	0.08	0.97	11.40	9.72(5.22)

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Table 3.10: Continued

		Product	Processors	Finished weight (million lbs)	First wholesale value ($ million)	Weighted average price ($/lb)	Mean(sd) price ($/lb)
Snow (opilio)	2007	Sections	16	20.19	90.71	4.49	4.59(0.22)
		Whole crab	1	*	*	*	*
		Other	2	*	*	*	*
	2008	Sections	16	29.60	134.44	4.54	4.62(0.30)
		Whole crab	1	*	*	*	*
		Other	3	*	*	*	*
	2009	Sections	16	35.60	135.77	3.81	3.82(0.19)
		Other	1	*	*	*	*
	2010	Sections	12	29.80	106.97	3.59	3.66(1.12)
		Whole crab	1	*	*	*	*
		Other	1	*	*	*	*
	2011	Sections	16	35.30	203.32	5.76	5.44(1.47)
		Whole crab	1	*	*	*	*
		Other	1	*	*	*	*
	2012	Sections	15	58.86	294.01	4.99	4.84(0.92)
		Whole crab	2	*	*	*	*
		Other	1	*	*	*	*
	2013	Sections	16	47.50	245.50	5.17	4.96(1.70)
		Whole crab	1	*	*	*	*
		Other	1	*	*	*	*
	2014	Sections	14	36.98	197.64	5.34	6.01(5.43)
		Whole crab	2	*	*	*	*
		Other	1	*	*	*	*
	2015	Sections	14	39.83	175.60	4.41	4.29(1.17)
		Whole crab	1	*	*	*	*
		Other	1	*	*	*	*
	2016	Sections	12	28.65	153.61	5.36	5.22(1.27)
		Whole crab	1	*	*	*	*
		Other	3	*	*	*	*

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Table 3.10: Continued

		Product	Processors	Finished weight (million lbs)	First wholesale value ($ million)	Weighted average price ($/lb)	Mean(sd) price ($/lb)
Tanner (bairdi)	2007	Sections	18	2.46	12.44	5.06	5.48(1.02)
		Whole crab	4	0.01	0.02	3.67	7.01
		Other	1	*	*	*	*
	2008	Sections	22	2.39	12.74	5.33	5.49(1.24)
		Whole crab	4	0.00	0.01	3.62	3.04
		Other	4	0.04	0.17	3.90	5.74
	2009	Sections	16	2.20	9.52	4.33	4.77(1.35)
		Whole crab	3	*	*	*	*
		Other	4	0.02	0.07	3.03	5.91
	2010	Sections	16	1.45	6.63	4.58	4.84(0.88)
		Whole crab	6	0.44	1.35	3.07	3.63(1.43)
		Other	1	*	*	*	*
	2011	Sections	14	3.49	24.43	7.01	7.40(1.21)
		Whole crab	5	0.30	2.46	8.15	5.93(2.15)
		Other	4	0.10	0.60	6.32	8.28
	2012	Sections	13	2.73	17.25	6.33	6.91(1.42)
		Whole crab	6	0.35	2.92	8.27	6.44(2.14)
		Other	1	*	*	*	*
	2013	Sections	19	1.60	9.97	6.22	6.49(1.09)
		Whole crab	4	0.29	2.14	7.44	6.76
		Other	4	0.00	0.06	13.63	11.45
	2014	Sections	15	6.78	38.71	5.71	6.31(1.57)
		Whole crab	4	0.08	0.61	7.38	6.08
		Other	2	*	*	*	*
	2015	Sections	17	10.73	52.54	4.89	5.24(1.31)
		Whole crab	6	0.84	1.92	2.29	4.57(2.34)
		Other	5	0.06	0.31	5.29	9.86(6.87)
	2016	Sections	18	8.38	47.49	5.66	6.20(1.66)
		Whole crab	6	0.17	1.23	7.10	5.78(1.76)
		Other	5	0.10	0.49	4.80	8.89(7.18)

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Table 3.10: Continued

		Product	Processors	Finished weight (million lbs)	First wholesale value ($ million)	Weighted average price ($/lb)	Mean(sd) price ($/lb)
Golden (brown) king	2007	Sections	7	2.96	18.75	6.34	7.18(2.37)
		Whole crab	6	0.46	3.33	7.29	7.31(1.16)
		Other	4	0.34	2.09	6.18	8.89
	2008	Sections	8	2.96	23.04	7.78	8.80(1.96)
		Whole crab	8	0.51	3.78	7.38	6.98(1.22)
		Other	4	0.42	3.13	7.49	8.98
	2009	Sections	10	3.31	19.73	5.97	7.54(2.94)
		Whole crab	8	0.78	5.00	6.42	6.15(1.59)
		Other	3	*	*	*	*
	2010	Sections	11	4.04	35.82	8.87	9.91(1.39)
		Whole crab	12	1.08	6.92	6.38	7.30(1.50)
		Other	3	*	*	*	*
	2011	Sections	14	3.40	41.02	12.08	12.84(4.58)
		Whole crab	10	0.76	8.09	10.63	10.45(1.22)
		Other	3	*	*	*	*
	2012	Sections	15	3.32	29.81	8.99	11.81(4.95)
		Whole crab	11	0.62	7.07	11.35	11.15(2.86)
		Other	4	0.01	0.06	9.69	13.17
	2013	Sections	14	3.51	31.50	8.98	10.70(4.92)
		Whole crab	10	0.69	6.34	9.24	10.77(3.65)
		Other	6	0.01	0.04	8.14	11.07(7.31)
	2014	Sections	12	4.33	35.36	8.16	9.41(3.80)
		Whole crab	8	0.16	2.53	15.53	14.08(3.62)
		Other	2	*	*	*	*
	2015	Sections	6	2.94	30.07	10.22	10.58(0.99)
		Whole crab	7	0.41	4.53	11.01	13.26(3.09)
		Other	2	*	*	*	*
	2016	Sections	12	3.31	42.14	12.74	14.49(4.84)
		Whole crab	6	0.07	1.01	15.11	15.93(2.95)
		Other	2	*	*	*	*

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Table 3.10: Continued

		Product	Processors	Finished weight (million lbs)	First wholesale value ($ million)	Weighted average price ($/lb)	Mean(sd) price ($/lb)
Blue king	2009	Sections	4	0.19	1.36	7.33	7.52
		Whole crab	1	*	*	*	*
		Other	1	*	*	*	*
	2010	Sections	7	0.65	8.46	13.04	12.44(2.47)
		Whole crab	1	*	*	*	*
		Other	1	*	*	*	*
	2011	Sections	12	1.22	18.14	14.83	14.56(5.50)
		Whole crab	2	*	*	*	*
		Other	2	*	*	*	*
	2012	Sections	10	1.10	14.49	13.20	11.77(3.60)
		Whole crab	2	*	*	*	*
		Other	2	*	*	*	*
	2014	Sections	6	0.21	2.02	9.57	9.92(2.83)
		Whole crab	1	*	*	*	*
		Other	2	*	*	*	*
	2015	Sections	5	0.07	0.65	8.92	9.62(2.47)
		Whole crab	1	*	*	*	*
		Other	1	*	*	*	*

Notes: Data shown by calendar year. Includes processing of crab taken from stocks/fisheries other than those managed under the BSAI crab FMP. Counts of processors in Tables 3.9, 3.10, and 3.11 identify number of entities reporting crab production in the Commercial Operators Annual Report, including buyers of landed crab that employed custom processing services of other crab processors for all purchased crab; where noted, processor counts in other tables show the number of active crab processing plants exclusive of custom-only buyers.

Source: ADF&G Commercial Operator's Annual Report (COAR) data.

Table 3.11: Processing Labor Hours and Pay, CR Program Fisheries

			Processors	Processing labor hours			Labor Payments ($1,000)		Processing wages, median ($)	
		Year		Total (1,000)	Median per plant (1,000)	Median per 1000 pounds (raw)	Total	Median per plant	per hour	per 1000 pounds (raw)
All CR	SF & CP	2012	16	1,262	71.66	15.84	$15,051	$629	$10.79	$154.02
		2013	14	956	53.70	12.75	$10,301	$580	$10.52	$129.61
		2014	11	905	103.11	11.06	$9,780	$619	$10.24	$124.69
		2015	11	1,179	112.90	15.89	$13,591	$1,087	$10.76	$170.99
		2016	10	788	95.46	14.17	$9,836	$723	$12.15	$187.81
AIG	CP	98/01/04	4(2)	-	-	-	*	*	-	*
		2005	2	-	-	-	*	*	-	*
		2006	1	-	-	-	*	*	-	*
		2007	1	-	-	-	*	*	-	*
		2008	1	-	-	-	*	*	-	*
	SF	98/01/04	13(7)	93	14.59	19.74	$1,233	$162	$12.08	$278.66
		2005	4	*	*	*	*	*	*	*
		2006	6	92	9.96	13.12	$991	$115	$11.09	$187.05
		2007	5	94	13.19	17.86	$994	$136	$10.16	$169.57
		2008	6	69	2.83	8.55	$1,066	$154	$12.33	$171.90
	SF & CP	2009	5	86	15.69	15.89	$1,322	$142	$9.95	$153.23
		2010	4	*	*	*	*	*	*	*
		2011	7	98	4.79	16.97	$2,364	$80	$10.65	$184.90
		2012	8	53	2.60	6.89	$1,151	$62	$10.60	$77.46
		2013	6	61	5.96	9.19	$632	$64	$10.32	$109.11
		2014	4	*	*	*	*	*	*	*
		2015	3	*	*	*	*	*	*	*
		2016	4	*	*	*	*	*	*	*

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Table 3.11: Continued

			Processors	Processing labor hours			Labor Payments ($1,000)		Processing wages, median ($)	
		Year		Total (1,000)	Median per plant (1,000)	Median per 1000 pounds (raw)	Total	Median per plant	per hour	per 1000 pounds (raw)
BBR	CP	98/01/04	18(10)	-	-	-	$282	$44	-	*
		2005	4	-	-	-	*	*	-	*
		2006	3	-	-	-	*	*	-	*
		2007	3	-	-	-	*	*	-	*
		2008	3	-	-	-	*	*	-	*
	SF	98/01/04	40(20)	142	9.96	12.75	$1,656	$107	$12.75	$152.12
		2005	11	202	12.12	13.44	$2,357	$212	$11.51	$140.23
		2006	11	180	10.76	13.73	$2,111	$169	$11.28	$154.78
		2007	11	261	25.22	13.17	$2,921	$240	$11.80	$155.47
		2008	11	245	12.58	16.04	$2,952	$299	$11.84	$166.85
	SF & CP	2009	12	199	16.06	14.47	$2,337	$135	$10.95	$153.03
		2010	13	212	20.09	15.43	$2,501	$202	$10.35	$161.51
		2011	14	104	6.71	13.97	$1,294	$78	$10.83	$147.73
		2012	12	100	6.51	13.74	$1,222	$70	$11.23	$139.54
		2013	10	104	10.00	14.95	$1,228	$97	$10.37	$146.48
		2014	9	130	21.07	12.11	$1,436	$78	$9.68	$143.87
		2015	10	127	14.80	16.03	$1,609	$121	$10.79	$175.40
		2016	10	130	8.93	13.13	$1,698	$87	$12.15	$171.28

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Table 3.11: Continued

			Processors	Processing labor hours			Labor Payments ($1,000)		Processing wages, median ($)	
		Year		Total (1,000)	Median per plant (1,000)	Median per 1000 pounds (raw)	Total	Median per plant	per hour	per 1000 pounds (raw)
BSS	CP	98/01/04	17(8)	-	-	-	$738	$115	-	*
		2005	6	-	-	-	$288	$36	-	*
		2006	4	-	-	-	*	*	-	*
		2007	4	-	-	-	*	*	-	*
		2008	4	-	-	-	*	*	-	*
	SF	98/01/04	50(24)	1,134	36.21	12.80	$13,751	$437	$12.23	$163.20
		2005	13	302	23.68	13.36	$3,471	$285	$11.44	$153.59
		2006	10	445	49.45	13.76	$4,854	$550	$11.14	$152.46
		2007	10	442	41.29	13.58	$5,264	$483	$11.55	$179.39
		2008	12	712	30.52	13.17	$9,390	$538	$11.51	$157.50
	SF & CP	2009	14	600	58.41	13.44	$7,183	$329	$11.04	$136.46
		2010	11	534	50.90	13.92	$5,870	$388	$10.56	$137.35
		2011	14	555	45.69	13.90	$6,407	$371	$10.99	$150.44
		2012	13	1,087	77.94	16.00	$12,426	$634	$10.78	$166.90
		2013	12	774	63.55	12.84	$8,273	$499	$10.40	$131.19
		2014	10	590	76.01	12.08	$6,488	$469	$10.87	$125.20
		2015	10	747	95.42	15.45	$8,722	$812	$10.94	$160.22
		2016	8	447	69.40	12.96	$5,666	$537	$11.95	$156.11

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Table 3.11: Continued

			Processors	Processing labor hours			Labor Payments ($1,000)		Processing wages, median ($)	
		Year		Total (1,000)	Median per plant (1,000)	Median per 1000 pounds (raw)	Total	Median per plant	per hour	per 1000 pounds (raw)
BST	CP	2006	1	-	-	-	*	*	-	*
		2007	1	-	-	-	*	*	-	*
		2008	1	-	-	-	*	*	-	*
	SF	2005	7	8	0.40	17.54	$91	$5	$11.16	$177.62
		2006	8	14	1.25	12.57	$152	$14	$11.12	$125.07
		2007	7	35	4.97	13.85	$373	$47	$10.81	$150.46
		2008	8	27	2.93	15.95	$462	$49	$11.57	$194.88
	SF & CP	2009	8	29	4.27	14.34	$305	$35	$10.56	$141.73
		2010	5	6	0.70	*	$67	$7	$10.57	*
		2013	7	17	1.86	13.77	$168	$16	$9.97	$136.14
		2014	8	122	8.51	11.96	$1,257	$81	$9.85	$119.86
		2015	8	230	21.84	13.06	$2,498	$210	$10.59	$135.85
		2016	7	145	18.44	13.77	$1,708	$200	$11.79	$155.58
PIK	SF	98/01/04	13(13)	25	1.03	14.27	$252	$17	$11.54	$190.00
SMB	CP	98/01/04	1(1)	-	-	-	*	*	-	*
	SF	98/01/04	10(10)	55	3.08	13.64	$618	$34	$10.98	$177.19
	SF & CP	2009	2	*	*	*	*	*	*	*
		2010	5	19	0.40	14.48	$179	$4	$10.30	$139.32
		2011	6	17	0.84	15.10	$156	$8	$9.81	$154.93
		2012	6	21	0.76	11.09	$252	$8	$10.13	$130.01
		2014	1	*	*	*	*	*	*	*
		2015	1	*	*	*	*	*	*	*

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Table 3.11: Continued

			Processors	Processing labor hours			Labor Payments ($1,000)		Processing wages, median ($)	
		Year		Total (1,000)	Median per plant (1,000)	Median per 1000 pounds (raw)	Total	Median per plant	per hour	per 1000 pounds (raw)
WAI	CP	98/01/04	2(1)	-	-	-	*	*	-	*
	SF	98/01/04	1(1)	*	*	*	*	*	*	*

Notes: Data shown for all CR program crab fisheries by calendar year. All dollar values are adjusted for inflation to 2016-equivalent value. Information suppressed for confidentiality where indicated by "*", and data not available where indicated by "-". Results shown for 2015 and 2016 calendar years fisheries are preliminary pending completion of data validation audit and may be revised in a subsequent update of this report. Calculation of average prices and pro-rata statistics censors observations where the observation-level calculated value is outside two standard deviations of the group mean. Statistics shown for the baseline period 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.

For the baseline period through 2008, results are shown by processing sector: CP denoting the catcher-processor sector and SF denoting Shore-based processors (shore-plants and stationary floating proscessors); for 2009 to current, results are summarized over all processing sectors (SF & CP) to preserve confidentiality.

Processing labor hours reflect hourly processing line workers employed by shoreside and floating processor sectors only; excludes salaried workers employed in the processing sectors (see Table 24)

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., processing labor hours and finished production pounds) in the fishery-year of interest.

Pro rata statistics estimtating processing labor hours per 1000 pounds and labor cost per 1000 pounds use the summed value of raw crab purchased and raw pounds custom processed for other buyers reported by active, shoreside and floating processing plants (excluding CPs) in EDR data; previous editions of this report used finished pounds as the per-pound pro rata factor, but collection of finished pounds in EDRs was discontinued beginning in 2012.

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

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

Table 3.12: Processing Sector Employment and Wages for Non-processing Employees, CR Program Fisheries

		Processors	Salaried employees			Salary cost	
	Year		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	17	\$346	\$40
	2005	8	44	\$3	11	\$1,048	\$45
	2006	4	*	*	*	*	*
	2007	4	*	*	*	*	*
	2008	4	*	*	*	*	*
	2009	5	*	*	*	*	*
	2010	3	*	*	*	*	*
	2011	3	*	*	*	*	*

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Table 3.12: Continued

		Processors	Salaried employees			Salary cost	
	Year		Total	Per plant, median	Cost per employee, median (\$1000)	Total (\$1,000)	Per plant, median (\$1,000)
SF	98/01/04	65(32)	1,096	\$17	9	\$8,267	\$168
	2005	17	1,592	\$20	5	\$10,360	\$70
	2006	13	2,031	\$20	4	\$13,042	\$352
	2007	14	691	\$15	8	\$5,643	\$240
	2008	13	1,056	\$16	11	\$11,673	\$294
	2009	17	900	\$29	10	\$7,934	\$534
	2010	17	786	\$22	6	\$6,381	\$109
	2011	17	1,148	\$25	6	\$7,184	\$402
	2012	13	1,428	\$33	42	\$54,714	\$1,053
	2013	12	1,459	\$28	41	\$58,539	\$1,281
	2014	9	1,300	\$84	51	\$59,642	\$3,220
	2015	9	1,572	\$170	32	\$60,377	\$4,852
	2016	8	1,473	\$174	39	\$60,312	\$7,841

Notes: Data shown for all CR program crab fisheries by calendar year. All dollar values are adjusted for inflation to 2016-equivalent value. Information suppressed for confidentiality where indicated by "*", and data not available where indicated by "-". Results shown for 2015 and 2016 calendar years fisheries are preliminary pending completion of data validation audit and may be revised in a subsequent update of this report. Calculation of average prices and pro-rata statistics censors observations where the observation-level calculated value is outside two standard deviations of the group mean.
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 for 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.
Results shown above summarize data reported by processors for number of employees and gross cost of salary and wages paid for non-processing positions at the processing facility (including foremen, managers, administrative, and other personnel not primarily employed as processing line laborers); wage costs include salary, hourly wages, and bonuses paid to employees, and exclude non-wage benefits, payroll taxes, and other employment costs. Reporting of non-processing employment costs for the CP sector was discontinued in 2011. Prior to 2012, employment and cost for non-processing labor was primarily reported as specific to BSAI crab production, or, where reported as annual values for all processing activity, were prorated using the ratio of crab-specific processing days to total processing days in all fisheries or the ratio of crab processing revenue to total processing revenue in all fisheries. 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, non-processing employment and wage cost statistics for 2012 and later are not comparable with pre-2012 results.

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

Table 3.13: 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
2015	9	688	833	1,076	3	2,600
2016	8	731	722	1,356	0	2,809

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

Table 3.14: Harvesting Sector Employment, CR Program Fisheries

			Vessels	Crew positions		Crew participants	
		Year		Total	Mean per vessel (sd)	Total	Mean per vessel (sd)
AIG	CP	98/01/04	4(2)	-	-	*	*
		2005	1	*	*	*	*
		2006	1	*	*	*	*
		2007	1	*	*	*	*
		2008	1	*	*	*	*
	CV	98/01/04	52(22)	115	6.65(0.99)	131	7.56(2.09)
		2005	10	72	7.20(2.58)	72	7.20(2.58)
		2006	6	48	7.92(2.58)	48	7.92(2.58)
		2007	6	40	6.67	40	6.67
		2008	4	*	*	*	*
	CVCP	2009	5	42	8.40	43	8.60
		2010	5	42	8.30	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	-	-
		2015	5	35	7.00	-	-
		2016	5	36	7.20	-	-
BBR	CP	98/01/04	20(9)	-	-	70	10.49(2.11)
		2005	3	*	*	*	*
		2006	3	*	*	*	*
		2007	3	*	*	*	*
		2008	3	*	*	*	*
	CV	98/01/04	633(250)	1,233	5.85(0.92)	1,304	6.18(1.16)
		2005	84	493	5.87(1.04)	493	5.87(1.04)
		2006	79	465	5.89(1.06)	465	5.89(1.06)
		2007	70	419	5.99(0.86)	419	5.99(0.86)
		2008	76	473	6.22(1.11)	473	6.22(1.11)
	CVCP	2009	70	440	6.29(1.28)	435	6.21(1.01)
		2010	65	421	6.48(1.86)	412	6.34(1.22)
		2011	62	409	6.60(1.72)	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)	-	-
		2015	64	441	6.89(3.26)	-	-
		2016	63	423	6.71(2.52)	-	-

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Table 3.14: 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	62	10.33(4.32)	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	857	5.71(0.73)	857	5.71(0.73)
		2006	74	448	6.05(1.19)	448	6.05(1.19)
		2007	65	400	6.15(1.08)	400	6.15(1.08)
		2008	74	489	6.61(1.41)	489	6.61(1.41)
	CVCP	2009	77	531	6.90(2.47)	522	6.78(1.82)
		2010	68	454	6.68(1.97)	442	6.50(1.26)
		2011	68	466	6.85(1.75)	463	6.81(1.70)
		2012	72	502	6.97(3.61)	-	-
		2013	71	481	6.77(3.11)	-	-
		2014	70	480	6.86(2.92)	-	-
		2015	70	491	7.01(3.50)	-	-
		2016	68	463	6.81(2.49)	-	-
BST	CP	2006	1	*	*	*	*
		2007	1	*	*	*	*
		2008	1	*	*	*	*
	CV	2005	4	*	*	*	*
		2006	25	143	5.72(1.02)	143	5.72(1.02)
		2007	22	131	5.95(0.84)	131	5.95(0.84)
		2008	26	162	6.23(1.31)	162	6.23(1.31)
	CVCP	2009	14	97	6.93(2.64)	96	6.86(2.54)
		2010	4	*	*	*	*
		2013	22	156	7.09(3.52)	-	-
		2014	41	279	6.80(2.62)	-	-
		2015	55	365	6.63(2.19)	-	-
		2016	46	296	6.42(1.14)	-	-

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Table 3.14: Continued

			Vessels	Crew positions		Crew participants	
		Year		Total	Mean per vessel (sd)	Total	Mean per vessel (sd)
SMB	CP	98/01/04	2(2)	-	-	*	*
	CV	98/01/04	94(94)	489	5.20(0.80)	516	5.49(0.84)
		2009	7	40	5.71(0.76)	40	5.71(0.76)
		2010	11	66	6.00(0.89)	66	6.00(0.89)
		2011	17	118	6.94(1.39)	118	6.94(1.39)
		2012	17	106	6.24(0.97)	-	-
		2014	4	*	*	-	-
		2015	3	*	*	-	-
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.

[a] No catcher/processor operations reported fishing activity in the SMB fishery from 2009 to 2012.

[b] 2001 WAI fishery was closed except for Petrel Bank test fishery.

[c] 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 3.15: Alaska Residency of Participating Licensed Crew Members and Gear Operators, CR Program Fisheries

	Crew license holders				Gear operators			Crew and gear operators
Year	Alaska resident	Non-resident	Unknown	Total	Alaska resident	Non-resident	Total	Total
1998	-	-	-	-	106	242	348	-
1999	-	-	-	-	105	246	351	-
2000	-	-	-	-	90	208	298	-
2001	-	-	-	-	78	210	288	-
2002	-	-	-	-	77	204	281	-
2003	-	-	-	-	82	199	281	-
2004	-	-	-	-	81	197	278	-
2005	-	-	-	-	56	137	193	-
2006	284	377	10	671	37	95	132	803
2007	191	337	2	530	26	74	100	630
2008	214	414	3	631	29	90	119	750
2009	187	381	1	569	28	82	110	679
2010	166	345	4	515	28	71	99	614
2011	181	347	2	530	25	68	93	623
2012	202	394	4	600	30	82	112	712
2013	188	375	13	576	24	70	94	670
2014	200	379	3	582	25	70	95	677
2015	232	485	12	729	31	77	108	837
2016	186	419	26	631	27	73	100	731

Notes: Data shown by calendar year. 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; processing line workers on catcher-processors are not required to hold licenses, however the counts above may include crab CP processing line workers that held commercial crew licenses but did not work as fishing crew.

[a] 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, eLandings, and NMFS AFSC BSAI Crab Economic Data Report (EDR) database.

Table 3.16: 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

		Alaska residents		Non-residents[ab]	
	Year	Permit holders	Associated share of landed ex-vessel value	Permit holders	Associated share of landed ex-vessel value
AIG	1998	2	*	23	*
	1999	5	*	21	*
	2000	3	*	23	*
	2001	4	3	24	97
	2002	3	*	25	*
	2003	3	*	19	*
	2004	3	*	21	*
	2005	0	0	10	100
	2006	1	*	9	*
	2007	1	*	5	*
	2008	1	*	6	*
	2009	0	0	7	100
	2010	1	*	8	*
	2011	2	*	5	*
	2012	1	*	7	*
	2013	1	*	7	*
	2014	1	*	5	*
	2015	1	*	6	*
	2016	1	*	7	*
BBR	1998	87	24	186	76
	1999	72	26	185	74
	2000	70	27	174	73
	2001	66	23	164	77
	2002	67	27	176	73
	2003	73	21	180	79
	2004	73	22	183	78
	2005	33	22	69	78
	2006	28	24	59	76
	2007	19	22	55	78
	2008	21	21	64	79
	2009	21	22	54	78
	2010	20	23	50	77
	2011	18	22	44	78
	2012	18	23	47	77
	2013	16	22	48	78
	2014	17	24	46	76
	2015	15	20	49	80
	2016	15	23	49	77

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Table 3.16: Continued

	Year	Alaska residents		Non-residents[ab]	
		Permit holders	Associated share of landed ex-vessel value	Permit holders	Associated share of landed ex-vessel value
BSS	1998	72	23	183	77
	1999	81	25	194	75
	2000	74	28	156	72
	2001	54	19	154	81
	2002	56	23	138	77
	2003	56	24	136	76
	2004	53	22	137	78
	2005	45	22	126	78
	2006	18	16	74	84
	2007	19	24	58	76
	2008	21	18	72	82
	2009	19	17	69	83
	2010	21	22	55	78
	2011	19	21	55	79
	2012	24	21	69	79
	2013	20	22	58	78
	2014	21	18	58	82
	2015	20	19	63	81
	2016	19	19	55	81
BST	2005	0	0	4	100
	2006	10	11	38	89
	2007	9	21	25	79
	2008	6	17	28	83
	2009	3	*	17	*
	2010	2	*	2	*
	2013	8	36	14	64
	2014	13	18	31	82
	2015	19	33	47	67
	2016	15	31	37	69

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Table 3.16: Continued

	Year	Alaska residents		Non-residents[ab]	
		Permit holders	Associated share of landed ex-vessel value	Permit holders	Associated share of landed ex-vessel value
PIK	1998	34	57	23	43
SMB	1998	34	25	97	75
	2009	2	*	5	*
	2010	4	33	7	67
	2011	4	24	14	76
	2012	7	34	11	66
	2014	2	*	2	*
	2015	2	*	1	*
WAI	1998	0	0	1	100
	2002	7	18	26	82
	2003	4	12	26	88

Notes: Data shown by calendar year. Information suppressed for confidentiality where indicated by "*", and data not available where indicated by "-".

[a] Count of unique holders of CFEC Gear Operator permits recorded on ADF&G fish tickets for BSAI crab landings.

[b] 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.

[c] 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 (COAR) data.

Table 3.17: Captain and Crew Share Payments, and Crab-Equivalent Crew Pay, CR Program Fisheries

			Crew share payment ($million)			Captain share payment ($million)		CV Crew payment, crab equivalent (1000 lbs)	
		Year	Vessels	Per vessel, median	Total	Per vessel, median	Total	Per vessel, median	Total
AIG	CP	98/01/04	4(2)	*	*	*	*	-	-
		2005	1	*	*	*	*	-	-
		2006	1	*	*	*	*	-	-
		2007	1	*	*	*	*	-	-
		2008	1	*	*	*	*	-	-
	CV	98/01/04	50(21)	$0.13	$3.76	$0.07	$1.82	40.24	1,002.58
		2005	10	$0.16	$1.84	$0.07	$1.00	46.18	583.75
		2006	6	$0.12	$0.89	$0.07	$0.49	58.24	386.17
		2007	6	$0.18	$1.16	$0.09	$0.57	66.47	466.01
		2008	4	*	*	*	*	*	*
	CV & CP	2009	5	$0.40	$1.97	$0.21	$1.16	*	*
		2010	5	$0.67	$3.31	$0.29	$1.88	*	*
		2011	5	$0.70	$4.14	$0.37	$2.25	*	*
		2012	6	$0.66	$3.61	$0.33	$1.86	175.67	739.97
		2013	6	$0.56	$3.45	$0.28	$1.56	137.26	821.72
		2014	5	$0.72	$3.32	$0.30	$1.44	167.09	807.83
		2015	5	$0.73	$4.11	$0.35	$1.68	151.04	948.32
		2016	5	$0.99	$4.48	$0.36	$2.05	177.92	848.56

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Table 3.17: Continued

			Crew share payment ($million)			Captain share payment ($million)		CV Crew payment, crab equivalent (1000 lbs)	
		Year	Vessels	Per vessel, median	Total	Per vessel, median	Total	Per vessel, median	Total
BBR	CP	98/01/04	20(9)	$0.09	$0.68	$0.03	$0.22	-	-
		2005	3	*	*	*	*	-	-
		2006	3	*	*	*	*	-	-
		2007	3	*	*	*	*	-	-
		2008	3	*	*	*	*	-	-
	CV	98/01/04	626(249)	$0.06	$13.37	$0.03	$6.46	10.88	2,551.38
		2005	84	$0.12	$12.24	$0.07	$6.43	22.81	2,261.70
		2006	79	$0.10	$8.97	$0.05	$4.55	23.45	2,002.05
		2007	70	$0.15	$12.13	$0.08	$6.05	27.60	2,391.78
		2008	76	$0.17	$14.85	$0.08	$6.71	29.74	2,568.73
	CV & CP	2009	70	$0.13	$9.89	$0.07	$4.68	24.50	1,848.95
		2010	65	$0.20	$13.63	$0.10	$6.49	24.96	1,630.31
		2011	62	$0.16	$11.13	$0.09	$5.16	14.07	942.64
		2012	66	$0.11	$8.30	$0.06	$3.74	13.55	958.50
		2013	63	$0.10	$7.76	$0.05	$3.69	13.13	1,021.99
		2014	63	$0.11	$7.90	$0.05	$3.82	15.67	1,113.59
		2015	65	$0.14	$9.60	$0.06	$4.46	16.97	1,152.35
		2016	64	$0.16	$11.20	$0.07	$4.95	14.77	1,020.98

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Table 3.17: Continued

			Crew share payment ($million)			Captain share payment ($million)		CV Crew payment, crab equivalent (1000 lbs)	
		Year	Vessels	Per vessel, median	Total	Per vessel, median	Total	Per vessel, median	Total
BSS	CP	98/01/04	18(8)	$0.26	$1.66	$0.09	$0.53	-	-
		2005	6	$0.07	$0.58	$0.03	$0.20	-	-
		2006	4	*	*	*	*	-	-
		2007	4	*	*	*	*	-	-
		2008	4	*	*	*	*	-	-
	CV	98/01/04	517(210)	$0.08	$19.36	$0.04	$9.34	33.92	18,059.94
		2005	150	$0.07	$10.97	$0.04	$5.64	31.02	5,335.74
		2006	74	$0.07	$6.21	$0.04	$3.10	56.65	4,787.81
		2007	65	$0.12	$9.18	$0.06	$4.36	63.39	4,701.20
		2008	74	$0.21	$16.87	$0.11	$8.03	108.04	8,833.86
	CV & CP	2009	77	$0.15	$13.48	$0.08	$5.97	97.27	7,687.66
		2010	68	$0.13	$9.71	$0.06	$4.36	88.79	6,625.45
		2011	68	$0.29	$20.76	$0.14	$9.29	104.28	7,350.30
		2012	72	$0.39	$27.88	$0.18	$12.65	164.03	11,875.33
		2013	71	$0.29	$22.80	$0.15	$10.38	119.71	9,132.92
		2014	69	$0.24	$18.12	$0.11	$8.13	97.45	7,255.43
		2015	70	$0.24	$18.62	$0.11	$7.80	117.71	8,663.67
		2016	68	$0.19	$15.11	$0.10	$6.67	72.54	5,413.76

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Table 3.17: Continued

			Crew share payment ($million)			Captain share payment ($million)		CV Crew payment, crab equivalent (1000 lbs)	
		Year	Vessels	Per vessel, median	Total	Per vessel, median	Total	Per vessel, median	Total
BST	CP	2006	1	*	*	*	*	-	-
		2007	1	*	*	*	*	-	-
		2008	1	*	*	*	*	-	-
	CV	2005	4	*	*	*	*	*	*
		2006	25	$0.00	$0.24	$0.00	$0.13	2.46	135.42
		2007	21	$0.02	$0.64	$0.01	$0.33	9.22	308.06
		2008	26	$0.01	$0.55	$0.01	$0.32	6.73	259.61
	CV & CP	2009	14	$0.03	$0.56	$0.02	$0.34	13.71	256.98
		2010	4	*	*	*	*	*	*
		2013	19	$0.02	$0.46	$0.01	$0.21	6.92	198.93
		2014	38	$0.07	$3.16	$0.03	$1.47	27.32	1,268.04
		2015	52	$0.11	$5.99	$0.05	$2.89	40.72	2,249.67
		2016	45	$0.08	$5.53	$0.04	$2.33	28.19	1,836.99
PIK	CV	98/01/04	42(42)	$0.01	$0.55	$0.01	$0.28	3.22	163.87
SMB	CP	98/01/04	2(2)	*	*	*	*	-	-
	CV	98/01/04	92(92)	$0.01	$1.21	$0.01	$0.66	4.09	429.84
		2009	7	$0.02	$0.16	$0.01	$0.07	5.97	49.67
		2010	11	$0.07	$0.95	$0.04	$0.49	13.60	163.26
		2011	17	$0.06	$1.32	$0.03	$0.62	10.69	232.83
		2012	17	$0.05	$0.88	$0.02	$0.40	10.16	197.23
		2014	4	*	*	*	*	*	*
		2015	3	*	*	*	*	*	*

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Table 3.17: Continued

			Crew share payment ($million)			Captain share payment ($million)		CV Crew payment, crab equivalent (1000 lbs)	
		Year	Vessels	Per vessel, median	Total	Per vessel, median	Total	Per vessel, median	Total
WAI	CP	98/01/04	2(1)	*	*	*	*	-	-
	CV	98/01/04	3(3)	*	*	*	*	*	*

Notes: Data shown for all CR program crab fisheries by calendar year. All dollar values are adjusted for inflation to 2016-equivalent value. Information suppressed for confidentiality where indicated by "*", and data not available where indicated by "-". Results shown for 2015 and 2016 calendar years fisheries are preliminary pending completion of data validation audit and may be revised in a subsequent update of this report. 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).

[a] No catcher/processor operations reported fishing activity in the SMB fishery from 2009 to 2012.

[b] 2001 WAI fishery was closed except for Petrel Bank test fishery.

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

Table 3.18: 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
AIG	2005	Labor total	10	35%	10	21%
		Crew	10	23%	10	14%
		Captain	10	14%	10	8%
	2006	Labor total	6	36%	6	17%
		Crew	6	25%	6	11%
		Captain	6	13%	6	6%
	2007	Labor total	6	40%	6	18%
		Crew	6	25%	6	12%
		Captain	6	13%	6	6%
	2008	Labor total	4	*	4	*
		Crew	4	*	4	*
		Captain	4	*	4	*
	2009	Labor total	4	*	4	*
		Crew	4	*	4	*
		Captain	4	*	4	*
	2010	Labor total	4	*	4	*
		Crew	4	*	4	*
		Captain	4	*	4	*
	2011	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%
	2015	Labor total	-	-	5	19%
		Crew	-	-	5	13%
		Captain	-	-	5	7%
	2016	Labor total	-	-	5	21%
		Crew	-	-	5	15%
		Captain	-	-	5	6%

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Table 3.18: Continued

			Net share distribution		Gross share distribution	
		Share	Vessels	Median share	Vessels	Median share
BBR	2005	Labor total	82	39%	83	23%
		Crew	82	25%	83	15%
		Captain	82	13%	83	8%
	2006	Labor total	78	39%	77	23%
		Crew	78	26%	77	15%
		Captain	78	13%	77	8%
	2007	Labor total	69	40%	70	21%
		Crew	69	26%	70	14%
		Captain	69	14%	70	7%
	2008	Labor total	75	39%	75	21%
		Crew	75	26%	75	13%
		Captain	75	14%	75	7%
	2009	Labor total	67	40%	67	20%
		Crew	67	26%	67	12%
		Captain	67	12%	67	6%
	2010	Labor total	62	40%	61	18%
		Crew	62	27%	61	12%
		Captain	62	13%	61	6%
	2011	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%
	2015	Labor total	-	-	62	18%
		Crew	-	-	62	11%
		Captain	-	-	62	6%
	2016	Labor total	-	-	61	19%
		Crew	-	-	61	12%
		Captain	-	-	61	6%

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Table 3.18: Continued

			Net share distribution		Gross share distribution	
		Share	Vessels	Median share	Vessels	Median share
BSS	2005	Labor total	150	40%	147	35%
		Crew	150	26%	147	23%
		Captain	150	14%	147	12%
	2006	Labor total	73	39%	73	22%
		Crew	73	26%	73	15%
		Captain	73	13%	73	7%
	2007	Labor total	63	39%	63	23%
		Crew	63	26%	63	15%
		Captain	63	13%	63	8%
	2008	Labor total	73	39%	73	23%
		Crew	73	26%	73	15%
		Captain	73	13%	73	8%
	2009	Labor total	74	39%	72	22%
		Crew	74	26%	72	15%
		Captain	74	12%	72	7%
	2010	Labor total	65	40%	65	22%
		Crew	65	27%	65	15%
		Captain	65	13%	65	7%
	2011	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%
	2015	Labor total	-	-	67	20%
		Crew	-	-	67	13%
		Captain	-	-	67	6%
	2016	Labor total	-	-	65	20%
		Crew	-	-	65	14%
		Captain	-	-	65	6%

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Table 3.18: Continued

			Net share distribution		Gross share distribution	
		Share	Vessels	Median share	Vessels	Median share
BST	2005	Labor total	4	*	3	*
		Crew	4	*	3	*
		Captain	4	*	3	*
	2006	Labor total	31	40%	24	27%
		Crew	31	26%	24	17%
		Captain	31	14%	24	9%
	2007	Labor total	24	40%	20	23%
		Crew	24	26%	20	15%
		Captain	24	14%	20	8%
	2008	Labor total	25	40%	24	22%
		Crew	25	26%	24	15%
		Captain	25	14%	24	8%
	2009	Labor total	15	40%	13	21%
		Crew	15	26%	13	15%
		Captain	15	12%	13	7%
	2010	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%
	2015	Labor total	-	-	51	23%
		Crew	-	-	51	15%
		Captain	-	-	51	8%
	2016	Labor total	-	-	42	24%
		Crew	-	-	42	17%
		Captain	-	-	42	8%

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Table 3.18: Continued

			Net share distribution		Gross share distribution	
		Share	Vessels	Median share	Vessels	Median share
SMB	2009	Labor total	7	40%	7	17%
		Crew	7	26%	7	13%
		Captain	7	14%	7	6%
	2010	Labor total	11	40%	10	20%
		Crew	11	27%	10	14%
		Captain	11	14%	10	6%
	2011	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	*
	2015	Labor total	-	-	3	*
		Crew	-	-	3	*
		Captain	-	-	3	*

Notes: Data shown by calendar year. Information suppressed for confidentiality where indicated by "*", and data not available where indicated by "-". Results exclude crab CPs and are shown for crab CVs only. Net revenue share percentages are estimated as the average over vessel-level net share percentages in EDR data from 1998-2011, and represent crew and captain percentages of ex-vessel revenue after deductions for vessel operating expenses and crew-related costs, with the residual percentage (100% - Labor total %) accruing to the vessel owner. Gross revenue share percentages represent crew and captain labor payments as a percentage of gross ex-vessel value, before deductions for vessel operating expenses and payments to harvest quota share-holders. Gross revenue share cannot be calculated for vessel owners with available data. 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 and crew 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 non-zero values are reported for both labor categories.

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

Table 3.19: Harvesting Sector Activity Days, CR Program Fisheries

			Vessels	Days active–total (median)[b]		Days fishing–total (median)[c]	
		Year		EDR	CIF	EDR	CIF
AIG	CP	98/01/04	4(2)	*	-	-	-
		2005	2	*	-	*	-
		2006	1	*	-	*	-
		2007	1	*	*	*	*
		2008	1	*	*	*	*
	CV	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	*	527(114)	*	353(74)
	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)
		2015	5	-	673(74)	-	437(48)
		2016	5	-	758(109)	-	493(60)
BBR	CP	98/01/04	20(9)	59(7)	-	-	-
		2005	5	162(23)	-	98(19)	-
		2006	3	*	-	*	-
		2007	3	*	89(24)	*	61(19)
		2008	3	*	104(32)	*	80(23)
	CV	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)
		2015	64	-	954(15)	-	539(8)
		2016	63	-	774(12)	-	422(6)

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Table 3.19: Continued

			Vessels	Days active–total (median)[b]		Days fishing–total (median)[c]	
		Year		EDR	CIF	EDR	CIF
BSS	CP	98/01/04	18(8)	239(39)	-	-	-
		2005	6	189(28)	-	80(8)	-
		2006	4	*	-	*	-
		2007	4	*	148(36)	*	115(28)
		2008	4	*	260(66)	*	204(54)
	CV	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)
		2015	69	-	4,294(62)	-	2,947(41)
		2016	67	-	2,805(40)	-	1,922(27)
BST	CP	2005	1	*	-	*	-
		2006	1	*	-	*	-
		2007	1	*	*	*	*
		2008	1	*	*	*	*
	CV	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	*	59(14)	*	33(8)
		2013	18	-	279(12)	-	200(9)
		2014	38	-	1,245(28)	-	905(22)
		2015	52	-	2,728(38)	-	1,928(27)
		2016	44	-	1,460(27)	-	1,080(20)

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Table 3.19: Continued

			Vessels	Days active–total (median)[b]		Days fishing–total (median)[c]	
		Year		EDR	CIF	EDR	CIF
SMB	CP	98/01/04	2(2)	*	-	-	-
	CV	98/01/04	93(93)	1,630(17)	-	-	-
		2009	7	184(19)	166(16)	133(10)	112(11)
		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	-	164(41)	-	115(28)
		2015	3	-	96(33)	-	56(18)
WAI	CP	98/01/04	2(1)	*	-	-	-
	CV	98/01/04	3(3)	*	-	-	-

Notes: Data shown by calendar year. Information suppressed for confidentiality where indicated by "*", and data not available where indicated by "-".
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.
[a] 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 3.20: Food and Provisions Costs, CR Program Fisheries

	Year	Total Costs ($1,000)	Median Costs ($1,000)	Vessels
All CR Fisheries	98/01/04	$2,688	$8	647(258)
	2005	$1,519	$6	156
	2006	$946	$8	70
	2007	$851	$10	61
	2008	$1,576	$15	69
	2009	$936	$12	60
	2010	$1,098	$14	49
	2011	$878	$12	52
	2012	$1,893	$8	81
	2013	$1,316	$7	76
	2014	$1,596	$6	72
	2015	$1,954	$8	77
	2016	$1,466	$6	75
AIG	2012	$150	$18	6
	2013	$148	$20	6
	2014	$190	$36	5
	2015	$240	$39	5
	2016	$298	$65	5
BBR	2012	$360	$5	62
	2013	$334	$4	59
	2014	$412	$5	59
	2015	$404	$6	60
	2016	$325	$4	61
BSS	2012	$1,260	$15	70
	2013	$770	$10	68
	2014	$761	$9	63
	2015	$816	$12	65
	2016	$559	$7	62
BST	2013	$65	$3	16
	2014	$225	$4	35
	2015	$493	$6	46
	2016	$284	$6	37
SMB	2012	$122	$6	16
	2014	*	*	2
	2015	*	*	1

Notes: 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.

[a] Beginning in 2012, vessel food and provisions expenses are reported on a by-fishery basis. Collection of processing employee provisions costs paid by shoreside processors was discontinued in ,2011; see earlier volumes of this report for processing plant provisions costs for 1998 through 2011.

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

Table 3.21: Fishery Expenditures - Bait Usage and Costs, CR Program Fisheries

			Vessels	Bait costs ($1000)		Bait usage (1000 lbs)		Price ($/lb)
		Year		Per vessel, median	Total	Per vessel, median	Total	Weighted average
All CR	All vessels	98/01/04	610(246)	12.93	4,705	$21	$7,980	$0.59
		2005	169	9.43	2,558	$17	$4,453	$0.57
		2006	99	13.04	1,967	$24	$3,659	$0.54
		2007	86	16.20	1,932	$30	$3,676	$0.53
		2008	96	20.22	2,637	$33	$4,474	$0.59
		2009	89	23.92	2,834	$38	$4,719	$0.60
		2010	79	26.53	2,825	$43	$4,614	$0.61
		2011	76	25.24	2,582	$36	$4,086	$0.63
		2012	83	11.80	3,034	-	-	-
		2013	81	12.59	3,019	-	-	-
		2014	76	11.67	3,605	-	-	-
		2015	82	12.69	4,556	-	-	-
		2016	80	12.64	3,325	-	-	-
AIG	CP	98/01/04	4(2)	*	*	*	*	*
		2005	1	*	*	*	*	*
		2006	1	*	*	*	*	*
		2007	1	*	*	*	*	*
		2008	1	*	*	*	*	*
	CV	98/01/04	50(21)	33.79	1,015	$60	$1,825	$0.56
		2005	9	44.14	458	$79	$863	$0.53
		2006	6	76.07	399	$142	$778	$0.51
		2007	6	40.05	297	$84	$741	$0.40
		2008	4	*	*	*	*	*
	All vessels	2009	7	72.66	639	$169	$1,137	$0.56
		2010	6	108.06	707	$215	$1,259	$0.56
		2011	5	162.18	657	$291	$1,172	$0.56
		2012	6	80.25	569	-	-	-
		2013	6	113.18	695	-	-	-
		2014	5	117.54	784	-	-	-
		2015	5	98.05	984	-	-	-
		2016	5	82.57	771	-	-	-

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Table 3.21: Continued

			Vessels	Bait costs ($1000)		Bait usage (1000 lbs)		Price ($/lb)
		Year		Per vessel, median	Total	Per vessel, median	Total	Weighted average
BBR	CP	98/01/04	15(8)	7.51	45	$15	$90	$0.50
		2005	4	*	*	*	*	*
		2006	3	*	*	*	*	*
		2007	2	*	*	*	*	*
		2008	3	*	*	*	*	*
	CV	98/01/04	546(227)	4.99	1,064	$8	$1,742	$0.61
		2005	82	6.62	845	$13	$1,380	$0.61
		2006	73	7.28	636	$13	$1,162	$0.55
		2007	70	11.07	850	$19	$1,488	$0.57
		2008	76	11.89	1,097	$19	$1,683	$0.65
	All vessels	2009	68	13.10	1,021	$20	$1,666	$0.61
		2010	61	13.93	1,031	$23	$1,625	$0.63
		2011	61	8.65	671	$10	$961	$0.70
		2012	64	6.50	477	-	-	-
		2013	63	7.74	607	-	-	-
		2014	63	9.20	668	-	-	-
		2015	64	10.07	690	-	-	-
		2016	64	8.38	608	-	-	-
BSS	CP	98/01/04	13(7)	14.75	79	$28	$147	$0.54
		2005	5	11.17	52	$23	$102	$0.51
		2006	4	*	*	*	*	*
		2007	3	*	*	*	*	*
		2008	4	*	*	*	*	*
	CV	98/01/04	448(190)	8.88	2,074	$14	$3,270	$0.63
		2005	148	6.18	1,036	$10	$1,758	$0.59
		2006	74	7.60	596	$13	$1,041	$0.57
		2007	64	7.02	477	$12	$869	$0.55
		2008	72	8.68	752	$16	$1,288	$0.58
	All vessels	2009	75	11.09	977	$18	$1,616	$0.60
		2010	67	11.24	865	$18	$1,374	$0.63
		2011	67	13.20	943	$19	$1,504	$0.63
		2012	72	22.67	1,738	-	-	-
		2013	72	18.24	1,572	-	-	-
		2014	69	21.64	1,562	-	-	-
		2015	69	25.81	1,937	-	-	-
		2016	67	17.06	1,260	-	-	-

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Table 3.21: Continued

		Year	Vessels	Bait costs ($1000)		Bait usage (1000 lbs)		Price ($/lb)
				Per vessel, median	Total	Per vessel, median	Total	Weighted average
BST	CP	2006	1	*	*	*	*	*
		2007	1	*	*	*	*	*
		2008	1	*	*	*	*	*
	CV	2005	4	*	*	*	*	*
		2006	15	1.00	25	$2	$41	$0.61
		2007	16	4.36	87	$8	$191	$0.46
		2008	21	4.81	133	$8	$230	$0.58
	All vessels	2009	12	5.91	133	$10	$204	$0.65
		2010	4	*	*	*	*	*
		2013	17	6.10	145	-	-	-
		2014	37	8.87	513	-	-	-
		2015	51	9.53	931	-	-	-
		2016	43	13.52	686	-	-	-
PIK	CV	98/01/04	35(35)	4.70	167	$7	$249	$0.67
SMB	CV	98/01/04	72(72)	5.98	431	$9	$668	$0.65
		2009	7	4.81	64	$8	$96	$0.66
		2010	13	11.75	206	$22	$329	$0.63
		2011	18	12.84	311	$17	$448	$0.69
	All vessels	2012	17	12.83	250	-	-	-
		2014	4	*	*	-	-	-
		2015	2	*	*	-	-	-
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 column 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. Starting in 2009, data are reported over all harvesting sectors (CVCP) to preserve confidentiality. Totals for 98/01/04 represent total annual bait pounds purchased or bait costs averaged across years with participating/reporting vessels. Changes in the reporting of bait quantity and costs in the EDR limit the comparability of bait statistics over the available time series. Beginning in 2006, EDR submitters were directed to report only pounds and costs of bait purchased during the reporting year; treatment of bait caught by the vessel or purchased in the prior year was not specified in EDR reporting instructions for 2005 and earlier years. Additionally, bait quantity reporting is differentiated by species and fishery in all years of EDR data collection, whereas bait costs are reported only by fishery for the years 1998-2004 and by fishery and species together for 2005 and later years. Methods for generating price per pound statistics differs across reporting years. For 1998 - 2004 statistics, reported bait quantities are aggregated by submitter and fishery to match reported bait costs; 2005 and later bait price statistics reflect the exclusion of quantity-cost observations that indicate zero or no reported costs, as well as of observations where the quantity of bait is less than 100 pounds. Bait quantity reporting was dropped from the EDR beginning in 2012. a No catcher/processor operations reported fishing activity in the SMB fishery from 2009 to 2012.

Source: NMFS AFSC BSAI Crab Economic Data.

Table 3.22: Fishery Expenditures -Vessel Fuel Costs, CR Program Fisheries

		Fuel expenses		Gallons purchased		Fuel price
	Year	Total ($1,000)	Median ($1,000)	Total (1,000s)	Median (1,000s)	Average
AIG	2012	$1,294	$243	355	70	$3.65
	2013	$1,726	$314	455	85	$3.80
	2014	$1,415	$285	386	75	$3.67
	2015	$1,259	$205	431	78	$2.92
	2016	$1,165	$214	531	101	$2.19
BBR	2012	$3,158	$34	731	8	$4.32
	2013	$3,463	$38	813	9	$4.26
	2014	$2,610	$31	681	8	$3.83
	2015	$2,022	$25	670	8	$3.02
	2016	$1,380	$19	573	8	$2.41
BSS	2012	$14,684	$167	3,431	38	$4.28
	2013	$11,359	$120	2,645	28	$4.29
	2014	$8,354	$101	2,172	27	$3.85
	2015	$7,454	$90	2,398	30	$3.11
	2016	$3,994	$54	1,667	20	$2.40
BST	2013	$540	$23	137	6	$3.93
	2014	$2,096	$46	546	12	$3.84
	2015	$3,803	$47	1,208	16	$3.15
	2016	$2,022	$38	836	16	$2.42
SMB	2012	$1,303	$85	296	19	$4.40
	2014	*	*	*	*	*
	2015	*	*	*	*	*

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

Table 3.23: Average Monthly Fuel Prices For Selected Ports

	Port	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1999	Dutch Harbor	-	$1.20	$1.15	$1.35	$1.31	$1.31	$1.45	$1.51	$1.52	$1.50	$1.49	$1.48
	Kodiak	-	$1.08	$1.08	$1.28	$1.37	$1.37	$1.47	$1.48	$1.50	$1.50	$1.52	$1.53
	Seattle	$0.74	$0.81	$0.74	$1.17	$0.88	$1.06	$1.24	$1.08	$1.25	$1.19	$1.13	$1.17
2000	Dutch Harbor	$1.48	$1.61	$1.96	$1.96	$1.76	-	$1.78	$1.80	$1.91	$2.10	$2.16	$2.16
	Kodiak	$1.49	$1.62	$1.89	$1.89	$1.85	$1.79	$1.85	$1.85	$1.95	$2.05	$2.17	$2.17
	Seattle	$1.29	$1.33	$1.47	$1.47	$1.29	$1.30	$1.49	$1.34	$1.88	$1.88	$1.79	$1.93
2001	Adak	-	-	$2.04	$1.91	$1.91	$1.85	$1.91	$1.75	$1.75	$1.85	-	$1.69
	Dutch Harbor	$2.12	$1.99	$1.99	$1.87	$1.85	$1.84	$1.85	$1.74	$1.81	$1.83	$1.74	$1.63
	Kodiak	$2.12	$2.04	$1.94	$1.81	$1.81	$1.81	$1.81	$1.78	$1.81	$1.72	$1.67	$1.49
	Seattle	$1.74	$1.47	$1.39	$1.44	$1.44	$1.40	$1.29	$1.24	$1.50	$1.15	$1.13	$0.89
2002	Adak	$1.66	$1.66	$1.66	$1.66	$1.78	-	-	$1.66	$1.77	$1.90	-	-
	Dutch Harbor	$1.51	$1.30	$1.29	$1.42	$1.49	$1.49	$1.49	$1.49	$1.55	$1.62	$1.65	$1.68
	Kodiak	$1.45	$1.36	$1.35	$1.39	$1.44	$1.44	$1.66	$1.43	$1.50	$1.54	$1.54	$1.54
	Seattle	$0.99	$0.90	$1.12	$1.23	$1.30	$1.29	$1.30	$1.28	$1.47	$1.31	$1.45	$1.29
2003	Adak	$1.86	$1.86	-	$2.14	$2.05	$2.05	$1.99	$1.99	$1.99	$1.99	$1.99	$1.99
	Dutch Harbor	$1.65	$1.72	$1.87	$1.98	$1.88	$1.85	$1.85	$1.85	$1.92	$1.92	$1.92	$1.92
	Kodiak	$1.52	$1.58	$1.77	$1.94	$1.80	$1.75	$1.75	$1.76	$1.73	$1.90	$1.73	$1.73
	Seattle	$1.46	$1.48	$2.15	$1.77	$1.52	$1.47	$1.61	$1.59	$1.58	$1.50	$1.53	$1.55
2004	Adak	$2.00	$2.00	$2.00	-	$2.18	$2.43	$2.43	$2.43	-	$2.56	$2.62	$2.62
	Dutch Harbor	$1.87	$1.87	$2.04	$1.99	$2.05	$2.21	$2.21	$2.30	$2.31	$2.42	$2.50	$2.50
	Kodiak	$1.68	$1.72	$1.85	$1.87	$2.03	$2.20	$2.23	$2.22	$2.23	$2.29	$2.45	$2.47
	Seattle	$1.60	$1.76	$1.85	$1.89	$2.20	$2.12	$2.07	$2.09	$2.11	$2.47	$2.50	$2.10
2005	Adak	$2.54	$2.54	$2.60	$2.67	-	$3.20	$2.78	$2.84	$3.03	$3.20	$3.20	$3.20
	Dutch Harbor	$2.42	$2.42	$2.52	$2.60	$2.66	$2.66	$2.66	$2.78	$3.03	$3.05	$3.13	$3.11
	Kodiak	$2.32	$2.32	$2.38	$2.55	$2.70	$2.70	$2.69	$2.70	$3.00	$3.24	$3.19	$3.14
	Seattle	$2.01	$2.22	$2.70	$2.76	$2.70	$2.51	$2.69	$2.87	$3.47	$3.41	$3.06	$2.68

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Table 3.23: Continued

	Port	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2006	Adak	-	$3.00	$3.00	-	$3.99	$3.31	$3.31	$3.31	$3.51	$3.51	$3.45	$3.45
	Dutch Harbor	$2.90	$2.88	$2.88	$2.88	$3.10	$3.17	$3.17	$3.24	$3.34	$3.18	$3.03	$3.00
	Kodiak	$2.91	$2.93	$2.92	$2.95	$3.15	$3.15	$3.16	$3.22	$3.39	$3.22	$2.98	$3.04
	Seattle	$2.72	$2.57	$2.96	$2.85	$3.31	$3.40	$3.26	$3.47	$3.54	$2.88	$2.90	$3.16
2007	Adak	$3.42	$3.42	$3.15	$3.04	$3.27	$3.27	$3.27	$3.27	$3.27	$3.35	$3.42	$3.66
	Dutch Harbor	$2.92	$2.87	$2.84	$2.86	$3.00	$3.10	$3.10	$3.12	$3.21	$3.22	$3.42	$3.64
	Kodiak	$2.90	$2.87	$2.84	$2.84	$2.96	$3.07	$3.07	$3.07	$3.24	$3.19	$3.36	$3.43
	Seattle	$3.04	$2.97	$2.84	$3.09	$3.18	$3.18	$3.25	$3.30	$3.17	$3.40	$3.90	$3.69
2008	Adak	$3.59	$3.59	$3.66	$4.03	-	$4.65	$5.04	$5.21	$5.21	$5.21	$5.21	$5.21
	Dutch Harbor	$3.35	$3.37	$3.60	$4.19	-	$4.85	$5.01	$5.17	$4.99	$4.82	$4.42	$4.31
	Kodiak	$3.38	$3.43	$3.55	$4.25	-	$4.76	$4.92	$5.20	$5.03	$4.75	$4.46	$3.69
	Seattle	$3.73	$3.56	$3.95	$4.21	-	$4.98	$4.95	$4.83	$4.56	$3.52	$3.30	$2.73
2009	Adak	$5.17	$3.71	$3.60	$3.49	$3.49	$3.21	$3.21	$3.21	-	$3.32	$3.32	$3.32
	Dutch Harbor	$3.40	$3.01	$2.84	$2.84	$2.84	$2.84	$3.10	$3.06	$3.10	$3.22	$3.22	$3.28
	Kodiak	$3.21	$3.05	$2.88	$2.77	$2.77	$2.88	$2.99	$2.99	$3.03	$3.21	$3.07	$3.10
	Seattle	$2.54	$2.40	$2.23	$2.32	$2.52	$2.66	$2.67	$2.71	$3.01	$2.88	$3.00	$3.00
2010	Adak	$3.28	$3.28	-	$3.28	$3.43	$3.43	$3.43	$3.43	$3.50	$3.50	$3.67	$3.67
	Dutch Harbor	$3.19	$3.24	$3.19	$3.26	$3.35	$3.33	$3.43	$3.35	$3.35	$3.35	$3.51	$3.51
	Kodiak	$3.06	$3.23	$3.17	$3.28	$3.45	$3.39	$3.29	$3.28	$3.28	$3.31	$3.45	$3.45
	Seattle	$3.10	$2.94	$3.02	$3.24	$3.46	$3.20	$3.04	$3.17	$3.29	$3.18	$3.43	$3.37
2011	Adak	$3.59	$3.78	$3.97	$4.29	$4.62	$4.46	-	$4.51	$4.40	$4.40	$4.53	$4.72
	Dutch Harbor	$3.44	$3.55	$3.66	$4.04	$4.12	$4.14	$4.14	$4.14	$4.14	$4.14	$4.14	$4.14
	Kodiak	$3.38	$3.49	$3.53	$4.03	$4.12	$4.20	$4.16	$4.18	$4.11	$4.18	$4.15	$4.17
	Seattle	$3.40	$3.58	$4.03	$4.25	$4.35	$4.24	$3.93	$4.04	$4.26	$3.94	$4.04	$3.96

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Table 3.23: Continued

	Port	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2012	Adak	$4.64	-	-	-	$4.60	$4.60	$4.60	$4.60	$4.60	$4.60	$4.60	$4.60
	Dutch Harbor	$4.07	$4.07	$4.28	$4.28	$4.38	$4.35	$4.17	$4.07	$4.17	$4.23	$4.23	$4.23
	Kodiak	$3.97	$4.01	$4.10	$4.29	$4.37	$4.32	$4.15	$3.99	$4.12	$4.27	$4.21	$4.21
	Seattle	$3.74	$3.86	$4.21	$4.36	$4.32	$3.78	$3.48	$3.98	$4.33	$4.03	$4.00	$3.90
2013	Adak	-	$4.52	$4.52	-	$4.57	$4.57	-	$4.57	$4.57	$4.57	$4.57	$4.57
	Dutch Harbor	$4.16	$4.11	$4.17	$4.16	$4.15	$4.16	$4.16	$4.17	$4.19	$4.16	$4.15	$4.09
	Kodiak	$4.10	$4.09	$4.15	$4.14	$4.15	$4.16	$4.13	$4.16	$4.19	$4.19	$4.12	$4.10
	Seattle	$3.72	$3.85	$3.87	$3.86	$3.69	$3.72	$3.68	$3.85	$3.89	$3.76	$3.75	$3.82
2014	Adak	-	$4.48	$4.48	$4.48	-	$4.48	$4.48	$4.48	$4.48	-	-	-
	Dutch Harbor	$4.01	$3.93	$3.96	$3.95	$3.93	$3.93	$4.05	$4.04	$4.06	$4.04	$3.90	$3.83
	Kodiak	$4.03	$4.07	$3.97	$3.97	$3.98	$4.03	$4.08	$3.96	$3.98	$3.93	$3.85	$3.71
	Seattle	$3.66	$3.75	$3.76	$3.77	$3.70	$3.76	$3.77	$3.73	$4.01	$3.64	$3.37	$3.26
2015	Adak	$4.44	$4.44	$4.44	$4.44	$4.43	$4.44	$4.44	-	$4.00	-	$3.79	-
	Dutch Harbor	$3.55	$3.44	$3.39	$3.30	$3.29	$3.29	$3.37	$3.29	$3.03	$3.03	$3.03	$3.03
	Kodiak	$3.48	$3.01	$3.01	$3.02	$3.03	$3.07	$3.17	$3.19	$3.12	$2.90	$2.90	$2.75
	Seattle	$2.70	$2.43	$2.74	$2.45	$2.75	$2.97	$2.87	$2.60	$2.44	$2.43	$2.34	$2.15
2016	Adak	$3.75	$3.25	$3.25	-	$3.25	$3.25	$3.25	$3.05	$3.05	$3.05	$3.05	$3.05
	Dutch Harbor	$2.60	$2.45	$2.52	$2.41	$2.30	$2.40	$2.43	$2.50	$2.50	$2.50	$2.50	$2.50
	Kodiak	$2.57	$2.39	$2.23	$2.32	$2.24	$2.39	$2.51	$2.52	$2.49	$2.49	$2.59	$2.60
	Seattle	$1.97	$1.81	$1.81	$1.88	$2.16	$2.38	$2.44	$2.13	$2.28	$2.25	$2.54	$2.32

Notes:

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

Table 3.24: Vessel-level mean operating costs and revenue residuals, BBR, BSS, and all CRP fisheries in aggregate, 2012 through 2016

		2012		2013		2014		2015		2016	
	variable	Pounds, Value (1,000)	% of Gross	Pounds, Value (1,000)	% of Gross	Pounds, Value (1,000)	% of Gross	Pounds, Value (1,000)	% of Gross	Pounds, Value (1,000)	% of Gross
BBR	Number of active vessels	64		63		63		62		60	
	Pounds landed	121		135		156		155		137	
	Quota pounds leased (% of landed)	73	(57%)	97	(65%)	113	(63%)	104	(62%)	94	(63%)
	Gross ex-vessel revenue	$1008		$992		$1051		$1256		$1462	
	—- Quota lease cost	($388)	(37%)	($463)	(42%)	($492)	(40%)	($543)	(39%)	($643)	(39%)
	Gross residual after lease cost	$620	63%	$530	58%	$559	60%	$714	61%	$818	61%
	——— Provisions	($5.56)	(0.6%)	($5.25)	(0.5%)	($6.50)	(0.6%)	($6.31)	(0.5%)	($5.08)	(0.4%)
	——— Bait	($7.36)	(0.7%)	($9.54)	(1.0%)	($10.53)	(1.0%)	($10.98)	(0.9%)	($9.13)	(0.6%)
	——— Fuel	($48.76)	(4.8%)	($54.44)	(5.5%)	($41.18)	(3.9%)	($31.77)	(2.5%)	($21.99)	(1.5%)
	—- Non-labor vessel cost (Total)	($62)	(7%)	($69)	(7%)	($58)	(6%)	($49)	(5%)	($36)	(3%)
	Gross residual (non-labor)	$559	56%	$460	51%	$501	55%	$664	56%	$782	59%
	—- Labor cost	($187)	(21%)	($183)	(20%)	($187)	(20%)	($219)	(19%)	($291)	(22%)
	– Harvesting cost (Total)	($636)	(65%)	($715)	(70%)	($737)	(65%)	($811)	(63%)	($971)	(63%)
	Gross ex-vessel profit	$372	35%	$278	30%	$314	35%	$446	37%	$491	37%
BSS	Number of active vessels	72		71		69		67		65	
	Pounds landed	1223		971		807		884		579	
	Quota pounds leased (% of landed)	807	(62%)	708	(66%)	613	(69%)	623	(66%)	416	(65%)
	Gross ex-vessel revenue	$2759		$2324		$1954		$1821		$1581	
	—- Quota lease cost	($865)	(29%)	($819)	(31%)	($697)	(32%)	($623)	(31%)	($560)	(31%)
	Gross residual after lease cost	$1894	71%	$1505	69%	$1257	68%	$1198	69%	$1021	69%
	——— Provisions	($17.29)	(0.6%)	($10.63)	(0.5%)	($10.96)	(0.6%)	($11.17)	(0.6%)	($7.81)	(0.5%)
	——— Bait	($23.85)	(0.9%)	($21.73)	(0.9%)	($22.50)	(1.1%)	($27.14)	(1.5%)	($18.29)	(1.2%)
	——— Fuel	($201.49)	(7.3%)	($158.44)	(6.8%)	($120.34)	(6.2%)	($105.36)	(5.8%)	($58.17)	(3.7%)
	—- Non-labor vessel cost (Total)	($243)	(10%)	($191)	(9%)	($154)	(9%)	($144)	(9%)	($84)	(6%)
	Gross residual (non-labor)	$1651	61%	$1314	60%	$1103	59%	$1054	60%	$937	63%
	—- Labor cost	($566)	(22%)	($473)	(22%)	($385)	(22%)	($354)	(21%)	($324)	(23%)
	– Harvesting cost (Total)	($1673)	(61%)	($1484)	(62%)	($1236)	(63%)	($1122)	(61%)	($968)	(60%)
	Gross ex-vessel profit	$1086	39%	$840	39%	$718	37%	$700	39%	$613	40%

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Table 3.24: Continued

	variable	2012 Pounds, Value (1,000)	2012 % of Gross	2013 Pounds, Value (1,000)	2013 % of Gross	2014 Pounds, Value (1,000)	2014 % of Gross	2015 Pounds, Value (1,000)	2015 % of Gross	2016 Pounds, Value (1,000)	2016 % of Gross
	Number of active vessels	83		81		76		80		78	
	Pounds landed	1246		1037		1053		1124		794	
	Quota pounds leased (% of landed)	825	(64%)	754	(67%)	802	(68%)	811	(69%)	598	(69%)
	Gross ex-vessel revenue	$3546		$3124		$3253		$3317		$3242	
	—- Quota lease cost	($1168)	(31%)	($1167)	(33%)	($1215)	(33%)	($1170)	(32%)	($1219)	(34%)
	Gross residual after lease cost	$2378	69%	$1957	67%	$2039	67%	$2147	67%	$2023	66%
All CRP	——— Provisions	($22.52)	(0.6%)	($16.00)	(0.5%)	($20.88)	(0.6%)	($23.12)	(0.7%)	($17.81)	(0.6%)
	——— Bait	($36.11)	(1.0%)	($36.73)	(1.2%)	($47.15)	(1.4%)	($54.85)	(1.6%)	($40.81)	(1.3%)
	——— Fuel	($243.29)	(6.9%)	($208.90)	(6.7%)	($191.80)	(5.9%)	($175.94)	(5.3%)	($105.86)	(3.3%)
	—- Non-labor vessel cost (Total)	($302)	(10%)	($262)	(9%)	($260)	(9%)	($254)	(9%)	($164)	(6%)
	Gross residual (non-labor)	$2076	59%	$1696	58%	$1779	58%	$1894	59%	$1858	60%
	—- Labor cost	($722)	(21%)	($627)	(22%)	($632)	(21%)	($649)	(21%)	($679)	(24%)
	– Harvesting cost (Total)	($2192)	(63%)	($2055)	(64%)	($2106)	(63%)	($2073)	(62%)	($2063)	(64%)
	Gross ex-vessel profit	$1354	37%	$1069	36%	$1147	37%	$1245	37%	$1179	36%

Notes: Data shown for all CR program crab fisheries by calendar year. All dollar values are adjusted for inflation to 2016-equivalent value. Information suppressed for confidentiality where indicated by "*", and data not available where indicated by "-". Results shown for 2015 and 2016 calendar years fisheries are preliminary pending completion of data validation audit and may be revised in a subsequent update of this report. Cost and revenue values are shown in $1000. Vessel-level mean monetary and percentage statistics are calculated across all included vessels. Data reflect total commercial volume and value across all management programs (LLP/open access, IFQ, CDQ, ACA) inclusive of all harvesting sector production; approximation of ex-vessel sale value of CP and catcher-seller volume is incorporated in revenue total by multiplying volume of retained catch by the weighted average ex-vessel sale price sourced from CV sector EDR data. Note that cost information reported in the crab EDR data collection program is limited; vessel operating (i.e., variable) costs are not comprehensive, and fixed cost and capital expenditures are not collected. As a result, cost and revenue residual aggregates shown in table represent partial indices of costs and net earnings, and estimated gross profit statisitics represent upper bound approximations of gross profit. This value does not take into account fixed, overhead, finance/interest, and associated costs and is not a measure of vessel-level net profit.

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

Table 3.25: Fleet-level aggregate operating costs and revenue residuals, BBR, BSS, and all CRP fisheries in aggregate, 2012 through 2016

	variable	2012 Pounds, Value (million)	2012 % of Gross	2013 Pounds, Value (million)	2013 % of Gross	2014 Pounds, Value (million)	2014 % of Gross	2015 Pounds, Value (million)	2015 % of Gross	2016 Pounds, Value (million)	2016 % of Gross
BBR	Number of active vessels	64	-	63	-	63	-	62	-	60	-
	Pounds landed, million	7.8	-	8.5	-	9.8	-	9.6	-	8.2	-
	IFQ leased (% of landed)	4.7	60%	6.1	72%	7.1	72%	6.5	67%	5.7	69%
	Gross ex-vessel revenue	$64.5	-	$62.5	-	$66.2	-	$77.9	-	$87.7	-
	—- Non-labor vessel cost (Total)	($3.9)	(6%)	($4.4)	(7%)	($3.7)	(6%)	($3.0)	(4%)	($2.2)	(2%)
	——— Provisions	($0.4)	(1%)	($0.3)	(1%)	($0.4)	(1%)	($0.4)	(0%)	($0.3)	(0%)
	——— Bait	($0.5)	(1%)	($0.6)	(1%)	($0.7)	(1%)	($0.7)	(1%)	($0.5)	(1%)
	——— Fuel	($3.1)	(5%)	($3.4)	(5%)	($2.6)	(4%)	($2.0)	(3%)	($1.3)	(2%)
	Gross residual (non-labor)	$60.6	94%	$58.1	93%	$62.5	94%	$74.9	96%	$85.5	98%
	—- Labor cost	($11.9)	(19%)	($11.5)	(18%)	($11.8)	(18%)	($13.6)	(17%)	($17.5)	(20%)
	– Harvesting cost (Total)	($15.9)	(25%)	($15.9)	(25%)	($15.4)	(23%)	($16.6)	(21%)	($19.6)	(22%)
	Gross ex-vessel profit	$48.6	75%	$46.6	75%	$50.8	77%	$61.3	79%	$68.1	78%
	– Gross returns to vessel sector	$23.8	49%	$17.5	38%	$19.8	39%	$27.6	45%	$29.5	43%
	– Lease royalties (QS sector)	$24.8	51%	$29.1	62%	$31.0	61%	$33.7	55%	$38.6	57%
BSS	Number of active vessels	72	-	71	-	69	-	67	-	65	-
	Pounds landed, million	88.1	-	68.9	-	55.7	-	59.3	-	37.7	-
	IFQ leased (% of landed)	58.1	66%	50.3	73%	42.3	76%	41.7	70%	27.0	72%
	Gross ex-vessel revenue	$198.6	-	$165.0	-	$134.8	-	$122.0	-	$102.8	-
	—- Non-labor vessel cost (Total)	($17.5)	(9%)	($13.5)	(8%)	($10.6)	(8%)	($9.6)	(8%)	($5.5)	(5%)
	——— Provisions	($1.2)	(1%)	($0.8)	(0%)	($0.8)	(1%)	($0.7)	(1%)	($0.5)	(0%)
	——— Bait	($1.7)	(1%)	($1.5)	(1%)	($1.6)	(1%)	($1.8)	(1%)	($1.2)	(1%)
	——— Fuel	($14.5)	(7%)	($11.2)	(7%)	($8.3)	(6%)	($7.1)	(6%)	($3.8)	(4%)
	Gross residual (non-labor)	$181.2	91%	$151.5	92%	$124.2	92%	$112.4	92%	$97.3	95%
	—- Labor cost	($40.7)	(20%)	($33.6)	(20%)	($26.6)	(20%)	($23.7)	(19%)	($21.1)	(21%)
	– Harvesting cost (Total)	($58.2)	(29%)	($47.2)	(29%)	($37.2)	(28%)	($33.4)	(27%)	($26.5)	(26%)
	Gross ex-vessel profit	$140.4	71%	$117.8	71%	$97.6	72%	$88.7	73%	$76.2	74%
	– Gross returns to vessel sector	$78.2	56%	$59.7	51%	$49.5	51%	$46.9	53%	$39.8	52%
	– Lease royalties (QS sector)	$62.3	44%	$58.2	49%	$48.1	49%	$41.8	47%	$36.4	48%

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Table 3.25: Continued

	variable	2012 Pounds, Value (million)	2012 % of Gross	2013 Pounds, Value (million)	2013 % of Gross	2014 Pounds, Value (million)	2014 % of Gross	2015 Pounds, Value (million)	2015 % of Gross	2016 Pounds, Value (million)	2016 % of Gross
All CRP	Number of active vessels	83	-	81	-	76	-	80	-	78	-
	Pounds landed, million	103.4	-	84.0	-	80.1	-	89.9	-	61.9	-
	IFQ leased (% of landed)	68.5	66%	61.1	73%	61.0	76%	64.9	72%	46.7	75%
	Gross ex-vessel revenue	$294.4	-	$253.0	-	$247.3	-	$265.4	-	$252.8	-
	—- Non-labor vessel cost (Total)	($25.1)	(9%)	($21.2)	(8%)	($19.7)	(8%)	($20.3)	(8%)	($12.8)	(5%)
	——— Provisions	($1.9)	(1%)	($1.3)	(1%)	($1.6)	(1%)	($1.8)	(1%)	($1.4)	(1%)
	——— Bait	($3.0)	(1%)	($3.0)	(1%)	($3.6)	(1%)	($4.4)	(2%)	($3.2)	(1%)
	——— Fuel	($20.2)	(7%)	($16.9)	(7%)	($14.6)	(6%)	($14.1)	(5%)	($8.3)	(3%)
	Gross residual (non-labor)	$269.3	91%	$231.8	92%	$227.5	92%	$245.1	92%	$240.0	95%
	—- Labor cost	($59.9)	(20%)	($50.8)	(20%)	($48.0)	(19%)	($51.9)	(20%)	($53.0)	(21%)
	– Harvesting cost (Total)	($85.0)	(29%)	($71.9)	(28%)	($67.8)	(27%)	($72.2)	(27%)	($65.8)	(26%)
	Gross ex-vessel profit	$209.4	71%	$181.1	72%	$179.5	73%	$193.2	73%	$187.0	74%
	– Gross returns to vessel sector	$112.4	54%	$86.6	48%	$87.2	49%	$99.6	52%	$91.9	49%
	– Lease royalties (QS sector)	$97.0	46%	$94.5	52%	$92.3	51%	$93.6	48%	$95.1	51%

Notes: Data shown for all CR program crab fisheries by calendar year. All dollar values are adjusted for inflation to 2016-equivalent value. Information suppressed for confidentiality where indicated by "*", and data not available where indicated by "-". Results shown for 2015 and 2016 calendar years fisheries are preliminary pending completion of data validation audit and may be revised in a subsequent update of this report. Cost and revenue values are shown in $ million. Fleet-level monetary and percentage statistics are calculated across all included vessels. Data reflect total commercial volume and value across all management programs (LLP/open access, IFQ, CDQ, ACA) inclusive of all harvesting sector production; approximation of ex-vessel sale value of CP and catcher-seller volume is incorporated in revenue total by multiplying volume of retained catch by the weighted average ex-vessel sale price sourced from CV sector EDR data. Note that cost information reported in the crab EDR data collection program is limited; vessel operating (i.e., variable) costs are not comprehensive, and fixed cost and capital expenditures are entirely excluded. As a result, cost and revenue residual aggregates shown in table represent partial indices of costs and net earnings, and estimated gross profit statisitics represent upper bound approximations of gross profit. This value does not take into account fixed, overhead, finance/interest, and associated costs and is not a complete measure of net income or economic profit.

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

Table 3.26: Crab Harvest Quota Lease Activity, Volume, Cost, and Average Lease Prices and Rates - CR Program Fisheries

			Vessels[a]	Pounds Leased (1000lbs)			Cost ($1000)			Lease Price ($/pound)[b]		Lease Rate (percent of ex-vessel price)[c]
		Year		Total	Median	Mean	Total	Median	Mean	Median	Mean	Median
AIG	CVO A	2012	4	*	*	*	*	*	*	*	*	*
		2013	5	2,026.23	327.87	405.25	3,730.16	596.00	$746.03	$1.56	$1.72	35%
		2014	4	*	*	*	*	*	*	*	*	*
		2015	5	2,252.00	351.05	450.40	5,262.67	934.37	$1,052.53	$2.32	$1.90	49%
		2016	3	*	*	*	*	*	*	*	*	*
	CVO B + CPO	2012	4	*	*	*	*	*	*	*	*	*
		2013	6	1,284.80	83.15	142.76	1,904.95	239.64	$211.66	$1.54	$1.79	36%
		2014	4	*	*	*	*	*	*	*	*	*
		2015	5	1,375.30	24.30	196.47	2,043.77	73.56	$291.97	$1.35	$1.68	37%
		2016	4	*	*	*	*	*	*	*	*	*
	CVC + CPC	2012	4	*	*	*	*	*	*	*	*	*
		2013	5	151.06	27.36	25.18	318.68	46.51	$53.11	$1.94	$1.97	41%
		2014	4	*	*	*	*	*	*	*	*	*
		2015	4	*	*	*	*	*	*	*	*	*
		2016	3	*	*	*	*	*	*	*	*	*
	CDQ + ACA	2012	4	*	*	*	*	*	*	*	*	*
		2013	2	*	*	*	*	*	*	*	*	*
		2014	3	*	*	*	*	*	*	*	*	*
		2015	3	*	*	*	*	*	*	*	*	*
		2016	3	*	*	*	*	*	*	*	*	*

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Table 3.26: Continued

			Vessels[a]	Pounds Leased (1000lbs)			Cost ($1000)			Lease Price ($/pound)[b]		Lease Rate (percent of ex-vessel price)[c]
		Year		Total	Median	Mean	Total	Median	Mean	Median	Mean	Median
BBR	CVO A	2012	50	3,618.97	65.48	72.38	18,818.95	322.68	$376.38	$5.46	$5.60	65%
		2013	51	4,425.47	78.75	86.77	21,072.63	357.10	$413.19	$4.67	$4.82	64%
		2014	50	5,229.07	88.41	104.58	22,743.48	381.64	$454.87	$4.31	$4.33	62%
		2015	49	5,128.51	90.14	104.66	26,265.72	441.47	$536.04	$5.00	$5.07	63%
		2016	50	4,433.41	75.26	88.67	29,676.52	493.65	$593.53	$6.66	$6.66	62%
	CVO B + CPO	2012	42	539.10	7.60	11.72	3,077.73	43.96	$68.39	$5.64	$6.03	65%
		2013	45	777.86	10.07	15.56	3,848.12	49.12	$76.96	$4.93	$4.83	65%
		2014	43	853.62	11.77	17.42	3,811.95	55.74	$77.80	$4.46	$4.45	64%
		2015	42	696.51	10.89	14.82	3,858.85	59.98	$82.10	$5.30	$5.49	63%
		2016	43	609.89	9.68	12.45	4,371.69	67.25	$89.22	$7.03	$7.19	64%
	CVC + CPC	2012	36	171.60	4.24	4.52	947.71	22.41	$24.94	$5.51	$5.55	63%
		2013	37	198.96	4.52	4.85	1,012.31	22.48	$24.69	$4.96	$5.12	66%
		2014	34	212.79	5.98	5.91	947.86	24.22	$26.33	$4.45	$4.51	65%
		2015	40	222.10	5.04	5.29	1,222.23	29.17	$29.10	$5.38	$5.55	63%
		2016	37	200.51	4.04	5.14	1,395.88	34.48	$35.79	$6.98	$7.10	64%
	CDQ + ACA	2012	5	368.62	70.68	73.72	2,304.14	457.11	$460.83	$5.70	$6.27	64%
		2013	8	713.42	77.40	89.18	3,598.69	389.18	$449.84	$5.05	$5.04	67%
		2014	7	826.41	117.86	118.06	3,780.14	514.32	$540.02	$4.56	$4.55	63%
		2015	5	467.90	99.74	93.58	2,633.12	549.12	$526.62	$5.51	$5.64	67%
		2016	5	550.41	120.52	110.08	4,005.38	846.14	$801.08	$7.02	$7.24	63%

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Table 3.26: Continued

			Vessels[a]	Pounds Leased (1000lbs)			Cost ($1000)			Lease Price ($/pound)[b]		Lease Rate (percent of ex-vessel price)[c]
		Year		Total	Median	Mean	Total	Median	Mean	Median	Mean	Median
BSS	CVO A	2012	55	42,796.16	640.32	778.11	44,954.90	693.36	$817.36	$1.05	$1.05	46%
		2013	56	34,352.58	486.63	613.44	38,362.25	534.65	$685.04	$1.11	$1.11	46%
		2014	57	29,682.64	442.04	520.75	33,060.99	499.72	$580.02	$1.15	$1.11	46%
		2015	55	30,362.23	523.30	552.04	29,847.68	490.45	$542.69	$0.94	$0.98	46%
		2016	54	19,639.88	337.36	363.70	25,954.20	402.58	$480.63	$1.24	$1.33	46%
	CVO B + CPO	2012	47	6,989.61	83.97	131.88	8,246.92	105.93	$155.60	$1.15	$1.22	46%
		2013	50	7,740.91	78.48	133.46	9,917.67	98.37	$170.99	$1.21	$1.23	47%
		2014	48	5,987.69	69.15	106.92	7,342.55	95.85	$131.12	$1.24	$1.29	47%
		2015	47	6,288.75	69.80	118.66	6,540.65	75.80	$123.41	$0.99	$1.02	46%
		2016	45	3,867.74	44.16	77.36	5,462.55	65.39	$109.25	$1.31	$1.42	46%
	CVC + CPC	2012	39	1,879.88	47.96	45.85	2,118.60	53.17	$52.97	$1.15	$1.17	46%
		2013	41	1,767.02	35.03	40.16	2,163.16	41.49	$49.16	$1.18	$1.28	46%
		2014	37	1,258.30	29.13	31.46	1,496.12	35.19	$38.36	$1.24	$1.25	46%
		2015	37	1,515.74	32.75	36.97	1,573.77	37.36	$39.34	$1.00	$1.09	46%
		2016	36	925.25	21.91	25.01	1,271.44	31.05	$34.36	$1.31	$1.58	46%
	CDQ + ACA	2012	11	6,463.57	563.35	587.60	7,699.41	699.44	$699.95	$1.18	$1.20	49%
		2013	11	6,409.21	563.98	582.66	8,304.71	777.51	$754.97	$1.29	$1.29	54%
		2014	10	5,367.24	422.75	536.72	6,474.85	521.45	$647.49	$1.26	$1.25	49%
		2015	7	4,150.07	509.28	592.87	4,449.54	546.60	$635.65	$1.05	$1.08	51%
		2016	7	3,041.67	334.55	434.52	4,339.59	457.33	$619.94	$1.38	$1.43	51%

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Table 3.26: Continued

			Vessels[a]	Pounds Leased (1000lbs)			Cost ($1000)			Lease Price ($/pound)[b]		Lease Rate (percent of ex-vessel price)[c]
		Year		Total	Median	Mean	Total	Median	Mean	Median	Mean	Median
BST	CVO A	2013	16	776.65	52.73	48.54	565.57	26.24	$35.35	$0.76	$0.69	28%
		2014	32	5,255.66	94.55	128.19	3,507.63	66.82	$85.55	$0.66	$0.72	28%
		2015	43	9,486.94	130.54	163.57	7,262.24	90.36	$125.21	$0.80	$0.84	28%
		2016	37	7,478.40	126.71	169.96	6,732.11	108.51	$153.00	$0.82	$0.94	28%
	CVO B + CPO	2013	13	130.35	6.21	8.15	124.07	4.68	$7.76	$0.82	$0.88	28%
		2014	25	819.58	11.65	21.02	616.76	9.45	$15.81	$0.69	$0.82	28%
		2015	27	1,527.35	26.10	33.20	1,212.94	19.48	$26.37	$0.76	$0.78	28%
		2016	31	1,124.51	19.40	26.15	1,135.94	17.32	$26.42	$0.87	$0.98	28%
	CVC + CPC	2013	10	41.62	1.10	3.20	32.82	1.21	$2.53	$0.82	$0.77	28%
		2014	24	427.60	2.64	11.25	186.22	2.05	$4.90	$0.71	$0.81	28%
		2015	24	381.57	5.93	8.87	263.79	4.01	$6.14	$0.73	$0.75	28%
		2016	24	440.96	7.14	12.25	529.73	6.52	$14.72	$0.87	$1.02	28%
	CDQ + ACA	2013	5	88.01	24.87	17.60	77.23	16.26	$15.45	$1.04	$1.08	34%
		2014	6	728.51	29.61	80.95	596.77	31.92	$66.31	$0.96	$0.91	34%
		2015	8	1,341.70	125.15	149.08	1,193.51	93.13	$132.61	$0.67	$0.89	29%
		2016	7	829.85	80.60	103.73	765.37	73.81	$95.67	$0.91	$0.92	31%

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Table 3.26: Continued

		Year	Vessels[a]	Pounds Leased (1000lbs) Total	Pounds Leased (1000lbs) Median	Pounds Leased (1000lbs) Mean	Cost ($1000) Total	Cost ($1000) Median	Cost ($1000) Mean	Lease Price ($/pound)[b] Median	Lease Price ($/pound)[b] Mean	Lease Rate (percent of ex-vessel price)[c] Median
SMB	CVO A	2012	17	1,149.28	49.07	67.61	1,719.94	69.85	$101.17	$1.45	$1.69	32%
		2014	3	*	*	*	*	*	*	*	*	*
		2015	3	*	*	*	*	*	*	*	*	*
	CVO B + CPO	2012	10	143.73	11.56	11.06	219.20	18.94	$16.86	$1.50	$1.55	32%
		2014	2	*	*	*	*	*	*	*	*	*
		2015	3	*	*	*	*	*	*	*	*	*
	CVC + CPC	2012	9	94.70	2.48	10.52	47.54	5.66	$5.28	$1.50	$1.70	34%
		2014	2	*	*	*	*	*	*	*	*	*
		2015	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.

[a] 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.

[b] 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.

[c] 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 3.27: Counts of QS/PQS Sales and IFQ/IPQ Lease Transfers, All CR Program Fisheries

	Harvest			Processing	
Year	Cooperative lease	Noncooperative lease	QS sale	PQS sale	PQS lease
2005/06	144	113	199	7	40
2006/07	171	39	329	7	39
2007/08	211	16	292	12	32
2008/09	229	-	209	42	45
2009/10	190	-	221	4	31
2010/11	247	-	192	-	25
2011/12	163	4	126	-	28
2012/13	180	-	211	3	35
2013/14	281	-	215	4	30
2014/15	342	-	193	16	37
2015/16	255	-	86	-	55
2016/17	172	-	140	-	28

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 3.28: IFQ Fisheries Estimated Weighted Mean Price Per Crab Quota Unit for Catcher Vessel Owner and Crew QS Sale Transfers

		CVC QS				CVO QS			
	Year	Transfers (transferors, transferees)	Total units transferred (1,000)	Median units per transfer (1,000)	Median price per QS unit	Transfers (transferors, transferees)	Total units transferred (1,000)	Median units per transfer (1,000)	Median price per QS unit
EAG	2005/06	2(2,1)	*	*	*	2(1,1)	*	*	*
	2007/08	2(2,2)	*	*	*	-	-	-	-
	2008/09	4(4,3)	59.91	12.80	$3.00	1(1,1)	*	*	*
	2009/10	1(1,1)	*	*	*	5(2,5)	*	*	*
	2010/11	3(2,3)	*	*	*	-	-	-	-
	2013/14	-	-	-	-	9(2,9)	*	*	*
	2014/15	1(1,1)	*	*	*	-	-	-	-
	2015/16	3(2,2)	*	*	*	-	-	-	-
	2016/17	1(1,1)	*	*	*	-	-	-	-
WAG	2005/06	2(1,1)	*	*	*	1(1,1)	*	*	*
	2007/08	2(1,1)	*	*	*	-	-	-	-
	2008/09	1(1,1)	*	*	*	-	-	-	-
	2010/11	-	-	-	-	2(1,1)	*	*	*
	2011/12	-	-	-	-	2(1,1)	*	*	*
	2012/13	-	-	-	-	2(1,1)	*	*	*
	2013/14	-	-	-	-	1(1,1)	*	*	*
	2014/15	1(1,1)	*	*	*	-	-	-	-
BBR	2005/06	21(19,14)	1,221.05	56.18	$1.01	14(6,10)	7,139.91	115.40	$0.63
	2006/07	24(20,17)	1,130.33	40.08	$0.73	27(17,11)	24,420.20	404.43	$1.05
	2007/08	10(8,5)	525.49	56.28	$0.80	21(11,13)	7,144.78	288.73	$1.33
	2008/09	9(7,7)	482.47	53.64	$0.87	25(16,19)	13,988.27	274.01	$1.33
	2009/10	9(6,7)	427.85	38.27	$0.81	12(10,11)	4,525.84	374.91	$1.11
	2010/11	5(5,5)	292.57	45.87	$0.71	33(15,22)	14,596.18	194.71	$0.96
	2011/12	3(3,2)	*	*	*	3(3,3)	2,229.68	987.57	$1.25
	2012/13	4(3,3)	127.72	34.93	$0.72	21(9,16)	7,044.13	141.43	$0.83
	2013/14	9(8,7)	282.72	34.00	$0.83	7(6,4)	5,423.95	1,051.28	$0.99
	2014/15	10(8,6)	484.07	48.19	$0.92	18(8,11)	8,902.66	85.71	$1.25
	2015/16	3(2,2)	*	*	*	6(5,5)	2,866.03	364.08	$1.36
	2016/17	11(7,10)	603.03	51.38	$0.92	9(7,7)	3,138.42	71.08	$1.35

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Table 3.28: Continued

		CVC QS				CVO QS			
	Year	Transfers (transferors, transferees)	Total units transferred (1,000)	Median units per transfer (1,000)	Median price per QS unit	Transfers (transferors, transferees)	Total units transferred (1,000)	Median units per transfer (1,000)	Median price per QS unit
BSS	2005/06	25(14,12)	2,793.09	109.80	$0.25	22(9,12)	24,619.41	442.13	$0.41
	2006/07	35(17,15)	2,864.46	64.53	$0.23	36(17,8)	48,984.24	603.67	$0.32
	2007/08	12(5,5)	821.97	50.65	$0.34	26(10,13)	24,751.78	1,000.26	$0.61
	2008/09	10(5,6)	757.82	48.14	$0.47	15(9,11)	12,649.18	382.28	$0.56
	2009/10	15(6,8)	1,121.20	49.19	$0.31	14(8,10)	6,452.42	365.95	$0.44
	2010/11	11(6,6)	851.94	80.89	$0.40	56(17,24)	34,571.82	248.49	$0.54
	2011/12	2(1,1)	*	*	*	21(10,12)	12,597.57	289.40	$0.62
	2012/13	9(4,5)	920.85	84.74	$0.97	40(9,18)	16,222.63	178.61	$0.96
	2013/14	12(6,6)	674.45	33.76	$0.75	50(15,18)	20,655.73	120.52	$1.11
	2014/15	9(5,3)	418.10	27.73	$0.87	23(13,14)	22,280.56	396.32	$1.08
	2015/16	3(2,1)	*	*	*	16(9,10)	7,088.92	118.91	$0.80
	2016/17	13(7,8)	1,433.25	138.00	$0.34	7(4,5)	1,843.52	36.36	$0.69
EBT	2006/07	17(14,14)	394.01	21.63	$0.05	17(13,8)	6,577.53	416.69	$0.09
	2007/08	5(4,3)	178.14	35.14	$0.09	9(7,8)	3,030.92	388.26	$0.17
	2008/09	4(4,4)	165.75	42.94	$0.62	14(8,9)	6,246.18	373.38	$0.17
	2009/10	3(2,3)	*	*	*	5(4,5)	832.23	171.59	$0.04
	2010/11	3(3,3)	83.85	33.89	$0.05	6(6,2)	*	*	*
	2011/12	-	-	-	-	2(2,2)	*	*	*
	2012/13	2(2,2)	*	*	*	12(5,10)	2,824.76	44.15	$0.11
	2013/14	6(5,6)	127.32	26.55	$0.06	10(5,6)	1,411.57	120.99	$0.05
	2014/15	8(8,7)	184.98	24.95	$0.19	15(7,11)	4,355.27	152.63	$0.44
	2015/16	5(2,3)	*	*	*	7(6,7)	4,481.11	314.34	$0.35
	2016/17	8(7,7)	288.40	27.81	-	8(5,7)	2,765.85	304.39	$0.56

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Table 3.28: Continued

		CVC QS				CVO QS			
	Year	Transfers (transferors, transferees)	Total units transferred (1,000)	Median units per transfer (1,000)	Median price per QS unit	Transfers (transferors, transferees)	Total units transferred (1,000)	Median units per transfer (1,000)	Median price per QS unit
	2006/07	16(13,13)	372.39	21.89	$0.05	22(18,9)	8,511.78	358.84	$0.06
	2007/08	5(4,3)	178.14	35.14	$0.06	8(6,7)	2,948.05	388.26	$0.11
	2008/09	4(4,4)	165.75	42.94	$0.11	14(8,9)	6,246.18	373.38	$0.11
	2009/10	2(2,2)	*	*	*	5(4,5)	832.23	171.59	$0.02
	2010/11	3(3,3)	83.85	33.89	$0.05	5(5,2)	*	*	*
WBT	2011/12	-	-	-	-	1(1,1)	*	*	*
	2012/13	2(2,2)	*	*	*	11(5,9)	884.76	36.26	$0.08
	2013/14	6(5,6)	127.32	26.55	$0.05	10(5,6)	1,411.58	120.99	$0.05
	2014/15	6(6,5)	135.96	24.95	$0.23	16(8,12)	4,677.25	172.14	$0.34
	2015/16	5(2,3)	*	*	*	7(6,7)	4,481.11	314.34	$0.35
	2016/17	9(8,8)	408.40	34.03	-	7(4,6)	1,894.12	191.65	$0.42
	2007/08	-	-	-	-	8(2,3)	*	*	*
	2008/09	4(2,1)	*	*	*	-	-	-	-
PIK	2010/11	1(1,1)	*	*	*	6(3,1)	*	*	*
	2012/13	2(1,1)	*	*	*	4(1,2)	*	*	*
	2016/17	4(2,2)	*	*	*	-	-	-	-

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Table 3.28: Continued

		CVC QS				CVO QS			
	Year	Transfers (transferors, transferees)	Total units transferred (1,000)	Median units per transfer (1,000)	Median price per QS unit	Transfers (transferors, transferees)	Total units transferred (1,000)	Median units per transfer (1,000)	Median price per QS unit
SMB	2005/06	1(1,1)	*	*	*	2(1,2)	*	*	*
	2006/07	4(3,3)	40.32	10.23	$0.28	6(1,3)	*	*	*
	2007/08	4(2,1)	*	*	*	10(3,4)	876.90	91.10	$0.39
	2008/09	2(1,1)	*	*	*	-	-	-	-
	2009/10	2(1,1)	*	*	*	4(2,2)	*	*	*
	2010/11	3(2,2)	*	*	*	1(1,1)	*	*	*
	2011/12	2(2,1)	*	*	*	2(2,2)	*	*	*
	2012/13	2(1,1)	*	*	*	23(8,12)	1,002.73	20.65	$0.92
	2013/14	6(3,3)	36.29	5.62	$0.61	2(1,1)	*	*	*
	2014/15	2(1,1)	*	*	*	2(2,2)	*	*	*
	2015/16	1(1,1)	*	*	*	-	-	-	-
	2016/17	2(1,1)	*	*	*	-	-	-	-
WAI	2013/14	-	-	-	-	2(2,1)	*	*	*

Notes: The counts of transfers reported in the first column represent the number of distinct bi-lateral transfers for which transfer applications were submitted to RAM by QS holders; counts of tranferors represents the number of distinct QS holders submitting applications to sell QS shares, and tranferees identifies the number of distinct entities receiving transfers.

Source: NMFS AKRO RAM division Quota share transfer data.

Table 3.29: IFQ Fisheries Estimated Weighted Mean Price Per Crab Processor Quota (PQS) Unit Sale Transfers

		CVC QS				CVO QS			
	Year	Transfers (transferors, transferees)	Total units transferred (1,000)	Median units per transfer (1,000)	Median price per QS unit	Transfers (transferors, transferees)	Total units transferred (1,000)	Median units per transfer (1,000)	Median price per QS unit
EAG	2005/06	2(2,1)	*	*	*	2(1,1)	*	*	*
	2007/08	2(2,2)	*	*	*	-	-	-	-
	2008/09	4(4,3)	59.91	12.80	$3.00	1(1,1)	*	*	*
	2009/10	1(1,1)	*	*	*	5(2,5)	*	*	*
	2010/11	3(2,3)	*	*	*	-	-	-	-
	2013/14	-	-	-	-	9(2,9)	*	*	*
	2014/15	1(1,1)	*	*	*	-	-	-	-
	2015/16	3(2,2)	*	*	*	-	-	-	-
	2016/17	1(1,1)	*	*	*	-	-	-	-
WAG	2005/06	2(1,1)	*	*	*	1(1,1)	*	*	*
	2007/08	2(1,1)	*	*	*	-	-	-	-
	2008/09	1(1,1)	*	*	*	-	-	-	-
	2010/11	-	-	-	-	2(1,1)	*	*	*
	2011/12	-	-	-	-	2(1,1)	*	*	*
	2012/13	-	-	-	-	2(1,1)	*	*	*
	2013/14	-	-	-	-	1(1,1)	*	*	*
	2014/15	1(1,1)	*	*	*	-	-	-	-
BBR	2005/06	21(19,14)	1,221.05	56.18	$1.01	14(6,10)	7,139.91	115.40	0.63
	2006/07	24(20,17)	1,130.33	40.08	$0.73	27(17,11)	24,420.20	404.43	1.05
	2007/08	10(8,5)	525.49	56.28	$0.80	21(11,13)	7,144.78	288.73	1.33
	2008/09	9(7,7)	482.47	53.64	$0.87	25(16,19)	13,988.27	274.01	1.33
	2009/10	9(6,7)	427.85	38.27	$0.81	12(10,11)	4,525.84	374.91	1.11
	2010/11	5(5,5)	292.57	45.87	$0.71	33(15,22)	14,596.18	194.71	0.96
	2011/12	3(3,2)	*	*	*	3(3,3)	2,229.68	987.57	1.25
	2012/13	4(3,3)	127.72	34.93	$0.72	21(9,16)	7,044.13	141.43	0.83
	2013/14	9(8,7)	282.72	34.00	$0.83	7(6,4)	5,423.95	1,051.28	0.99
	2014/15	10(8,6)	484.07	48.19	$0.92	18(8,11)	8,902.66	85.71	1.25
	2015/16	3(2,2)	*	*	*	6(5,5)	2,866.03	364.08	1.36
	2016/17	11(7,10)	603.03	51.38	$0.92	9(7,7)	3,138.42	71.08	1.35

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Table 3.29: Continued

		CVC QS				CVO QS			
	Year	Transfers (transferors, transferees)	Total units transferred (1,000)	Median units per transfer (1,000)	Median price per QS unit	Transfers (transferors, transferees)	Total units transferred (1,000)	Median units per transfer (1,000)	Median price per QS unit
BSS	2005/06	25(14,12)	2,793.09	109.80	$0.25	22(9,12)	24,619.41	442.13	0.41
	2006/07	35(17,15)	2,864.46	64.53	$0.23	36(17,8)	48,984.24	603.67	0.32
	2007/08	12(5,5)	821.97	50.65	$0.34	26(10,13)	24,751.78	1,000.26	0.61
	2008/09	10(5,6)	757.82	48.14	$0.47	15(9,11)	12,649.18	382.28	0.56
	2009/10	15(6,8)	1,121.20	49.19	$0.31	14(8,10)	6,452.42	365.95	0.44
	2010/11	11(6,6)	851.94	80.89	$0.40	56(17,24)	34,571.82	248.49	0.54
	2011/12	2(1,1)	*	*	*	21(10,12)	12,597.57	289.40	0.62
	2012/13	9(4,5)	920.85	84.74	$0.97	40(9,18)	16,222.63	178.61	0.96
	2013/14	12(6,6)	674.45	33.76	$0.75	50(15,18)	20,655.73	120.52	1.11
	2014/15	9(5,3)	418.10	27.73	$0.87	23(13,14)	22,280.56	396.32	1.08
	2015/16	3(2,1)	*	*	*	16(9,10)	7,088.92	118.91	0.80
	2016/17	13(7,8)	1,433.25	138.00	$0.34	7(4,5)	1,843.52	36.36	0.69
EBT	2006/07	17(14,14)	394.01	21.63	$0.05	17(13,8)	6,577.53	416.69	0.09
	2007/08	5(4,3)	178.14	35.14	$0.09	9(7,8)	3,030.92	388.26	0.17
	2008/09	4(4,4)	165.75	42.94	$0.62	14(8,9)	6,246.18	373.38	0.17
	2009/10	3(2,3)	*	*	*	5(4,5)	832.23	171.59	0.04
	2010/11	3(3,3)	83.85	33.89	$0.05	6(6,2)	*	*	*
	2011/12	-	-	-	-	2(2,2)	*	*	*
	2012/13	2(2,2)	*	*	*	12(5,10)	2,824.76	44.15	0.11
	2013/14	6(5,6)	127.32	26.55	$0.06	10(5,6)	1,411.57	120.99	0.05
	2014/15	8(8,7)	184.98	24.95	$0.19	15(7,11)	4,355.27	152.63	0.44
	2015/16	5(2,3)	*	*	*	7(6,7)	4,481.11	314.34	0.35
	2016/17	8(7,7)	288.40	27.81	-	8(5,7)	2,765.85	304.39	0.56

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Table 3.29: Continued

		CVC QS				CVO QS			
	Year	Transfers (transferors, transferees)	Total units transferred (1,000)	Median units per transfer (1,000)	Median price per QS unit	Transfers (transferors, transferees)	Total units transferred (1,000)	Median units per transfer (1,000)	Median price per QS unit
WBT	2006/07	16(13,13)	372.39	21.89	$0.05	22(18,9)	8,511.78	358.84	0.06
	2007/08	5(4,3)	178.14	35.14	$0.06	8(6,7)	2,948.05	388.26	0.11
	2008/09	4(4,4)	165.75	42.94	$0.11	14(8,9)	6,246.18	373.38	0.11
	2009/10	2(2,2)	*	*	*	5(4,5)	832.23	171.59	0.02
	2010/11	3(3,3)	83.85	33.89	$0.05	5(5,2)	*	*	*
	2011/12	-	-	-	-	1(1,1)	*	*	*
	2012/13	2(2,2)	*	*	*	11(5,9)	884.76	36.26	0.08
	2013/14	6(5,6)	127.32	26.55	$0.05	10(5,6)	1,411.58	120.99	0.05
	2014/15	6(6,5)	135.96	24.95	$0.23	16(8,12)	4,677.25	172.14	0.34
	2015/16	5(2,3)	*	*	*	7(6,7)	4,481.11	314.34	0.35
	2016/17	9(8,8)	408.40	34.03	-	7(4,6)	1,894.12	191.65	0.42
PIK	2007/08	-	-	-	-	8(2,3)	*	*	*
	2008/09	4(2,1)	*	*	*	-	-	-	-
	2010/11	1(1,1)	*	*	*	6(3,1)	*	*	*
	2012/13	2(1,1)	*	*	*	4(1,2)	*	*	*
	2016/17	4(2,2)	*	*	*	-	-	-	-
SMB	2005/06	1(1,1)	*	*	*	2(1,2)	*	*	*
	2006/07	4(3,3)	40.32	10.23	$0.28	6(1,3)	*	*	*
	2007/08	4(2,1)	*	*	*	10(3,4)	876.90	91.10	0.39
	2008/09	2(1,1)	*	*	*	-	-	-	-
	2009/10	2(1,1)	*	*	*	4(2,2)	*	*	*
	2010/11	3(2,2)	*	*	*	1(1,1)	*	*	*
	2011/12	2(2,1)	*	*	*	2(2,2)	*	*	*
	2012/13	2(1,1)	*	*	*	23(8,12)	1,002.73	20.65	0.92
	2013/14	6(3,3)	36.29	5.62	$0.61	2(1,1)	*	*	*
	2014/15	2(1,1)	*	*	*	2(2,2)	*	*	*
	2015/16	1(1,1)	*	*	*	-	-	-	-
	2016/17	2(1,1)	*	*	*	-	-	-	-
WAI	2013/14	-	-	-	-	2(2,1)	*	*	*

Notes:

Source: NMFS AKRO RAM division Quota share transfer data.

Table 3.30: CR Program Computation Quota Share (QS) and IFQ Ratio

	Season	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
EAG	2015/2016	9,700,156	299,989	10,000,145	3.3569
	2016/2017	9,700,156	299,989	10,000,145	3.3569
	2017/2018	9,700,156	299,989	10,000,145	3.3569
WAG	2015/2016	38,800,000	1,200,058	40,000,058	14.9143
	2016/2017	38,800,000	1,200,058	40,000,058	19.8857
	2017/2018	38,800,000	1,200,058	40,000,058	19.8857
BBR	2015/2016	387,828,995	12,000,335	399,829,330	44.5413
	2016/2017	387,828,995	12,000,335	399,829,330	52.4566
	2017/2018	387,828,995	12,000,335	399,829,330	67.3011
BSS	2015/2016	970,675,714	30,200,191	1,000,875,905	27.3838
	2016/2017	970,675,714	30,200,191	1,000,875,905	51.5570
	2017/2018	970,675,714	30,200,191	1,000,875,905	58.6511
EBT	2015/2016	194,308,390	5,940,391	200,248,781	19.7391
WBT	2015/2016	194,308,390	5,940,391	200,248,781	26.5006
	2017/2018	194,308,390	5,960,299	200,268,689	89.0012
SMB	2015/2016	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 3.31: Comparison of QS Sale Price to IFQ Lease Price

		CVC QS					CVO QS				
	Season	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
BBR	2012/13	$0.69	56.57	$39.03	$5.56	0.14	$0.80	56.57	$45.26	$5.78	0.13
	2013/14	$0.80	51.66	$41.33	$5.10	0.12	$0.95	51.66	$49.07	$4.79	0.10
	2014/15	$0.91	44.49	$40.50	$4.51	0.11	$1.24	44.49	$55.16	$4.38	0.08
	2015/16	-	-	-	-	-	$1.36	44.54	$60.35	$5.26	0.09
	2016/17	$0.93	52.46	$48.52	$7.09	0.15	$1.32	52.46	$69.24	$6.94	0.10
BSS	2011/12	-	-	-	-	-	$0.58	12.51	$7.26	$1.13	0.16
	2012/13	$0.92	16.76	$15.42	$1.27	0.08	$0.92	16.76	$15.42	$1.16	0.08
	2013/14	$0.73	20.60	$15.04	$1.25	0.08	$1.07	20.60	$22.04	$1.19	0.05
	2014/15	$0.86	16.37	$14.07	$1.09	0.08	$1.07	16.37	$17.51	$1.00	0.06
	2015/16	-	-	-	-	-	$0.80	27.38	$21.91	$1.37	0.06
EBT	2013/14	$0.06	152.13	$8.37	$0.83	0.10	$0.05	152.13	$7.71	$0.77	0.10
	2014/15	$0.19	26.23	$4.92	$0.78	0.16	$0.44	26.23	$11.54	$0.77	0.07
	2015/16	-	-	-	-	-	$0.35	19.74	$6.91	$0.87	0.13
WBT	2014/15	$0.23	33.56	$7.55	$0.86	0.11	$0.34	33.56	$11.41	$0.77	0.07
	2015/16	-	-	-	-	-	$0.35	26.50	$9.28	$0.74	0.08
SMB	2012/13	-	-	-	-	-	$0.88	20.47	$18.01	$1.64	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 3.32: IFQ Fisheries Owner-and Crew-Type Quota Share Holdings

		Crew QS			Owner QS		
	Season	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%
	2015/2016	9	10.83%	20.14%	24	1.85%	20.00%
	2016/2017	9	10.83%	20.14%	24	1.85%	20.00%
WAG	Initial allocation	9	6.17%	41.74%	15	1.78%	45.73%
	2015/2016	9	6.30%	41.74%	13	1.81%	45.73%
	2016/2017	9	6.30%	41.74%	13	1.81%	45.73%
BBR	Initial allocation	181	0.52%	1.23%	252	0.36%	2.24%
	2015/2016	127	0.57%	2.00%	247	0.30%	5.00%
	2016/2017	123	0.57%	2.00%	246	0.31%	5.00%
BSS	Initial allocation	155	0.64%	1.59%	241	0.39%	2.35%
	2015/2016	120	0.70%	1.99%	263	0.25%	5.00%
	2016/2017	117	0.71%	1.99%	261	0.26%	5.00%
EBT	Initial allocation	166	0.56%	1.99%	256	0.30%	3.87%
	2015/2016	141	0.59%	1.99%	239	0.27%	4.97%
	2016/2017	140	0.58%	1.99%	237	0.27%	4.97%
WBT	Initial allocation	166	0.56%	1.99%	256	0.30%	3.87%
	2015/2016	141	0.59%	1.99%	240	0.26%	4.97%
	2016/2017	140	0.58%	1.99%	238	0.26%	4.97%
PIK	Initial allocation	40	2.47%	4.81%	112	0.53%	3.41%
	2015/2016	39	2.60%	4.81%	115	0.52%	6.96%
	2016/2017	39	2.60%	4.81%	116	0.51%	6.96%
SMB	Initial allocation	73	1.35%	3.10%	137	0.62%	4.43%
	2015/2016	64	1.41%	3.95%	133	0.55%	5.00%
	2016/2017	65	1.38%	3.95%	134	0.54%	5.00%
WAI	Initial allocation	4	20.84%	49.46%	30	0.65%	45.16%
	2015/2016	4	20.84%	49.46%	37	0.65%	45.16%
	2016/2017	4	20.84%	49.46%	38	0.63%	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 issuees 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 3.33: IFQ Fisheries Owner and Crew Quota Share Holdings by Fishery and Sector

			Crew QS				Owner QS			
		Season	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)%
		2015/16	-	-	-	-	5	7.24%	49.66%	20(18.99)%
		2016/17	-	-	-	-	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)%
		2015/16	9	10.83%	20.14%	11.11(8.03)%	20	3.59%	21.02%	5(5.39)%
		2016/17	9	10.83%	20.14%	11.11(8.03)%	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)%
		2015/16	2	50.00%	98.19%	50(68.14)%	3	1.06%	98.93%	33.33(56.81)%
		2016/17	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)%
		2015/16	8	8.93%	37.75%	12.5(11.85)%	11	3.31%	45.51%	9.09(13.72)%
		2016/17	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)%
		2015/16	9	10.01%	35.13%	11.11(11.89)%	9	10.64%	21.62%	11.11(7.63)%
		2016/17	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)%
		2015/16	124	0.58%	2.07%	0.81(0.54)%	243	0.31%	4.90%	0.41(0.5)%
		2016/17	121	0.58%	2.07%	0.83(0.57)%	242	0.32%	4.90%	0.41(0.5)%

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Table 3.33: 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)%
		2015/16	7	11.33%	33.82%	14.29(9.52)%	21	1.06%	24.29%	4.76(6.56)%
		2016/17	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)%
		2015/16	118	0.72%	2.11%	0.85(0.52)%	253	0.29%	4.44%	0.4(0.5)%
		2016/17	115	0.73%	2.11%	0.87(0.54)%	251	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)%
		2015/16	16	5.29%	18.32%	6.25(4.87)%	9	10.49%	37.53%	11.11(11.18)%
		2016/17	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)%
		2015/16	136	0.62%	2.17%	0.74(0.53)%	235	0.29%	4.56%	0.43(0.5)%
		2016/17	135	0.61%	2.17%	0.74(0.55)%	235	0.28%	4.56%	0.43(0.5)%
WBT	CP	Initial allocation	15	5.37%	18.32%	6.67(4.74)%	13	6.97%	16.79%	7.69(5.11)%
		2015/16	16	5.29%	18.32%	6.25(4.87)%	9	10.49%	37.53%	11.11(11.18)%
		2016/17	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)%
		2015/16	136	0.62%	2.17%	0.74(0.53)%	236	0.28%	4.56%	0.42(0.5)%
		2016/17	135	0.61%	2.17%	0.74(0.55)%	236	0.28%	4.56%	0.42(0.5)%

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Table 3.33: Continued

			Crew QS				Owner QS			
		Season	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%
		2015/16	-	-	-	-	1	100.00%	100.00%	100%
		2016/17	-	-	-	-	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)%
		2015/16	39	2.60%	4.81%	2.56(1.17)%	114	0.53%	6.99%	0.88(0.96)%
		2016/17	39	2.60%	4.81%	2.56(1.17)%	115	0.50%	6.99%	0.87(0.96)%
SMB	CP	Initial allocation	-	-	-	-	5	15.46%	43.40%	20(13.24)%
		2015/16	-	-	-	-	2	50.00%	56.60%	50(9.34)%
		2016/17	-	-	-	-	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)%
		2015/16	64	1.41%	3.95%	1.56(0.74)%	132	0.55%	5.10%	0.76(0.77)%
		2016/17	65	1.38%	3.95%	1.54(0.75)%	133	0.54%	5.10%	0.75(0.77)%
WAI	CP	Initial allocation	1	100.00%	100.00%	100%	2	50.00%	96.86%	50(66.26)%
		2015/16	1	100.00%	100.00%	100%	2	50.00%	96.86%	50(66.26)%
		2016/17	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)%
		2015/16	4	16.53%	57.26%	25(22.34)%	36	1.04%	18.78%	2.78(4.56)%
		2016/17	4	16.53%	57.26%	25(22.34)%	37	1.01%	18.78%	2.7(4.52)%

Notes: Owner QS includes Catcher Veseel Owner (CVO) and Catcher/Processor Owver (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 3.34: 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
	2015/2016	28	12	43	33
	2016/2017	28	10	36	44
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
	2015/2016	197	70	36	44
	2016/2017	196	60	31	40
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
	2015/2016	203	71	35	43
	2016/2017	201	61	30	40

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 3.35: IFQ Fisheries Owner Quota Share Holdings by QS Holder Location

	Season	Owner QS, Alaska		Owner QS, WA-OR-ID		Owner QS, Other Location	
		QS holders	Percent of pool	QS holders	Percent of pool	QS holders	Percent of pool
EAG	Initial allocation	1	2%	14	98%	0	0%
	2015/2016	5	30%	18	70%	1	0%
	2016/2017	5	30%	18	70%	1	0%
WAG	Initial allocation	1	2%	14	98%	0	0%
	2015/2016	5	63%	8	37%	0	0%
	2016/2017	5	63%	8	37%	0	0%
BBR	Initial allocation	41	16%	203	82%	8	2%
	2015/2016	51	29%	186	69%	10	2%
	2016/2017	53	29%	182	68%	11	3%
BSS	Initial allocation	40	16%	195	82%	6	2%
	2015/2016	51	31%	198	66%	14	3%
	2016/2017	54	32%	195	64%	12	4%
EBT	Initial allocation	40	16%	209	82%	7	2%
	2015/2016	50	32%	176	65%	13	3%
	2016/2017	51	33%	174	64%	12	3%
WBT	Initial allocation	40	16%	209	82%	7	2%
	2015/2016	51	32%	176	65%	13	3%
	2016/2017	52	33%	174	64%	12	3%
PIK	Initial allocation	22	25%	86	72%	4	3%
	2015/2016	33	38%	76	55%	6	7%
	2016/2017	34	38%	76	56%	6	6%
SMB	Initial allocation	20	19%	113	80%	4	1%
	2015/2016	29	33%	99	64%	5	3%
	2016/2017	31	34%	98	63%	5	3%
WAI	Initial allocation	6	3%	24	97%	0	0%
	2015/2016	13	52%	23	48%	1	0%
	2016/2017	13	52%	24	48%	1	0%

Notes: Owner QS includes Catcher Veseel Owner (CVO) and Catcher/Processor Owver (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 3.36: IFQ Fisheries Crew Quota Share Holdings by QS Holder Location

		Crew QS, Alaska		Crew QS, WA-OR-ID		Crew QS, Other Location	
	Season	QS holders	Percent of pool	QS holders	Percent of pool	QS holders	Percent of pool
EAG	Initial allocation	1	2%	11	94%	1	4%
	2015/2016	0	0%	9	100%	0	0%
	2016/2017	0	0%	9	100%	0	0%
WAG	Initial allocation	0	0%	8	94%	1	6%
	2015/2016	0	0%	9	100%	0	0%
	2016/2017	0	0%	9	100%	0	0%
BBR	Initial allocation	44	19%	127	74%	10	6%
	2015/2016	28	20%	85	67%	14	12%
	2016/2017	28	22%	85	71%	10	7%
BSS	Initial allocation	35	19%	111	76%	9	5%
	2015/2016	26	20%	81	71%	13	9%
	2016/2017	26	21%	80	71%	11	8%
EBT	Initial allocation	40	20%	117	75%	9	5%
	2015/2016	33	22%	92	68%	16	10%
	2016/2017	32	22%	94	71%	14	7%
WBT	Initial allocation	40	20%	117	75%	9	5%
	2015/2016	33	22%	92	68%	16	10%
	2016/2017	32	22%	94	71%	14	7%
PIK	Initial allocation	16	34%	19	55%	5	11%
	2015/2016	17	37%	15	46%	7	18%
	2016/2017	17	37%	18	55%	4	9%
SMB	Initial allocation	17	24%	53	72%	3	4%
	2015/2016	17	24%	43	70%	4	6%
	2016/2017	17	24%	44	70%	4	6%
WAI	Initial allocation	0	0%	4	100%	0	0%
	2015/2016	0	0%	4	100%	0	0%
	2016/2017	0	0%	4	100%	0	0%

Notes: Owner QS includes Catcher Veseel Owner (CVO) and Catcher/Processor Owner (CPO) QS; Crew QS includes Catcher Vessel Crew (CVC) and Catcher/Processor Crew (CPC) QS 2015/16 and 2016/17 holdings as of fishery season end. Includes CVO/CPO QS held by wholly owned direct subsidiaries of CDQ groups.

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

Table 3.37: 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)%
	2015/16	9	6.93%	45.36%	11.11(14.24)%
	2016/17	9	6.93%	45.36%	11.11(14.24)%
WAG	Initial allocation	9	1.03%	62.98%	11.11(21.23)%
	2015/16	10	3.41%	29.98%	10(12.04)%
	2016/17	10	3.41%	29.98%	10(12.04)%
BBR	Initial allocation	17	1.64%	22.98%	5.88(7.07)%
	2015/16	14	6.12%	23.20%	7.14(6.79)%
	2016/17	14	6.12%	23.20%	7.14(6.79)%
BSS	Initial allocation	20	2.08%	25.18%	5(6.73)%
	2015/16	17	3.42%	25.18%	5.88(7.52)%
	2016/17	17	3.42%	25.18%	5.88(7.52)%
EBT	Initial allocation	23	0.83%	24.26%	4.35(6.51)%
	2015/16	19	1.85%	24.37%	5.26(7.04)%
	2016/17	19	1.85%	24.37%	5.26(7.04)%
WBT	Initial allocation	23	0.83%	24.26%	4.35(6.51)%
	2015/16	19	1.85%	24.37%	5.26(7.04)%
	2016/17	19	1.85%	24.37%	5.26(7.04)%
PIK	Initial allocation	14	3.17%	24.49%	7.14(8.09)%
	2015/16	12	4.99%	25.46%	8.33(8.47)%
	2016/17	12	4.99%	25.46%	8.33(8.47)%
SMB	Initial allocation	12	5.06%	32.67%	8.33(10.56)%
	2015/16	10	4.18%	32.67%	10(11.3)%
	2016/17	10	4.18%	32.67%	10(11.3)%
WAI	Initial allocation	9	1.03%	62.98%	11.11(21.23)%
	2015/16	8	4.03%	32.99%	12.5(14.67)%
	2016/17	8	4.03%	32.99%	12.5(14.67)%

Notes: 2015/16 and 2016/17 holdings as of fishery season end. Includes PQS held by wholly owned direct subsidiaries of CDQ groups.

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

Table 3.38: CDQ/ACA Group Direct Holdings of CR Program/IFQ Quota Share Allocation, by Share Type and IFQ Fishery

		CP QS		CV QS		ALL QS		PQS	
	Season	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	2015/16	-	-	3	28.27%	3	26.94%	2	11.72%
	2016/17	-	-	3	28.27%	3	26.94%	2	11.72%
WAG	2015/16	1	96.19%	3	27.83%	4	59.35%	1	29.98%
	2016/17	1	96.19%	3	27.83%	4	59.35%	1	29.98%
BBR	Initial allocation	1	4.29%	3	1.23%	4	1.37%	-	-
	2015/16	4	40.98%	5	14.39%	5	15.59%	2	13.84%
	2016/17	4	40.98%	5	14.39%	5	15.59%	2	13.84%
BSS	Initial allocation	1	3.86%	3	1.42%	4	1.64%	-	-
	2015/16	4	44.53%	6	15.16%	6	17.82%	3	22.90%
	2016/17	4	44.53%	6	15.16%	6	17.82%	3	22.90%
EBT	Initial allocation	1	3.39%	3	1.42%	4	1.55%	-	-
	2015/16	4	62.68%	6	13.25%	6	16.60%	2	18.56%
	2016/17	4	62.68%	6	13.25%	6	16.60%	2	18.56%
WBT	Initial allocation	1	3.39%	3	1.42%	4	1.55%	-	-
	2015/16	4	62.68%	6	13.25%	6	16.60%	2	18.56%
	2016/17	4	62.68%	6	13.25%	6	16.60%	2	18.56%
PIK	Initial allocation	-	-	1	2.34%	1	2.33%	-	-
	2015/16	-	-	5	14.20%	5	14.13%	2	15.77%
	2016/17	-	-	6	14.42%	6	14.35%	2	15.77%
SMB	Initial allocation	-	-	2	1.14%	2	1.11%	-	-
	2015/16	2	100.00%	4	13.60%	5	15.26%	2	23.74%
	2016/17	2	100.00%	4	13.60%	5	15.26%	2	23.74%
WAI	Initial allocation	-	-	1	0.16%	1	0.10%	-	-
	2015/16	1	95.82%	5	16.95%	5	47.13%	-	-
	2016/17	1	95.82%	5	16.95%	5	47.13%	-	-

Notes: 2015/16 and 2016/17 holdings as of fishery season end. Includes CVO/CPO QS held by wholly owned direct subsidiaries of CDQ groups.

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

Table 3.39: Initial Crab QS/PQS Issuees with Holdings at Season End, by Share Type and IFQ Fishery

	Quota	Initial issuance	2015/16	2016/17	Net change from initial issuance	Net change from previous year
All	All Harvest QS	532	398	382	-150	-16
EAG	CPO	2	0	0	-2	0
	CVC	13	5	4	-9	-1
	CVO	13	8	8	-5	0
	All Harvest QS	28	13	12	-16	-1
	Processor QS	9	5	5	-4	0
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	5	5	-8	0
	CVC	178	98	89	-89	-9
	CVO	242	173	170	-72	-3
	All Harvest QS	426	276	264	-162	-12
	Processor QS	17	8	8	-9	0
BSS	CPC	8	5	5	-3	0
	CPO	14	5	5	-9	0
	CVC	152	87	80	-72	-7
	CVO	231	166	162	-69	-4
	All Harvest QS	389	256	245	-144	-11
	Processor QS	20	11	11	-9	0

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Table 3.39: Continued

	Quota	Initial issuance	2015/16	2016/17	Net change from initial issuance	Net change from previous year
BST	CPC	15	-	-	-	-
	CPO	14	-	-	-	-
	CVC	170	-	-	-	-
	CVO	248	-	-	-	-
	All Harvest QS	426	-	-	-	-
	Processor QS	23	-	-	-	-
BTE	CPC	15	13	12	-3	-1
	CPO	13	5	5	-8	0
	CVC	160	113	107	-53	-6
	CVO	246	181	176	-70	-5
	All Harvest QS	413	299	288	-125	-11
	Processor QS	23	14	14	-9	0
BTW	CPC	15	13	12	-3	-1
	CPO	13	5	5	-8	0
	CVC	160	113	107	-53	-6
	CVO	246	181	176	-70	-5
	All Harvest QS	413	299	288	-125	-11
	Processor QS	23	14	14	-9	0

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Table 3.39: Continued

	Quota	Initial issuance	2015/16	2016/17	Net change from initial issuance	Net change from previous year
PIK	CPO	1	1	1	0	0
	CVC	40	33	31	-9	-2
	CVO	111	84	82	-29	-2
	All Harvest QS	148	114	110	-38	-4
	Processor QS	14	9	9	-5	0
SMB	CPO	5	1	1	-4	0
	CVC	73	47	45	-28	-2
	CVO	133	91	91	-42	0
	All Harvest QS	210	139	137	-73	-2
	Processor QS	12	5	5	-7	0
WAI	CPC	1	1	1	0	0
	CPO	2	2	2	0	0
	CVC	4	4	4	0	0
	CVO	29	19	19	-10	0
	All Harvest QS	34	24	24	-10	0
	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; 2015/16 and 2016/17 show the number of original QS issuees remaining as of the end of the respective crab seasons. Initial issuees 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 3.40: New Holders of Crab QS and PQS in 2015, Relative to Initial Allocation and Prior Season End

		Owner QS, New in fishery		Owner QS, New in all fisheries		Crew QS, New in fishery		Crew QS, New in all fisheries		PQS, New in fishery		PQS, New in all fisheries	
	Season	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	2015 season end	-	-	-	-	1	15%	1	15%	-	-	-	-
	Initial allocation	16	49%	12	44%	5	43%	2	35%	4	24%	3	23%
WAG	Initial allocation	4	17%	3	5%	3	27%	2	20%	4	53%	3	53%
BBR	2015 season end	6	1%	5	1%	8	7%	7	7%	-	-	-	-
	Initial allocation	71	25%	65	22%	31	30%	25	26%	6	33%	5	32%
BSS	2015 season end	4	1%	4	1%	7	6%	5	4%	-	-	-	-
	Initial allocation	95	24%	85	21%	35	31%	29	26%	6	32%	5	31%
EBT	2015 season end	4	1%	3	0%	6	5%	5	3%	-	-	-	-
	Initial allocation	56	18%	56	18%	28	21%	26	20%	5	22%	4	22%
WBT	2015 season end	4	0%	3	0%	7	7%	6	5%	-	-	-	-
	Initial allocation	57	18%	57	18%	28	21%	26	20%	5	22%	4	22%
PIK	2015 season end	4	1%	2	0%	2	4%	1	3%	-	-	-	-
	Initial allocation	33	31%	23	22%	8	23%	4	11%	3	30%	2	16%
SMB	2015 season end	2	0%	1	0%	4	5%	3	4%	-	-	-	-
	Initial allocation	42	23%	32	16%	20	31%	13	21%	5	35%	4	27%
WAI	2015 season end	2	0%	1	0%	-	-	-	-	-	-	-	-
	Initial allocation	18	27%	10	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 2015/16 crab season.

Source: NMFS AKRO RAM division, Quota shareholder files.

Table 3.41: 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	*	*	*	*
	2015/2016	2	6	37	*	*	*	*
	2016/2017	2	7	41	*	*	*	*
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	*	*	*	*
	2015/2016	1	8	48	*	*	*	*
	2016/2017	2	8	41	*	*	*	*
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
	2015/2016	9	12	243	9.0	8.8	12.8	178.0
	2016/2017	8	14	249	7.6	7.6	19.3	35.4

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Table 3.41: Continued

	Season	IFQ permit holders	RCR permit holders	Landings	IFQ pounds (million)	Sold pounds (million)	Personal use pounds (1,000)	Deadloss pounds (1,000)
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
	2015/2016	9	11	492	36.6	36.2	2.0	352.7
	2016/2017	8	13	360	19.4	19.2	0.7	234.7
BST	2005/2006	34	9	73	0.8	0.8	2.9	14.6
EBT	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
	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
	2015/2016	8	12	244	10.1	10.0	1.1	115.0
WBT	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
	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
	2015/2016	7	11	268	7.5	7.5	0.6	49.6
SMB	2009/2010	1	6	30	*	*	*	*
	2010/2011	2	8	63	*	*	*	*
	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	*	*	*	*
	2015/2016	1	4	21	*	*	*	*

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 3.42: 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	5.24	297.49	5.67%	0.44
	1999	16	4.89	231.71	4.74%	0.43
	2000	17	5.76	220.96	3.84%	0.46
	2001	21	6.36	209.56	3.29%	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	1,375.91	22.66%	0.14
	2015	5	5.80	1,179.79	20.34%	0.17
	2016	5	5.60	1,150.77	20.54%	0.13
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
	2015	64	9.77	134.72	1.38%	0.26
	2016	63	8.41	112.63	1.34%	0.29

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Table 3.42: 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	55.22	733.59	1.33%	0.33
	2015	70	60.91	862.01	1.42%	0.29
	2016	68	39.57	526.21	1.33%	0.30
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
	2015	55	14.98	201.28	1.34%	0.45
	2016	46	10.45	160.29	1.53%	0.39
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
	2015	3	*	*	*	*
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 3.43: Purchasing Statistics

	Year	Processors	Purchased (million lbs)	Median Purchased lbs (million)	Median as percent of fishery year commercial lbs	Gini ratio
AIG	1998	9	5.24	0.23	4.3%	0.66
	1999	8	4.89	0.29	5.9%	0.59
	2000	7	5.76	0.65	11.3%	0.40
	2001	7	6.36	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
	2015	9	5.80	0.32	5.5%	0.56
	2016	11	5.60	0.30	5.3%	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
	2015	15	9.77	0.29	2.9%	0.61
	2016	17	8.41	0.19	2.2%	0.59

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Table 3.43: 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	55.22	4.43	8.0%	0.45
	2015	14	60.91	2.82	4.6%	0.47
	2016	12	39.57	2.56	6.5%	0.45
BST	2005	5	0.26	*	*	0.78
	2006	9	0.99	0.07	7.5%	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
	2015	13	14.98	0.59	3.9%	0.56
	2016	12	10.45	0.66	6.4%	0.54
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
	2015	4	*	*	*	*
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/processors 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 3.44: 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)
EAG	1998	14	51	-	3.6(1.5)	-	59.8(35.8)	-
	1999	15	59	-	3.9(1.2)	-	48.7(33.0)	-
	2000	15	50	-	3.3(0.8)	-	59.0(34.3)	-
	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)	-
	2005-2006	7	34	-	4.9(2.1)	-	83.5(47.3)	-
	2006-2007	6	28	24	4.7(4.2)	124.7(57.9)	105.6(59.5)	4.0(2.7)
	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	*	*	*	*	*	*
	2014-2015	3	*	*	*	*	*	*
	2015-2016	3	*	*	*	*	*	*

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Table 3.44: 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)
WAG	1998-1999	3	*	-	*	-	*	-
	1999-2000	15	113	-	7.5(10.4)	-	23.2(15.3)	-
	2000-2001	12	97	-	8.1(9.4)	-	28.0(17.5)	-
	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)	-
	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	*	*	*	*	*	*
	2014-2015	2	*	*	*	*	*	*
	2015-2016	2	*	*	*	*	*	*

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Table 3.44: 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)	-
	2005-2006	89	261	-	2.9(1.7)	-	69.8(47.8)	-
BBR	2006-2007	81	187	176	2.3(1.1)	88.7(67.0)	82.8(61.6)	2.2(1.0)
	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)
	2014-2015	63	117	113	1.9(0.6)	87.6(56.1)	84.4(51.6)	1.8(0.6)
	2015-2016	64	116	114	1.8(0.7)	87.5(53.5)	84.3(51.9)	1.8(0.7)

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Table 3.44: 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)
BSS	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)	-
	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	420	6.0(2.9)	149.4(84.6)	134.1(81.2)	5.4(2.6)
	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)
	2014-2015	70	471	458	6.7(2.9)	146.7(84.4)	143.0(79.3)	6.5(2.8)
	2015-2016	70	295	289	4.2(1.7)	124.9(92.8)	136.4(83.1)	4.1(1.6)

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Table 3.44: 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(22.8)	-
	2006-2007	39	88	82	2.3(1.3)	18.1(28.1)	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)
	2014-2015	45	191	184	4.2(2.6)	44.8(54.8)	70.9(51.4)	4.1(2.5)
	2015-2016	56	282	280	5.0(2.6)	52.4(49.4)	69.0(44.3)	5.0(2.5)
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)
	2014-2015	4	14	14	3.5	22.0(15.9)	21.6(15.5)	3.5
	2015-2016	3	*	*	*	*	*	*
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 3.45: 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
EAG	1998	68	NA	NA	60	6,200%	01-Sep - 07-Nov
	1999	55	NA	NA	60	6,200%	01-Sep - 25-Oct
	2000	41	NA	NA	60	6,200%	15-Aug - 24-Sep
	2001	27	NA	NA	60	6,200%	15-Aug - 10-Sep
	2002	24	NA	NA	60	6,200%	15-Aug - 07-Sep
	2003	25	NA	NA	60	6,200%	15-Aug - 08-Sep
	2004	15	NA	NA	60	6,200%	15-Aug - 29-Aug
	05/06	274	30-Aug	28-Mar	31	3,200%	15-Aug - 15-May
	06/07	274	31-Aug	13-Jan	7	2,000%	15-Aug - 15-May
	07/08	275	30-Aug	09-Feb	19	2,300%	15-Aug - 15-May
	08/09	274	07-Sep	22-Dec	2	1,100%	15-Aug - 15-May
	09/10	274	31-Aug	10-Jan	6	1,900%	15-Aug - 15-May
	10/11	274	22-Aug	16-Dec	5	1,300%	15-Aug - 15-May
	11/12	275	26-Aug	24-Nov	58	700%	15-Aug - 15-May
	12/13	274	25-Aug	03-Dec	1	1,000%	15-Aug - 15-May
	13/14	274	30-Aug	26-Nov	56	600%	15-Aug - 15-May
	14/15	274	30-Aug	13-Nov	54	200%	15-Aug - 15-May
	15/16	274	23-Aug	13-Nov	55	400%	01-Aug - 30-Apr
	2016/2017	273	19-Aug	02-Apr	34	3,700%	01-Aug - 30-Apr
WAG	98/99	365	NA	NA	60	6,200%	01-Sep - 31-Aug
	99/00	349	NA	NA	60	6,200%	01-Sep - 14-Aug
	00/01	270	NA	NA	60	6,200%	01-Sep - 28-May
	01/02	228	NA	NA	60	6,200%	15-Aug - 30-Mar
	02/03	206	NA	NA	60	6,200%	15-Aug - 08-Mar
	03/04	176	NA	NA	60	6,200%	15-Aug - 06-Feb
	05/06	274	06-Sep	25-Mar	29	3,000%	15-Aug - 15-May
	06/07	274	10-Sep	06-May	37	4,400%	15-Aug - 15-May
	07/08	275	14-Sep	21-May	39	4,700%	15-Aug - 15-May
	08/09	274	13-Sep	12-May	38	4,500%	15-Aug - 15-May
	09/10	274	05-Sep	18-May	41	5,200%	15-Aug - 15-May
	10/11	274	11-Sep	18-Mar	25	2,800%	15-Aug - 15-May
	11/12	275	06-Sep	10-Apr	33	3,400%	15-Aug - 15-May
	12/13	274	10-Sep	05-May	36	4,300%	15-Aug - 15-May
	13/14	274	09-Sep	08-May	38	4,500%	15-Aug - 15-May
	14/15	274	06-Sep	17-May	40	4,900%	15-Aug - 15-May
	15/16	274	14-Aug	02-May	43	5,600%	01-Aug - 30-Apr
	2016/2017	273	02-Sep	17-Mar	28	2,900%	01-Aug - 30-Apr

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Table 3.45: Continued

	Year	Season length, days	Earliest landing	Latest landing	Days fished	Percent of season fished	Season dates
BBR	1998	6	NA	NA	60	6,200%	01-Nov - 06-Nov
	1999	6	NA	NA	60	6,200%	15-Oct - 20-Oct
	2000	5	NA	NA	60	6,200%	16-Oct - 20-Oct
	2001	4	NA	NA	60	6,200%	15-Oct - 18-Oct
	2002	4	NA	NA	60	6,200%	15-Oct - 18-Oct
	2003	6	NA	NA	60	6,200%	15-Oct - 20-Oct
	2004	4	NA	NA	60	6,200%	15-Oct - 18-Oct
	05/06	93	20-Oct	16-Jan	56	5,500%	15-Oct - 15-Jan
	06/07	93	19-Oct	28-Nov	47	1,600%	15-Oct - 15-Jan
	07/08	93	18-Oct	15-Jan	57	5,700%	15-Oct - 15-Jan
	08/09	93	18-Oct	17-Jan	59	6,000%	15-Oct - 15-Jan
	09/10	93	17-Oct	16-Jan	59	6,000%	15-Oct - 15-Jan
	10/11	93	16-Oct	10-Dec	51	2,400%	15-Oct - 15-Jan
	11/12	93	18-Oct	18-Nov	45	800%	15-Oct - 15-Jan
	12/13	93	18-Oct	16-Dec	52	2,600%	15-Oct - 15-Jan
	13/14	93	21-Oct	15-Nov	42	300%	15-Oct - 15-Jan
	14/15	93	19-Oct	17-Nov	44	500%	15-Oct - 15-Jan
	15/16	93	17-Oct	17-Nov	45	800%	15-Oct - 15-Jan
	2016/2017	93	18-Oct	18-Nov	45	800%	15-Oct - 15-Jan
BSS	1998	65	NA	NA	60	6,200%	15-Jan - 20-Mar
	1999	67	NA	NA	60	6,200%	15-Jan - 22-Mar
	2000	8	NA	NA	60	6,200%	01-Apr - 08-Apr
	2001	31	NA	NA	60	6,200%	15-Jan - 14-Feb
	2002	25	NA	NA	60	6,200%	15-Jan - 08-Feb
	2003	11	NA	NA	60	6,200%	15-Jan - 25-Jan
	2004	9	NA	NA	60	6,200%	15-Jan - 23-Jan
	2005	6	NA	NA	60	6,200%	15-Jan - 20-Jan
	05/06	229	27-Oct	27-May	32	5,100%	15-Oct - 31-May
	06/07	229	07-Nov	05-May	24	3,300%	15-Oct - 31-May
	07/08	230	18-Nov	10-May	23	3,100%	15-Oct - 31-May
	08/09	229	30-Nov	16-May	22	3,000%	15-Oct - 31-May
	09/10	229	11-Jan	06-May	4	2,100%	15-Oct - 31-May
	10/11	229	18-Nov	09-Apr	9	2,500%	15-Oct - 31-May
	11/12	245	02-Nov	19-Jun	35	5,400%	15-Oct - 15-Jun
	12/13	229	24-Nov	05-Jun	27	4,000%	15-Oct - 31-May
	13/14	229	20-Oct	29-Apr	26	3,900%	15-Oct - 31-May
	14/15	229	03-Nov	30-May	30	4,700%	15-Oct - 31-May
	15/16	230	05-Nov	14-May	26	3,800%	15-Oct - 31-May
	2016/2017	229	07-Jan	25-Apr	3	1,800%	15-Oct - 31-May

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Table 3.45: Continued

	Year	Season length, days	Earliest landing	Latest landing	Days fished	Percent of season fished	Season dates
BST	05/06	168	27-Oct	02-Apr	17	5,300%	15-Oct - 31-Mar
BTE	06/07	168	23-Oct	27-Mar	15	5,200%	15-Oct - 31-Mar
	07/08	169	20-Oct	02-Apr	20	5,900%	15-Oct - 31-Mar
	08/09	168	19-Oct	11-Mar	11	4,200%	15-Oct - 31-Mar
	09/10	168	17-Oct	01-Mar	7	3,500%	15-Oct - 31-Mar
	13/14	168	29-Oct	29-Mar	12	4,600%	15-Oct - 31-Mar
	14/15	168	21-Oct	01-Apr	18	5,800%	15-Oct - 31-Mar
	15/16	169	23-Oct	27-Mar	16	5,000%	15-Oct - 31-Mar
BTW	06/07	168	04-Nov	26-Mar	10	4,100%	15-Oct - 31-Mar
	07/08	169	16-Nov	31-Mar	8	3,600%	15-Oct - 31-Mar
	08/09	168	13-Jan	25-Mar	53	1,500%	15-Oct - 31-Mar
	13/14	229	07-Nov	08-Apr	13	2,700%	15-Oct - 31-May
	14/15	168	03-Nov	18-Apr	21	6,100%	15-Oct - 31-Mar
	15/16	169	31-Oct	03-Apr	14	4,800%	15-Oct - 31-Mar
PIK	1998	14	NA	NA	60	6,200%	15-Sep - 28-Sep
SMB	1998	12	NA	NA	60	6,200%	15-Sep - 26-Sep
	09/10	110	23-Oct	07-Dec	48	1,200%	15-Oct - 01-Feb
	10/11	110	23-Oct	11-Dec	50	1,700%	15-Oct - 01-Feb
	11/12	110	21-Oct	15-Dec	51	2,200%	15-Oct - 01-Feb
	12/13	110	23-Oct	08-Dec	49	1,400%	15-Oct - 01-Feb
	14/15	110	28-Oct	05-Dec	46	900%	15-Oct - 01-Feb
	15/16	110	30-Oct	28-Nov	44	100%	15-Oct - 01-Feb
WAI	98/99	273	NA	NA	60	6,200%	01-Nov - 31-Jul
	02/03	3	NA	NA	60	6,200%	25-Oct - 27-Oct
	03/04	372	NA	NA	60	6,200%	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.
[a] 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 3.46: 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)
	2015-2016	0	3	68	39	70	59(17)
	2016-2017	1	3	95	51	105	84(29)
WAG	2005-2006	0	3	176	175	181	177(3)
	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)
	2015-2016	0	2	252	241	262	252(15)
	2016-2017	0	3	188	116	237	180(61)
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)
	2015-2016	24	40	6	2	20	8(4)
	2016-2017	24	39	6	1	23	7(5)

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Table 3.46: 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)
	2015-2016	3	68	33	5	116	35(22)
	2016-2017	3	60	23	3	69	24(13)
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)
	2015-2016	3	53	91	9	147	87(41)
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)
	2015-2016	1	2	15	13	16	15(2)

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, andeLandings.

Table 3.47: BBR Fishery Harvest by Week of Season

	2011-2012		2012-2013		2013-2014		2014-2015		2015-2016	
Week	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	16	7(9,2)	11	9(8,1)	1	1(1,0)	8	6(7,3)	11	8(9,12)
2: 22-Oct	52	71(74,51)	43	69(76,30)	29	36(33,26)	47	57(61,35)	52	67(70,46)
3: 29-Oct	27	97(97,95)	28	95(96,86)	43	83(84,75)	31	85(87,76)	31	95(97,96)
4: 05-Nov	6	98(97,100)	10	100(100,98)	22	98(97,97)	16	98(98,95)	6	98(99,100)
5: 12-Nov	2	100(100,100)	0	100(100,98)	4	100(100,100)	3	100(100,100)	3	100(100,100)
6: 19-Nov	0	100(100,100)	0	100(100,98)	0	100(100,100)	0	100(100,100)	0	100(100,100)
7: 26-Nov	0	100(100,100)	0	100(100,98)	0	100(100,100)	0	100(100,100)	0	100(100,100)
8: 03-Dec	0	100(100,100)	1	100(100,98)	0	100(100,100)	0	100(100,100)	0	100(100,100)
9: 10-Dec	0	100(100,100)	1	100(100,100)	0	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 3.48: BSS Fishery Harvest by Week of Season

	2011-2012		2012-2013		2013-2014		2014-2015		2015-2016	
Week	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)	1	0(0,0)	0	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	1	0(0,0)	0	0(0,0)	2	0(1,0)	1	0(0,0)	0	0(0,0)
4: 05-Nov	0	0(0,0)	0	0(0,0)	0	0(1,0)	2	0(0,0)	2	0(0,0)
5: 12-Nov	1	0(0,0)	0	0(0,0)	0	0(1,0)	1	0(0,0)	1	1(1,0)
6: 19-Nov	1	0(0,0)	1	0(0,0)	0	0(1,0)	1	0(1,0)	2	1(2,0)
7: 26-Nov	1	1(0,0)	0	0(0,0)	0	0(1,0)	1	1(1,0)	0	1(2,0)
8: 03-Dec	0	1(0,0)	1	1(0,0)	2	1(2,0)	4	2(2,0)	1	2(2,0)
9: 10-Dec	0	1(0,0)	0	1(0,0)	8	4(5,0)	12	5(6,0)	1	2(2,0)
10: 17-Dec	0	1(0,0)	1	1(0,0)	9	7(7,0)	12	8(9,1)	1	2(2,0)
11: 24-Dec	0	1(0,0)	0	1(0,0)	6	10(10,5)	8	10(11,1)	0	2(2,0)
12: 31-Dec	0	1(0,0)	8	3(4,0)	10	13(13,6)	12	13(14,3)	3	3(3,0)
13: 07-Jan	20	5(7,1)	30	12(14,1)	26	20(22,9)	21	18(20,3)	9	5(5,0)
14: 14-Jan	26	12(14,1)	29	20(24,3)	23	27(31,11)	30	25(28,3)	19	14(15,2)
15: 21-Jan	31	20(23,3)	33	29(34,7)	25	34(39,16)	25	31(36,4)	24	24(27,3)
16: 28-Jan	33	24(29,5)	29	36(42,12)	28	42(47,21)	33	40(46,7)	23	32(37,11)
17: 04-Feb	16	29(33,11)	38	45(51,14)	35	52(58,28)	33	47(54,9)	21	42(48,15)
18: 11-Feb	25	33(38,14)	44	54(60,21)	32	62(69,32)	28	53(61,12)	27	51(59,23)
19: 18-Feb	31	40(45,16)	26	60(67,26)	31	70(78,34)	30	61(67,26)	26	60(67,28)
20: 25-Feb	40	47(52,19)	29	68(73,34)	28	78(84,53)	32	69(73,38)	23	68(76,36)
21: 04-Mar	24	51(57,21)	31	75(81,41)	24	84(88,67)	27	75(79,46)	19	76(81,41)
22: 11-Mar	35	57(63,26)	23	81(85,55)	16	90(94,73)	23	80(83,51)	15	81(84,54)
23: 18-Mar	34	60(67,31)	27	90(91,69)	14	94(97,77)	13	83(86,55)	15	87(90,62)
24: 25-Mar	15	63(69,31)	11	92(93,73)	11	96(98,90)	17	86(90,56)	9	91(94,69)
25: 01-Apr	22	66(73,32)	12	94(95,75)	7	98(99,93)	13	88(91,59)	8	93(96,71)
26: 08-Apr	8	67(74,32)	9	96(96,86)	1	98(99,93)	9	90(93,62)	4	94(97,77)
27: 15-Apr	43	72(79,36)	2	97(96,87)	3	99(100,96)	11	92(94,70)	6	96(98,82)
28: 22-Apr	1	73(79,37)	0	97(96,87)	4	100(100,100)	9	93(95,78)	4	97(100,87)
29: 29-Apr	29	75(81,39)	8	99(97,95)	2	100(100,100)	9	95(96,84)	5	99(100,93)
30: 06-May	35	78(83,42)	3	99(98,95)	0	100(100,100)	10	98(98,95)	4	100(100,99)
31: 13-May	0	78(83,42)	2	100(98,97)	0	100(100,100)	7	99(99,97)	2	100(100,100)
32: 20-May	21	80(85,45)	2	100(98,98)	0	100(100,100)	3	100(100,97)	0	100(100,100)
33: 27-May	35	87(89,67)	0	100(98,98)	0	100(100,100)	3	100(100,100)	0	100(100,100)
Postseason: 01-Jun	42	100(100,100)	0	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.
[a] 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 3.49: Fishing Effort (Pot Lifts, CPUE, and RPUE) by Season, CR Program Fisheries

		Vessels	CPUE (lb legal crab)		Pot lifts		RPUE ($)	
	Season		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
EAG	1998	14	8.0(4.4)	9.0	5.6(2.6)	78.1	$94(48)	$103
	1999	15	9.0(4.7)	9.0	5.0(2.0)	74.3	$165(87)	$164
	2000	15	9.7(4.3)	9.7	4.6(1.6)	68.4	$199(95)	$200
	2001	19	11.2(5.6)	11.5	3.3(1.1)	62.6	$208(99)	$211
	2002	19	12.2(4.9)	12.1	2.7(0.7)	52.0	$238(94)	$238
	2003	18	10.6(2.9)	10.6	3.3(0.7)	58.9	$220(61)	$223
	2004	19	18.6(7.1)	18.0	1.8(0.4)	34.8	$332(118)	$321
	05-06	7	25.3(7.9)	25.2	3.5(1.9)	24.6	$355(132)	$373
	06-07	6	23.7(5.4)	24.5	4.4(3.5)	26.2	$227(59)	$253
	07-08	4	29.1	27.8	5.7	22.7	$309	$335
	08-09	3	*	*	*	*	*	*
	09-10	3	*	*	*	*	*	*
	10-11	3	*	*	*	*	*	*
	11-12	3	*	*	*	*	*	*
	12-13	3	*	*	*	*	*	*
	13-14	3	*	*	*	*	*	*
	14-15	3	*	*	*	*	*	*
	15-16	3	*	*	*	*	*	*
WAG	98-99	3	*	*	*	*	*	*
	99-00	15	4.2(2.7)	6.1	7.0(7.7)	104.3	$75(47)	$109
	00-01	12	4.7(3.3)	6.8	8.2(6.7)	97.9	$84(55)	$119
	01-02	9	5.8(1.7)	6.4	11.7(9.4)	105.5	$100(26)	$109
	02-03	6	6.4(3.4)	8.3	13.2(10.5)	79.0	$113(56)	$146
	03-04	6	8.5(3.3)	10.0	11.0(7.8)	66.2	$150(57)	$174
	04-05	6	9.3(4.4)	11.9	9.5(7.1)	56.8	$143(66)	$181
	05-06	3	*	*	*	*	*	*
	06-07	4	18.6	20.0	6.5	25.9	$150	$153
	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	$358	$340
	13-14	3	*	*	*	*	*	*
	14-15	2	*	*	*	*	*	*
	15-16	2	*	*	*	*	*	*

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Table 3.49: Continued

		Vessels	CPUE (lb legal crab)		Pot lifts		RPUE ($)	
	Season		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
BBR	1998	274	15.3(6.7)	15.2	0.5(0.2)	144.9	$374(164)	$370
	1999	257	12.6(6.1)	12.5	0.6(0.2)	150.0	$660(327)	$658
	2000	244	11.9(5.2)	12.0	0.4(0.1)	103.4	$488(214)	$494
	2001	230	19.1(10.0)	19.2	0.3(0.1)	66.2	$776(412)	$778
	2002	242	20.6(7.1)	20.4	0.3(0.1)	72.2	$1,059(360)	$1,049
	2003	250	18.2(9.5)	18.4	0.5(0.2)	134.1	$728(379)	$741
	2004	251	22.9(9.0)	22.9	0.4(0.1)	96.3	$904(345)	$907
	05-06	89	28.0(10.5)	23.7	1.3(1.0)	114.6	$989(374)	$842
	06-07	81	33.3(9.9)	34.0	0.9(0.5)	71.7	$902(276)	$921
	07-08	74	27.9(7.2)	27.5	1.5(0.9)	113.1	$897(235)	$884
	08-09	78	23.7(7.1)	21.7	1.8(1.1)	139.7	$873(271)	$800
	09-10	70	22.3(5.9)	21.2	1.7(0.8)	118.4	$710(187)	$678
	10-11	65	18.6(5.1)	18.1	2.0(1.0)	131.4	$925(260)	$899
	11-12	62	27.6(7.3)	28.2	0.7(0.3)	45.1	$1,950(515)	$1,987
	12-13	64	30.7(9.0)	30.2	0.6(0.3)	38.0	$1,748(526)	$1,727
	13-14	63	27.0(8.9)	26.9	0.7(0.3)	45.8	$1,320(447)	$1,310
	14-15	63	29.0(28.7)	25.3	0.9(0.5)	58.5	$1,343(1,376)	$1,168
	15-16	64	31.7(9.7)	30.6	0.7(0.4)	48.0	$1,709(535)	$1,652
BSS	1999	241	155.4(42.0)	158.3	3.9(1.5)	945.4	$269(68)	$273
	2000	231	138.5(59.9)	136.2	0.8(0.3)	181.5	$457(203)	$446
	2001	207	91.6(48.0)	95.6	0.9(0.5)	191.0	$252(121)	$263
	2002	191	76.2(35.2)	75.6	1.7(0.8)	325.6	$176(81)	$174
	2003	190	151.6(63.0)	146.9	0.8(0.4)	153.7	$431(170)	$415
	2004	189	156.0(60.3)	149.6	0.7(0.4)	123.4	$508(190)	$487
	2005	168	246.2(87.9)	242.8	0.4(0.1)	72.9	$742(279)	$730
	05-06	78	211.4(71.9)	202.6	1.5(1.1)	120.0	$429(138)	$413
	06-07	69	349.1(74.7)	343.0	1.2(0.8)	85.3	$784(181)	$759
	07-08	78	354.7(74.1)	352.7	1.8(1.0)	141.4	$837(172)	$833
	08-09	77	284.6(70.5)	279.1	2.1(1.3)	163.3	$561(143)	$550
	09-10	69	255.8(55.6)	255.0	2.0(1.1)	136.8	$496(102)	$494
	10-11	68	255.3(51.4)	254.9	2.2(1.1)	147.2	$989(197)	$986
	11-12	72	224.7(63.4)	222.7	3.7(1.8)	270.0	$740(207)	$737
	12-13	70	219.2(64.1)	210.0	3.2(1.6)	224.4	$722(203)	$693
	13-14	70	181.8(49.9)	179.8	3.3(1.7)	231.4	$563(157)	$553
	14-15	71	192.4(57.0)	190.6	4.0(1.9)	286.1	$493(149)	$488
	15-16	74	143.4(53.6)	138.1	2.9(1.6)	212.4	$524(186)	$504

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Table 3.49: Continued

		Vessels	CPUE (lb legal crab)		Pot lifts		RPUE ($)	
	Season		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
	05-06	43	19.1(16.7)	15.0	0.7(0.6)	29.0	$71(65)	$56
	06-07	52	16.8(15.4)	17.2	1.0(0.8)	52.9	$71(65)	$73
	07-08	41	18.6(10.1)	17.6	1.3(1.3)	52.0	$78(43)	$75
	08-09	49	14.7(15.7)	12.9	1.3(1.3)	63.9	$61(66)	$53
	09-10	41	38.8(30.9)	11.8	1.0(0.7)	40.6	$193(155)	$59
BST	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	$79(63)	$49
	14-15	64	34.9(15.2)	33.5	3.5(2.6)	221.7	$160(71)	$149
	15-16	70	42.1(19.1)	38.7	4.0(3.2)	278.3	$181(84)	$165
PIK	1998	58	3.0(1.7)	3.0	0.8(0.3)	46.0	$73(40)	$71
	1998	132	7.1(2.0)	6.9	0.7(0.3)	91.7	$88(24)	$85
	09-10	7	9.3(1.4)	9.6	1.5(1.0)	10.6	$99(15)	$103
	10-11	11	9.7(2.0)	10.1	2.7(1.2)	29.3	$222(45)	$231
SMB	11-12	18	8.5(2.1)	8.9	2.7(1.1)	48.6	$184(45)	$191
	12-13	17	9.8(2.6)	10.1	2.2(1.0)	37.0	$192(52)	$196
	14-15	4	6.2	6.7	2.5	10.1	$95	$102
	15-16	3	*	*	*	*	*	*
	98-99	1	*	*	*	*	*	*
WAI	02-03	33	18.7(12.7)	17.9	0.1(0.0)	3.8	$1,107(753)	$1,058
	03-04	30	10.2(5.4)	10.3	0.2(0.1)	5.8	$526(282)	$533

Notes: Effort statistics for the most recent crab year shown in the table represent fishing activity occuring 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 2015-equivalent value using the GDP deflator. Includes catcher/processor harvest and effort.

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

Table 3.50: Snow and King Crab Exports and Imports

	King crab						Snow crab					
Year	Export (1,000t)	Export value ($million)	Import (1,000t)	Import value ($million)	Net export (1,000t)	Net export value ($million)	Export (1,000t)	Export value ($million)	Import (1,000t)	Import value ($million)	Net export (1,000t)	Net export value ($million)
1991	3.85	$86.40	0.30	$6.43	3.55	$79.97	32.20	$247.12	0.74	$8.55	31.46	$238.57
1992	3.70	$93.97	2.19	$34.95	1.51	$59.02	61.61	$475.59	0.88	$7.40	60.73	$468.19
1993	5.96	$132.53	1.12	$19.82	4.84	$112.71	45.56	$413.22	1.33	$13.15	44.23	$400.07
1994	3.62	$72.08	2.60	$51.37	1.02	$20.71	31.12	$384.73	2.86	$32.32	28.26	$352.41
1995	2.85	$51.39	4.01	$66.61	-1.16	$-15.22	12.26	$182.44	2.26	$27.35	10.00	$155.09
1996	4.46	$81.98	6.27	$92.95	-1.81	$-10.97	9.53	$101.30	3.38	$32.03	6.15	$69.27
1997	2.80	$40.21	9.77	$157.02	-6.97	$-116.81	10.17	$76.45	6.90	$51.39	3.27	$25.06
1998	3.10	$32.07	11.82	$171.48	-8.72	$-139.41	11.99	$75.52	12.26	$87.96	-0.27	$-12.44
1999	2.73	$35.51	11.49	$188.82	-8.76	$-153.31	15.62	$128.48	24.68	$230.94	-9.06	$-102.46
2000	3.05	$61.60	10.05	$196.79	-7.00	$-135.19	4.75	$56.09	28.61	$325.83	-23.86	$-269.74
2001	1.83	$43.85	9.29	$183.27	-7.46	$-139.42	3.09	$33.13	42.18	$386.80	-39.09	$-353.67
2002	2.28	$43.65	10.42	$242.41	-8.14	$-198.76	3.36	$34.50	44.41	$407.94	-41.05	$-373.44
2003	3.94	$64.24	9.96	$207.06	-6.02	$-142.82	3.92	$48.34	51.60	$557.53	-47.68	$-509.19
2004	3.25	$48.36	10.55	$185.96	-7.30	$-137.60	4.09	$49.21	49.10	$522.98	-45.01	$-473.77
2005	3.90	$64.76	18.39	$300.62	-14.49	$-235.86	3.42	$36.02	45.97	$390.71	-42.55	$-354.69
2006	4.32	$67.29	28.07	$390.21	-23.75	$-322.92	4.79	$47.32	46.28	$353.72	-41.49	$-306.40
2007	3.31	$55.50	30.35	$414.87	-27.04	$-359.37	2.12	$17.25	47.98	$458.84	-45.86	$-441.59
2008	4.33	$77.14	15.92	$295.09	-11.59	$-217.95	5.55	$49.67	42.00	$411.79	-36.45	$-362.12
2009	3.36	$73.40	15.83	$270.77	-12.47	$-197.37	5.48	$49.86	51.65	$422.93	-46.17	$-373.07
2010	3.62	$89.15	10.06	$195.64	-6.44	$-106.49	4.96	$45.41	43.57	$410.40	-38.61	$-364.99
2011	2.66	$68.19	8.50	$183.75	-5.84	$-115.56	8.48	$97.48	41.04	$540.44	-32.56	$-442.96
2012	1.98	$53.37	9.41	$173.59	-7.43	$-120.22	12.72	$135.74	41.68	$458.27	-28.96	$-322.53
2013	1.78	$45.28	10.69	$201.08	-8.91	$-155.80	8.22	$94.36	52.05	$572.84	-43.83	$-478.48
2014	2.19	$52.06	12.34	$249.03	-10.15	$-196.97	7.24	$88.34	45.49	$515.28	-38.25	$-426.94
2015	0.75	$17.09	9.35	$190.66	-8.60	$-173.57	7.72	$79.15	45.79	$498.76	-38.07	$-419.61
2016	1.17	$32.66	10.39	$279.23	-9.22	$-246.57	6.12	$74.26	49.70	$625.83	-43.58	$-551.57

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 3.51: Inflation-adjustment Indices

Year	GDP Index	2016 GDP Adjustment Factor	PCE Index	2016 PCE Adjustment Factor
1991	69.057	1.61	69.652	1.59
1992	70.633	1.57	71.494	1.55
1993	72.314	1.54	73.279	1.51
1994	73.851	1.51	74.803	1.48
1995	75.393	1.47	76.356	1.45
1996	76.767	1.45	77.981	1.42
1997	78.088	1.42	79.327	1.4
1998	78.935	1.41	79.936	1.39
1999	80.065	1.39	81.11	1.37
2000	81.89	1.36	83.131	1.33
2001	83.755	1.33	84.736	1.31
2002	85.041	1.31	85.873	1.29
2003	86.736	1.28	87.572	1.27
2004	89.118	1.25	89.703	1.24
2005	91.985	1.21	92.261	1.2
2006	94.812	1.17	94.729	1.17
2007	97.34	1.14	97.101	1.14
2008	99.218	1.12	100.065	1.11
2009	100	1.11	100	1.11
2010	101.226	1.1	101.653	1.09
2011	103.316	1.08	104.149	1.06
2012	105.22	1.06	106.121	1.04
2013	106.917	1.04	107.572	1.03
2014	108.838	1.02	109.105	1.02
2015	109.999	1.01	109.532	1.01
2016	111.188	1	110.789	1

Notes: The Personal Consumption Expenditures (PCE) chain-type price index is used where noted in this report to deflate estimates of ex-vessel revenues, fishing costs, crew earnings, and associated monetary values to account for price inflation in US general personal consumption expenditures. The Gross Domestic Production (GDP) chain-type price index is used where noted to deflate estimates of wholesale production revenues and production costs to account for change in the general price level of US domestic production of all goods and services.

Source: U.S. Bureau of Economic Analysis, Gross Domestic Product: Chain-type Price Index [GDPCTPI], retrieved from FRED, Federal Reserve Bank of St. Louis; https://fred.stlouisfed.org/series/GDPCTPI, retrieved December 2017. U.S. Bureau of Economic Analysis, Personal Consumption Expenditures: Chain-type Price Index [PCEPI], retrieved from FRED, Federal Reserve Bank of St. Louis; https://fred.stlouisfed.org/series/PCEPI, retrieved December 2017.