

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,
2019

by

Brian Garber-Yonts, NOAA Fisheries
Jean Lee, Alaska Fisheries Information Network.

Economic and Social Sciences Research Program
Resource Ecology and Fisheries Management Division
Alaska Fisheries Science Center
National Marine Fisheries Service
National Oceanic and Atmospheric Administration
7600 Sand Point Way N.E.
Seattle, Washington 98115-6349

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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 maintain 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).

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For additional information concerning this report contact:

Brian Garber-Yonts
Resource Ecology and Fisheries Management Division
Alaska Fisheries Science Center
7600 Sand Point Way N.E.
Seattle, Washington 98115-6349
(206) 526-6301
brian.garber-yonts@noaa.gov

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ECONOMIC STATUS REPORT EXECUTIVE SUMMARY: BSAI CRAB FISHERIES, 2019

The Economic Status Report for BSAI Crab Fisheries, 2019 (Crab Economic SAFE) 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, and other information regarding data collection and ongoing economic and social science research related the BSAI crab fisheries and related communities. This executive summary highlights 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.

Fishery production and economic value

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 2018) prosecuted by an active fleet of 99 catcher vessels and two catcher processors, and landed and processed at 12 processing facilities throughout the region. Across all fisheries managed under the BSAI Crab FMP during 2018, the total volume of ex-vessel landings was 31.9 million pounds (14.5 thousand metric tons), a 9% decrease from the previous year. Processing sector finished production volume during 2018 was 20.9 million pounds (9.5 thousand mt) aggregated over all BSAI crab species and product forms, also declining 9% from the previous year. The effect of fishery closures and a net reduction in production volume across crab fisheries, combined with changes in market prices, produced an aggregate 10% decrease in ex-vessel revenue over all fisheries in 2018, totaling \$169 million for the year, and with aggregate first wholesale revenues also declining by 10% to \$201 million.¹

Harvest and processing sector production statistics by crab fishery, including ex-vessel and first wholesale output, estimated revenue, and average prices are shown in Table 1 for calendar years 2014 through 2018 and summarized in Figure 1, with ex-vessel and first wholesale prices shown in Figure 2.

As of 2018, allowable catch quantities in all BSAI crab fisheries currently open to targeted fishing are fully exploited (> 98% of total allocation landed), and recent inter-annual variation in commercial landings largely reflects the results of stock assessments and the State of Alaska's specified catch limits rather than changes in fishing capacity or exploitation rates. The decrease in aggregate production during 2018 reflected declines across two of the three largest crab fisheries compared to 2017. The total catch of 18.9 million pounds (8.6 thousand mt) landed in the Bering Sea snow crab (BSS) fishery was a decline of 11.6% from 21.3 million pounds in 2017, and reflected a historical low

¹All monetary values in the report, unless otherwise noted, are inflation-adjusted to 2018-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.

for the fishery. Landings in the western portion of the Bering Sea Tanner (BST) fisheries during 2018 increased relative to 2017 levels, to 2.3 million pounds (1.04 thousand mt), and landings in the Bristol Bay red king crab (BBR) fishery declined 35% to 4.2 million pounds (1.9 thousand mt). The 6.5 million pounds (3.0 thousand mt) landed in the Aleutian Islands golden king crab (AIG) fisheries during 2018 was an increase of 17% from 2017 production.

Similar to ex-vessel production, the 9% decrease in processing sector output aggregated over all active crab fisheries was driven in the largest part by the reduction to 12.3 million pounds (5.6 thousand mt) of finished production in the BSS fishery, 2.3 million pounds (12%) less than 2017, as well as the 35% decline in finished volume in the BBR fishery to 2.9 million pounds (1.3 thousand mt).

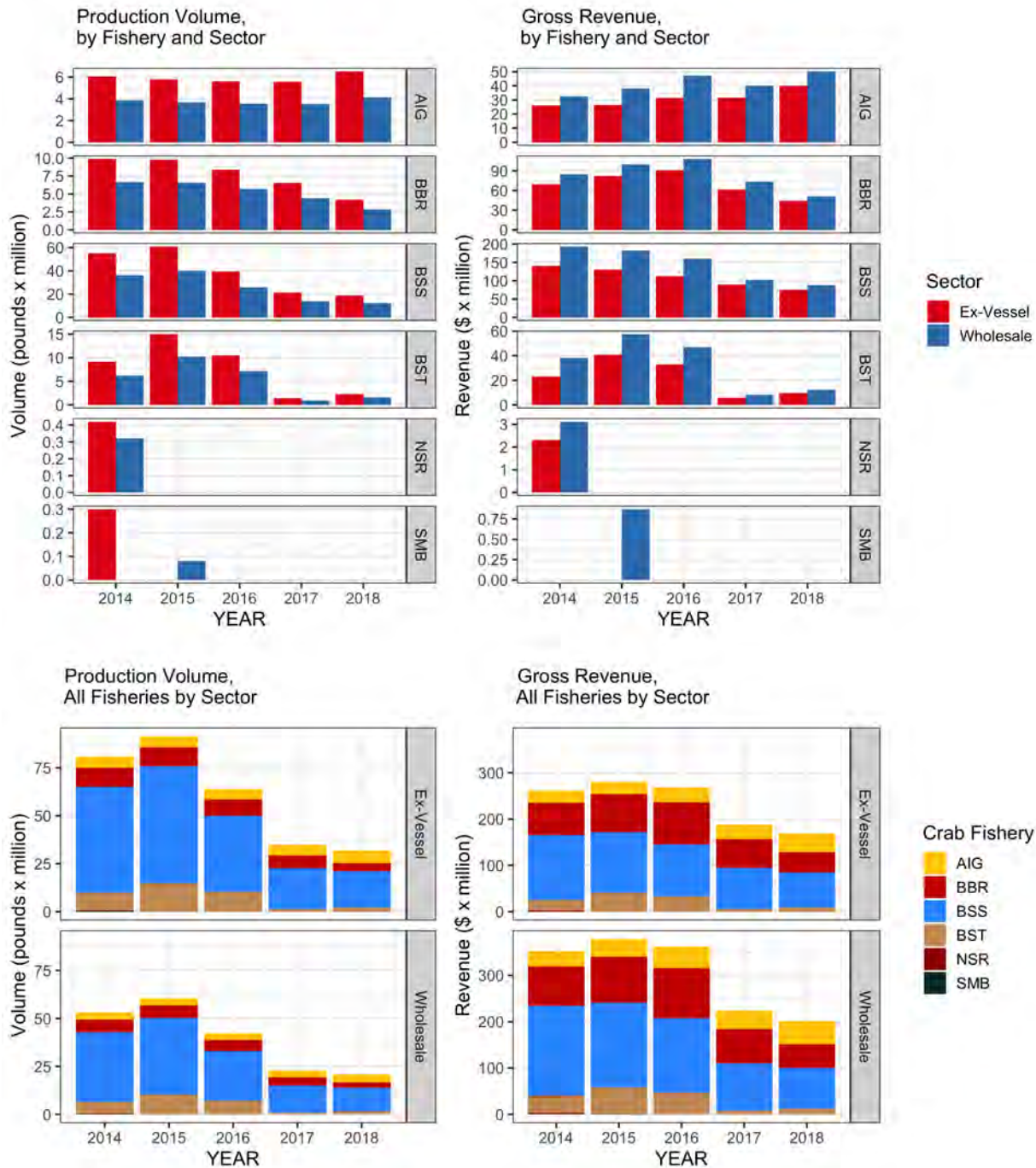
With respect to aggregate revenues accruing to active participants within the harvesting and processing sectors, increases in ex-vessel and first wholesale prices in the AIG, BBR, and BST fisheries partially offset the effect of production declines on aggregate value, while prices declined moderately in the BSS fishery. The average BBR ex-vessel price increased 11% in 2018 to \$10.39 per pound, and the first wholesale price increased 8% to \$17.91 per finished pound. The average first wholesale price in the AIG fishery increased 7% to \$12.15 per pound, while ex-vessel price increased by 9% to \$6.18 per pound landed. Ex-vessel price in the BST fishery increased slightly from 2017 to \$4.15 ex-vessel, while declining 8% to \$7.83 at first wholesale. BSS prices declined by 5% to \$3.99 average ex-vessel, and by 3% to \$7.11 average first wholesale.

Both price and production declines relative to 2017 in both sectors of the BSS fishery reduced gross revenue by 16% in the harvest sector, to \$75.2 million, and by 14% to \$87.8 million in the processing sector. The BST fishery produced gross revenue of \$9.5 million ex-vessel and \$12.2 million in the processing sector, increasing by 64% and 50%, respectively. Gross ex-vessel earnings declined by 28% to \$43.9 million in the BBR fishery, and by 30% to \$51.2 million first wholesale. Ex-vessel revenues in the AIG fisheries increased 27% from 2017, to \$40.2 million, and by 25% in the processing sector, to \$50.2 million.

Of the 10 crab stocks and 11 fisheries managed under the FMP,² seven fisheries were open to targeted fishing during 2018, including the Bristol Bay and Norton Sound red king crab fisheries, Eastern and Western Aleutian Islands and Pribilof Islands golden king crab fisheries, the Bering Sea snow crab fishery, and Western Bering Sea Tanner crab fisheries. The latter has been closed for the 2019/20 season; after closure for the 2010/11 through 2012/13 seasons, the Bering Sea Tanner crab fisheries opened for targeted fishing for 2013/14 through 2015/16 seasons, but under ADF&G management strategy, were subsequently closed for the 2016/17 season; the Western Bering Sea Tanner (WBT) crab fishery opened for the 2017/18 and 2018/19 seasons, but neither of the Eastern or Western Bering Sea Tanner fisheries were opened for the 2019/20 season. The Saint Matthew

²There 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 were 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.

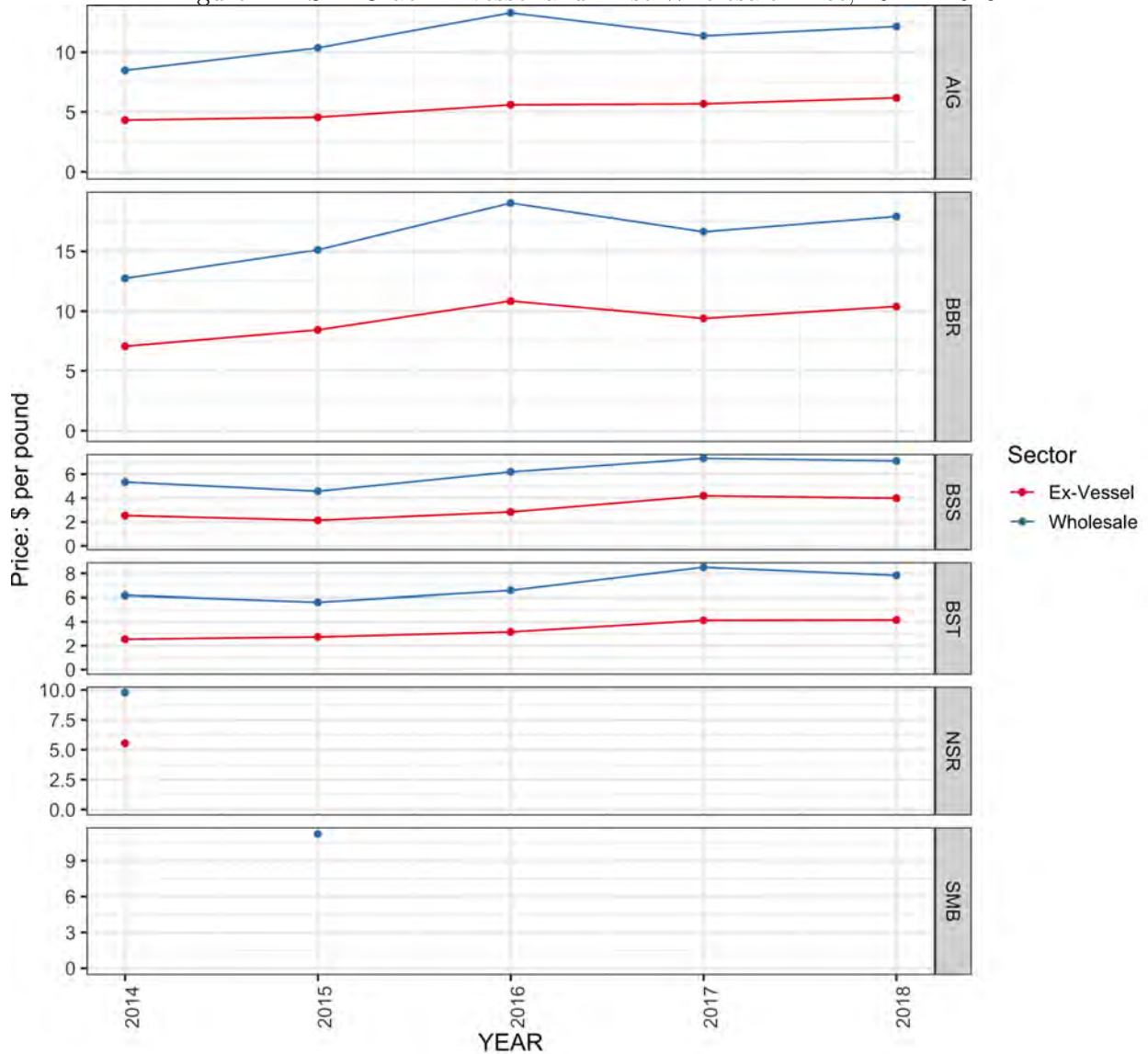
Figure 1: BSAI Crab Ex-vessel and First Wholesale Production, 2014 - 2018



Source: ADF&G fish tickets, eLandings, CFEC pricing, ADF&G Commercial Operator's Annual Report, NMFS AFSC BSAI Crab Economic Data Report (EDR) database.

(a) Revenue, (b) Volume, and (c) Weighted Average Price, 2014 - 2018; 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 details.

Figure 2: BSAI Crab Ex-vessel and First Wholesale Price, 2014 - 2018



Source: ADFG/CFEC Fish Tickets (data compiled by AKFIN in Comprehensive FT), eLandings, CFEC pricing, ADFG Commercial Operators Annual Report (data compiled by AKFIN in Comprehensive ENCOAR PROD), NMFS AFSC BSAI Crab Economic Data Report (EDR) database. See Table 1 footnotes for details. Ex-vessel and First Wholesale Weighted Average Price, 2014 - 2018. See Table 1 footnotes for data sources and details.

blue king crab fishery was declared to be overfished in October, 2018 and a rebuilding plan for the fishery is currently in development; the 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 has been closed for 2016/17 through 2019/20 seasons. The Western Aleutian red king crab fishery has been closed since 2003/04, and the Pribilof Islands red and blue king crab have been closed since 1999, and are both currently designated overfished.

Employment and Income

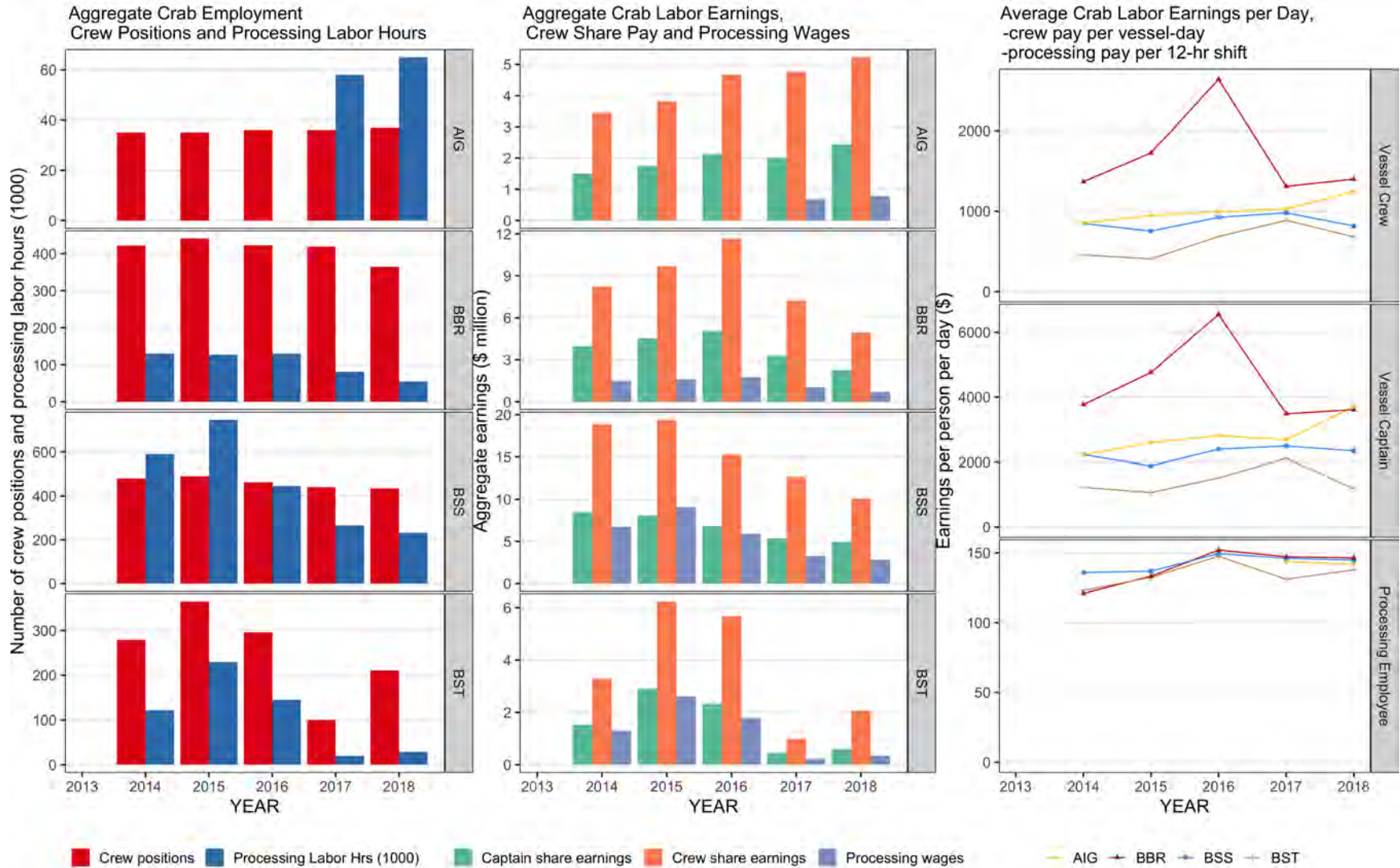
A summary of selected indicators from the most recent employment data available for Crab Rationalization (CR) program fisheries is provided in Table 2 and depicted graphically in Figure 3, reporting results through calendar year 2018.³

During 2018, 101 vessels actively operated in BSAI crab fisheries, a historically low level of vessel participation in the fisheries, and the number of vessels operating in one or more of the CR fisheries in 2018 declined from 72 to 67. The active fleets in the AIG and BSS fisheries remained constant at 5 and 63 vessels, respectively. The number of vessels that participated in targeted fishing in the WBT fishery during 2018 doubled from 16 to 30, while vessels active in the BBR fishery declined from 61 in 2017 to 55 during 2018. Based on the number of crew onboard participating vessels during each fishery (averaged over crew size values reported in eLandings catch accounting records for crab vessels), there were an estimated 1,049 crew positions in aggregate across all 67 vessels in CR fisheries in 2018, a 5% increase from the previous year, largely due to increased participation in the WBT fishery.⁴

³BSAI 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.

⁴ 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, 2014 - 2018



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 \$22.4 million in 2018, with an additional \$10.2 million paid to vessel captains, declining by 13% and 8% respectively.⁵

Aggregate crew earnings in the AIG fishery during 2018 increased by 10% to \$5.2 million, and captain earnings increased by 21% to \$2.4 million. Earnings in the BST fishery also increased, with captain earnings of \$600 thousand fishery representing an increase of 33%, and aggregate crew earnings more than doubled from 2017 to \$2.07 million. Aggregate crew earnings in the BSS fishery declined by 20% to \$10.2 million and captain earnings decreased by 9% to \$4.9 million, while crew and captain earnings in the BBR fishery each declined by 31%, to \$4.94 million and \$2.26 million, respectively.

The number of active processing plants receiving deliveries from BSAI crab fisheries also continued a long declining trend in 2018, falling to just eight, the lowest number in the history of BSAI crab fisheries, and compared to 19 active plants in CR fisheries as of 2006. Crab processing employment in 2018, as measured by hours of processing labor input at plants that received IFQ and CDQ crab landings, is estimated at 382 thousand labor hours, declining 10% from 2017. Aggregate wages paid to crab processing line employees across all CR fisheries during 2018 generated labor earnings of \$4.7 million, 11% less than the previous year. Based on number of processing labor hours and wage payments in each CR fishery reported by crab processors, average hourly labor earnings over all CR fisheries reached \$11.85 per hour in 2018, declining for a second year from a peak of \$12.66 in 2016. The BSS fishery accounted for the largest share of processing labor wages in 2018, at \$2.85 million, with the AIG and BBR fisheries accounting for \$700 thousand and \$790 thousand, respectively.

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 2018 calendar year crab fishing activity. Table 3 and Figure 4 shows aggregated results for crab fishing quota lease market indicators over the most recent five calendar years for CR fisheries, by fishing quota type. 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). Indicators shown in Figure 4 include weighted average statistics for average lease rates (lease price as percentage of ex-vessel price) per vessel, aggregate volume of quota pounds leased as a percentage of total landings, and aggregate quota lease cost as a percentage of gross ex-vessel revenue. Table 3 also reports volume (in pounds) and cost reported for crab vessels active during fishing year, including total quantities summed over all reporting vessels, and average values (both median and mean) per vessel.

⁵ 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).

Figure 4: Crab Harvest Quota Lease Market Indicators, Selected Crab Fisheries, 2014 - 2018



Source: NMFS AFSC BSAI Crab Economic Data Report (EDR) database. See Table 3 footnotes for details.

The total volume of leased quota in the BBR fishery during 2018, aggregating over all IFQ and CDQ pounds leased, represented 90% of total ex-vessel pounds landed in the fishery, a notable increase compared to previous seasons when leased quota varied annually between 78% and 84% of annual pounds landed. Similarly, aggregate quota costs in the BBR fishery increased proportionally during 2018; after ranging between 51% and 53% of total ex-vessel value over the previous four

years, quota lease royalties paid by crab vessel operators increased to 58% of aggregate ex-vessel revenue. A similar increasing trend in aggregate lease volume relative to total catch in the BSS fishery, with the volume of quota leases reported by the 63 vessels active during 2018 increasing in aggregate to 88% of ex-vessel pounds landed, compared to the range of 81% to 84% observed prior to 2017. However, quota lease payments as a proportion of ex-vessel value have only modestly, if consistently increased in the BBR fishery on recent years, from 39% in 2014 to 42% in 2018.

In contrast to more dynamic changes in the volume of lease activity in recent years, quota lease rates (i.e., the per-pound lease cost as a percentage of ex-vessel value) have remained quite stable. The median and weighted average lease rates in the BBR and BSS fisheries shown in Table 3 vary somewhat by quota type within fishery, but are generally quite consistent over the most recent five years. The median lease rate reported for BBR CVO Class A allocation has remained at 62% to 63% of ex-vessel price, and between 62 to 65% as a weighted mean. A lease rate premium of 2-5% is typically reported for CDQ and non-share-matched IFQ types over the rate received for BBR CVO Class A, and the 67% average rate reported for 2018 for both CDQ and Crew IFQ (CVO and CPO), as compared to 64% for CVO IFQ, was consistent with this pattern. The median lease rate for CVO Class A quota in the BSS fishery has remained constant over the period at 46% of ex-vessel value, and varied slightly on a weighted mean basis, between 46-49%, and with similar premiums of 3% to 6% received for CDQ and non-share-matched IFQ.

Table 1: BSAI Crab Harvesting and Processing Sector Output – Production Volume, Gross Revenue, and Average Price

	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	2014	109	257	36.73	80.97	25	\$261.42	-	17	24.15	53.23	\$352.29	-
	2015	117	270	41.49	91.47	22	\$280.29	-	15	27.45	60.51	\$378.62	-
	2016	118	262	29.04	64.02	21	\$267.85	-	12	19.19	42.30	\$362.76	-
	2017	108	276	15.80	34.84	23	\$188.21	-	12	10.38	22.88	\$224.04	-
	2018	101	231	14.45	31.87	20	\$168.86	-	12	9.48	20.90	\$201.37	-
AIG	2014	5	11	2.75	6.07	12	\$26.21	\$4.32	5	1.75	3.85	\$32.68	\$8.48
	2015	5	12	2.63	5.80	9	\$26.46	\$4.56	4	1.67	3.68	\$38.13	\$10.36
	2016	5	12	2.54	5.60	11	\$31.39	\$5.60	5	1.61	3.56	\$47.26	\$13.29
	2017	5	12	2.52	5.56	13	\$31.60	\$5.68	6	1.60	3.53	\$40.11	\$11.36
	2018	5	14	2.95	6.51	11	\$40.20	\$6.18	5	1.87	4.13	\$50.20	\$12.15
BBR	2014	63	72	4.48	9.87	17	\$69.72	\$7.06	9	3.02	6.66	\$84.88	\$12.74
	2015	64	71	4.43	9.77	15	\$82.37	\$8.43	10	2.99	6.60	\$99.81	\$15.12
	2016	63	70	3.81	8.41	17	\$91.10	\$10.84	10	2.57	5.68	\$108.06	\$19.04
	2017	61	69	2.97	6.55	17	\$61.51	\$9.39	10	2.01	4.42	\$73.54	\$16.63
	2018	55	62	1.92	4.23	15	\$43.95	\$10.39	9	1.30	2.86	\$51.15	\$17.91
BSS	2014	70	93	25.05	55.22	13	\$140.06	\$2.54	10	16.41	36.17	\$193.16	\$5.34
	2015	70	94	27.63	60.91	14	\$130.64	\$2.14	10	18.10	39.90	\$182.20	\$4.57
	2016	68	86	17.95	39.57	12	\$112.48	\$2.84	8	11.76	25.92	\$160.41	\$6.19
	2017	63	78	9.67	21.32	14	\$89.30	\$4.19	8	6.33	13.97	\$102.20	\$7.32
	2018	63	80	8.55	18.84	13	\$75.20	\$3.99	8	5.60	12.34	\$87.75	\$7.11
BST	2014	40	53	4.12	9.09	13	\$23.12	\$2.54	9	2.82	6.23	\$38.45	\$6.18
	2015	55	77	6.79	14.98	13	\$40.83	\$2.73	8	4.65	10.26	\$57.61	\$5.62
	2016	46	63	4.74	10.45	12	\$32.88	\$3.15	7	3.24	7.15	\$47.03	\$6.58
	2017	16	21	0.64	1.41	11	\$5.80	\$4.12	6	0.44	0.96	\$8.20	\$8.51
	2018	30	36	1.04	2.29	14	\$9.51	\$4.15	7	0.71	1.57	\$12.27	\$7.83

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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
NSR	2014	34	65	0.19	0.42	4	\$2.31	\$5.54	4	0.14	0.32	\$3.12	\$9.79
	2015	37	72	*	*	3	*	*	3	*	*	*	*
	2016	37	75	*	*	2	*	*	1	*	*	*	*
	2017	37	110	*	*	2	*	*	1	*	*	*	*
	2018	34	71	*	*	1	*	*	1	*	*	*	*
PIG	2014	1	1	*	*	1	*	*	1	*	*	*	*
	2017	2	2	*	*	2	*	*	2	*	*	*	*
	2018	1	2	*	*	1	*	*	1	*	*	*	*
SMB	2014	4	5	0.14	0.30	6	*	*	1	*	*	*	*
	2015	3	3	*	*	4	*	*	1	0.04	0.08	\$0.87	\$11.23

Notes: Data shown for all BSAI crab fisheries by calendar year. All dollar values are adjusted for inflation to 2018-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 for CR program fisheries and from CFEC gross earnings estimates 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 are inclusive of all CP and shoreside processor output. CR program fisheries finished volume and gross first wholesale revenue and price for 2014 to current are sourced from calendar year sales reported in crab processor EDR data; production volume for non-CR fisheries is estimated from ex-vessel landings volume adjusted using average product recovery rate (PRR), with price and revenue derived from COAR gross earnings estimates.

^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

	Year	Crew positions ^a			Crew share ^b		Captain share		Processing labor hours ^c			Processing labor payment ^d		
		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	Total \$million	Plant median, \$1,000
All CR Fisheries	2014	76	1,216	-	\$33.84	-	\$15.47	-	9	905	103	\$10.67	\$10.19	\$644.91
	2015	82	1,332	-	\$39.15	-	\$17.30	-	9	1,179	113	\$11.13	\$14.09	\$1,132.67
	2016	80	1,218	-	\$37.28	-	\$16.33	-	8	788	95	\$12.66	\$10.25	\$753.37
	2017	72	996	-	\$25.67	-	\$11.12	-	9	426	32	\$12.19	\$5.27	\$312.66
	2018	67	1,049	-	\$22.35	-	\$10.20	-	8	382	30	\$11.85	\$4.69	\$186.32
AIG	2014	5	35	7.0	\$3.46	\$747.44	\$1.50	\$310.95	4	*	*	*	*	*
	2015	5	35	7.0	\$3.82	\$755.59	\$1.75	\$365.15	3	*	*	*	*	*
	2016	5	36	7.0	\$4.67	\$1,030.28	\$2.13	\$376.84	4	*	*	*	*	*
	2017	5	36	7.0	\$4.77	\$794.52	\$2.01	\$371.04	5	58	10	\$11.96	\$0.69	\$105.52
	2018	5	37	7.0	\$5.23	\$998.85	\$2.44	\$384.61	5	65	8	\$11.84	\$0.79	\$123.45
BBR	2014	63	422	6.0	\$8.23	\$113.16	\$3.98	\$56.24	7	130	21	\$10.08	\$1.50	\$81.07
	2015	64	441	6.0	\$9.69	\$144.23	\$4.54	\$66.51	8	127	15	\$11.10	\$1.61	\$125.56
	2016	63	423	6.0	\$11.67	\$164.27	\$5.07	\$72.58	8	130	9	\$12.66	\$1.77	\$91.15
	2017	61	419	6.0	\$7.24	\$106.67	\$3.29	\$48.91	8	81	8	\$12.26	\$1.06	\$64.07
	2018	55	365	6.0	\$4.94	\$80.77	\$2.26	\$39.58	7	55	5	\$12.19	\$0.70	\$38.60
BSS	2014	70	480	6.0	\$18.87	\$252.20	\$8.47	\$116.88	8	590	76	\$11.32	\$6.76	\$488.48
	2015	70	491	6.0	\$19.40	\$253.66	\$8.09	\$118.63	8	747	95	\$11.40	\$9.09	\$845.56
	2016	68	463	6.0	\$15.25	\$197.35	\$6.81	\$97.72	6	447	69	\$12.45	\$5.90	\$559.60
	2017	63	441	6.0	\$12.67	\$168.75	\$5.37	\$78.49	6	266	35	\$12.17	\$3.30	\$214.72
	2018	63	436	6.0	\$10.12	\$138.63	\$4.91	\$65.40	6	232	30	\$12.06	\$2.85	\$163.48

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Table 2: Continued

	Year	Crew positions ^a			Crew share ^b		Captain share		Processing labor hours ^c			Processing labor payment ^d		
		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	Total \$million	Plant median, \$1,000
BST	2014	41	279	6.0	\$3.29	\$73.77	\$1.53	\$33.06	7	122	9	\$10.26	\$1.31	\$84.61
	2015	55	365	6.0	\$6.24	\$119.23	\$2.91	\$49.58	7	230	22	\$11.03	\$2.60	\$219.05
	2016	46	296	6.0	\$5.68	\$83.50	\$2.32	\$40.84	6	145	18	\$12.29	\$1.78	\$207.87
	2017	16	100	6.0	\$0.99	\$65.79	\$0.45	\$25.94	5	20	3	\$10.92	\$0.22	\$34.63
	2018	30	211	6.0	\$2.07	\$37.94	\$0.60	\$18.43	6	29	2	\$11.48	\$0.35	\$22.46
SMB	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 2018-equivalent value. Information suppressed for confidentiality where indicated by “*”, and data not available where indicated by “-”.

^a Crew positions total and median summary statistics are calculated from vessel-level observations derived from eLandings crew size reporting, averaged over all landings in the respective fishery reported by each active vessel.

^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

	Year	Vessels ^a	Lease rate (percent of ex-vessel price) ^a		Pounds Leased (1000lbs)			Cost (\$1000)			Lease pounds as % of pounds landed) ^b	Lease cost as % of ex-vessel gross) ^c
		Median	Wtd mean	Total	Median	Mean	Total	Median	Mean	Wtd mean	Wtd mean	
All Quota	2014	4	*	*	*	*	*	*	*	*	*	*
	2015	5	*	*	*	*	*	*	*	*	*	*
	2016	4	*	*	*	*	*	*	*	*	*	*
	2017	5	*	*	*	*	*	*	*	*	*	*
	2018	4	*	*	*	*	*	*	*	*	*	*
CVO A	2014	4	*	*	*	*	*	*	*	*	*	*
	2015	5	49%	49%	2,252	351	450	\$5,483	\$973.56	\$1,096.68	65%	34%
	2016	3	*	*	*	*	*	*	*	*	*	*
	2017	5	52%	53%	2,368	367	395	\$7,242	\$1,197.57	\$1,207.06	76%	40%
	2018	4	*	*	*	*	*	*	*	*	*	*
AIG CVO B + CPO	2014	4	*	*	*	*	*	*	*	*	*	*
	2015	5	37%	36%	1,375	24	196	\$2,129	\$76.65	\$304.21	95%	34%
	2016	4	*	*	*	*	*	*	*	*	*	*
	2017	5	53%	40%	1,285	73	161	\$3,023	\$197.29	\$377.88	91%	37%
	2018	4	*	*	*	*	*	*	*	*	*	*
CVC + CPC	2014	4	*	*	*	*	*	*	*	*	*	*
	2015	4	*	*	*	*	*	*	*	*	*	*
	2016	3	*	*	*	*	*	*	*	*	*	*
	2017	5	51%	74%	204	23	29	\$899	\$74.76	\$128.47	100%	78%
	2018	3	*	*	*	*	*	*	*	*	*	*
CDQ + ACA	2014	3	*	*	*	*	*	*	*	*	*	*
	2015	3	*	*	*	*	*	*	*	*	*	*
	2016	3	*	*	*	*	*	*	*	*	*	*
	2017	4	*	*	*	*	*	*	*	*	*	*
	2018	2	*	*	*	*	*	*	*	*	*	*

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Table 3: Continued

	Year	Vessels ^a	Lease rate (percent of ex-vessel price) ^a		Pounds Leased (1000lbs)			Cost (\$1000)			Lease pounds as % of pounds landed) ^b	Lease cost as % of ex-vessel gross) ^c
			Median	Wtd mean	Total	Median	Mean	Total	Median	Mean	Wtd mean	Wtd mean
All Quota	2014	52	63%	64%	7,122	108	137	\$32,584	\$509.52	\$626.62	83%	53%
	2015	52	63%	66%	6,515	106	125	\$36,013	\$554.37	\$692.55	80%	53%
	2016	53	62%	63%	5,786	89	109	\$41,050	\$643.79	\$774.53	81%	51%
	2017	52	62%	64%	4,959	70	95	\$29,675	\$410.75	\$570.67	84%	53%
	2018	45	63%	65%	3,328	48	74	\$22,362	\$335.54	\$496.94	90%	58%
CVO A	2014	50	62%	64%	5,229	88	105	\$23,689	\$397.50	\$473.78	82%	52%
	2015	49	63%	65%	5,129	90	105	\$27,975	\$466.94	\$570.91	78%	51%
	2016	50	62%	62%	4,433	75	89	\$30,855	\$514.31	\$617.10	77%	47%
	2017	50	62%	63%	3,709	56	74	\$22,094	\$328.22	\$441.89	81%	51%
	2018	42	62%	64%	2,503	41	60	\$16,553	\$274.85	\$394.12	87%	56%
BBR CVO B + CPO	2014	43	64%	63%	854	12	17	\$3,970	\$58.06	\$81.03	72%	45%
	2015	42	63%	66%	697	11	15	\$4,021	\$62.50	\$85.55	72%	48%
	2016	43	64%	65%	610	10	13	\$4,631	\$72.95	\$96.48	77%	51%
	2017	43	63%	63%	546	9	11	\$3,292	\$54.09	\$68.58	85%	54%
	2018	39	64%	65%	358	6	8	\$2,505	\$38.59	\$56.94	83%	54%
CVC + CPC	2014	34	65%	66%	213	6	6	\$987	\$25.23	\$27.42	78%	51%
	2015	40	63%	65%	222	5	5	\$1,273	\$30.40	\$30.32	73%	48%
	2016	35	66%	75%	193	5	5	\$1,391	\$35.92	\$37.60	46%	30%
	2017	39	62%	64%	153	3	4	\$944	\$22.36	\$23.59	85%	55%
	2018	35	63%	67%	109	3	3	\$765	\$19.25	\$19.62	81%	54%
CDQ + ACA	2014	7	63%	66%	826	118	118	\$3,937	\$535.71	\$562.47	100%	65%
	2015	5	67%	68%	468	100	94	\$2,744	\$572.15	\$548.71	100%	68%
	2016	5	63%	67%	550	121	110	\$4,173	\$881.56	\$834.60	101%	67%
	2017	6	63%	64%	551	94	92	\$3,345	\$560.35	\$557.48	100%	65%
	2018	6	66%	67%	357	71	60	\$2,539	\$491.34	\$423.13	100%	67%

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Table 3: Continued

	Year	Lease rate (percent of ex-vessel price) ^a		Pounds Leased (1000lbs)			Cost (\$1000)			Lease pounds as % of pounds landed) ^b	Lease cost as % of ex-vessel gross) ^c		
		Vessels ^a	Median	Wtd mean	Total	Median	Mean	Total	Median	Mean	Wtd mean	Wtd mean	
BSS	All Quota	2014	59	46%	47%	42,296	556	717	\$50,386	\$662.02	\$854.00	84%	39%
		2015	57	46%	48%	42,317	641	742	\$44,190	\$670.23	\$775.27	81%	39%
		2016	56	46%	49%	27,475	412	491	\$38,578	\$531.64	\$688.88	82%	41%
		2017	54	46%	48%	16,448	218	305	\$33,086	\$438.11	\$612.70	86%	41%
		2018	52	47%	48%	14,030	187	270	\$26,877	\$341.91	\$516.86	88%	42%
	CVO A	2014	57	46%	46%	29,683	442	521	\$34,436	\$520.49	\$604.14	82%	38%
		2015	55	46%	48%	30,362	523	552	\$31,100	\$511.02	\$565.45	76%	37%
		2016	54	46%	49%	19,640	337	364	\$27,040	\$419.43	\$500.75	79%	39%
		2017	52	46%	47%	11,518	176	222	\$22,561	\$330.36	\$433.86	82%	38%
		2018	48	46%	47%	10,046	153	209	\$18,723	\$281.95	\$390.06	83%	39%
	CVO B + CPO	2014	48	47%	56%	5,988	69	107	\$7,648	\$99.83	\$136.57	78%	38%
		2015	47	46%	48%	6,289	70	119	\$6,815	\$78.98	\$128.58	86%	41%
		2016	45	46%	50%	3,868	44	77	\$5,691	\$68.12	\$113.82	83%	41%
		2017	48	48%	50%	2,469	28	46	\$5,241	\$62.27	\$97.06	85%	43%
		2018	42	48%	48%	2,091	29	44	\$4,235	\$60.98	\$88.23	95%	45%
	CVC + CPC	2014	37	46%	46%	1,258	29	31	\$1,558	\$36.66	\$39.96	93%	43%
		2015	37	46%	49%	1,516	33	37	\$1,640	\$38.93	\$40.99	99%	49%
		2016	36	46%	47%	925	22	25	\$1,325	\$32.35	\$35.80	99%	45%
		2017	37	48%	54%	479	12	12	\$1,065	\$22.73	\$27.30	77%	42%
		2018	36	46%	50%	500	12	13	\$1,039	\$24.96	\$27.35	98%	49%
CDQ + ACA	2014	10	49%	58%	5,367	423	537	\$6,744	\$543.13	\$674.41	101%	50%	
	2015	7	51%	52%	4,150	509	593	\$4,636	\$569.52	\$662.31	101%	51%	
	2016	7	50%	52%	3,042	335	435	\$4,521	\$476.47	\$645.89	101%	52%	
	2017	8	50%	51%	1,982	222	248	\$4,219	\$479.84	\$527.40	101%	51%	
	2018	6	51%	51%	1,393	228	232	\$2,880	\$478.58	\$479.92	100%	51%	

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Table 3: Continued

	Year	Vessels ^a	Lease rate (percent of ex-vessel price) ^a		Pounds Leased (1000lbs)			Cost (\$1000)			Lease pounds as % of pounds landed) ^b	Lease cost as % of ex-vessel gross) ^c
		Median	Wtd mean	Total	Median	Mean	Total	Median	Mean	Wtd mean	Wtd mean	
All Quota	2014	36	28%	27%	7,231	191	201	\$5,111	\$126.22	\$141.98	99%	27%
	2015	45	28%	31%	12,737	215	283	\$10,317	\$172.75	\$229.27	96%	28%
	2016	38	28%	30%	9,862	158	260	\$9,075	\$146.45	\$238.83	106%	32%
	2017	15	28%	29%	1,188	70	79	\$1,436	\$79.75	\$95.71	88%	26%
	2018	30	31%	31%	1,891	54	63	\$2,479	\$71.50	\$82.65	90%	29%
CVO A	2014	32	28%	27%	5,256	95	128	\$3,653	\$69.60	\$89.11	94%	26%
	2015	43	28%	30%	9,487	131	164	\$7,535	\$94.14	\$129.91	93%	27%
	2016	37	28%	29%	7,470	127	170	\$6,545	\$113.05	\$148.76	108%	31%
	2017	15	28%	29%	829	60	55	\$975	\$54.08	\$65.01	82%	24%
	2018	28	29%	30%	1,394	44	50	\$1,761	\$53.01	\$62.88	93%	28%
BST CVO B + CPO	2014	25	28%	34%	820	12	21	\$642	\$9.84	\$16.47	98%	27%
	2015	27	28%	33%	1,527	26	33	\$1,264	\$20.30	\$27.47	86%	26%
	2016	31	28%	33%	1,125	19	26	\$1,183	\$18.04	\$27.52	87%	29%
	2017	15	28%	29%	172	7	9	\$218	\$7.58	\$11.47	89%	26%
	2018	26	31%	35%	244	6	9	\$372	\$7.18	\$13.27	79%	30%
CVC + CPC	2014	24	28%	17%	428	3	11	\$194	\$2.14	\$5.10	99%	27%
	2015	24	28%	26%	382	6	9	\$275	\$4.18	\$6.39	60%	17%
	2016	23	28%	29%	438	7	13	\$549	\$6.92	\$15.69	66%	19%
	2017	14	28%	28%	31	2	2	\$38	\$2.06	\$2.74	93%	27%
	2018	22	29%	30%	54	1	2	\$67	\$1.90	\$2.81	59%	19%
CDQ + ACA	2014	6	34%	39%	729	30	81	\$622	\$33.24	\$69.07	77%	25%
	2015	8	29%	35%	1,342	125	149	\$1,244	\$97.03	\$138.18	100%	31%
	2016	7	31%	32%	830	81	104	\$797	\$76.90	\$99.68	100%	32%
	2017	4	*	*	*	*	*	*	*	*	*	*
	2018	5	29%	31%	199	44	40	\$280	\$59.48	\$55.97	100%	32%

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Table 3: Continued

	Year	Vessels ^a	Lease rate (percent of ex-vessel price) ^a		Pounds Leased (1000lbs)			Cost (\$1000)			Lease pounds as % of pounds landed) ^b	Lease cost as % of ex-vessel gross) ^c	
		Median	Wtd mean	Total	Median	Mean	Total	Median	Mean	Wtd mean	Wtd mean		
SMB	All Quota	2014	4	*	*	*	*	*	*	*	*	*	*
		2015	3	*	*	*	*	*	*	*	*	*	*
	CVO A	2014	3	*	*	*	*	*	*	*	*	*	*
		2015	3	*	*	*	*	*	*	*	*	*	*
	CVO B + CPO	2014	2	*	*	*	*	*	*	*	*	*	*
		2015	3	*	*	*	*	*	*	*	*	*	*
	CVC + CPC	2014	2	*	*	*	*	*	*	*	*	*	*
		2015	2	*	*	*	*	*	*	*	*	*	*
	CDQ + ACA	2014	1	*	*	*	*	*	*	*	*	*	*

Notes: Other fishery data is not shown due to insufficient observations. Lease data shown represent “market-rate and/or negotiated price” lease transactions as reported for active crab fishing vessels in the 2012 through 2018 Crab EDR, which includes both true arm’s length transactions as well as transfers between related parties at market-rate value. 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.

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
TAC	Total Allowable Catch

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* (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), and is 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 2018 was 31.9 million pounds, with an estimated gross ex-vessel revenue value of \$69 million. Total sales of finished crab production reported by processors in 2018 across all FMP crab species and product forms was 20.9 million pounds, with an estimated first wholesale value of \$201 million (F.O.B Alaska). As an indicator of the relative economic importance of Alaska crab fisheries to the state and U.S. economies, the 63.1 million pounds (28.6 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 0.66% of the 9.62 billion pounds (4.62 million metric tons) total volume of U.S. commercial seafood landings, but accounted for 4.83% of total ex-vessel value; with respect to Alaska alone, these fisheries account for 1.13% of total landed volume and 16.7 percent of total ex-vessel value produced in commercial fisheries off Alaska (NMFS, 2017).

The North Pacific Fishery Management Council (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) harvest sector operating costs and net income; 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 2018-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. 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 NOAA Fisheries 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 Total Allowable Catch (TAC) and GHL (Guideline Harvest Level) 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 fisheries.

Of the 10 crab stocks and 11 fisheries managed under the FMP, seven fisheries were open to targeted fishing during 2018 and 2019, including the Bristol Bay and Norton Sound red king crab fisheries, Eastern and Western Aleutian Islands and Pribilof Islands golden king crab fisheries, the Bering Sea snow crab fishery, and Western Bering Sea Tanner crab fisheries.¹ The latter has been closed for the 2019/20 season; after closure for the 2010/11 through 2012/13 seasons, the Bering Sea Tanner crab fisheries opened for targeted fishing for 2013/14 through 2015/16 seasons, but under ADF&G management strategy, were subsequently closed for the 2016/17 season; the Western Bering Sea Tanner (WBT) crab fishery opened for the 2017/18 and 2018/19 seasons, but neither of the Eastern or Western Bering Sea Tanner fisheries were opened for the 2019/20 season.

The Saint Matthew blue king crab fishery was declared to be overfished in October, 2018 and a rebuilding plan for the fishery is currently in development. This follows a history of intermittent open seasons in the fishery. 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 through 2018, the fishery has been closed for the 2016/17, 2017/18, and 2018/19 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).

¹As 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.

To date, there has been no stock survey for Western Aleutian (Adak) red king crab and therefore no basis for stock status determinations, and the fishery has been closed since 2003/2004.

1.1.1 BSAI Crab Rationalization Program

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

The CR Program allocates BSAI crab resources to qualifying harvesters, vessel crew members, processors, and Western Alaska coastal communities. Under terms of FMP Amendments 18 and 19 and subsequent amendments, harvest and processing privileges in the CR 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% of the annual TAC, and the remaining 10% allocated as Community Development Quota (CDQ) or, for Western Aleutian Islands golden king crab fishery, Adak Community Allocation (ACA) quota. Under the three-pie allocation system that is unique to the CR Program, 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 % Class A IFQ, subject to regional delivery requirements and share-matching, and the remaining 10% designated Class B IFQ are 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 interchangeably 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 (AKR), 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/CrabFMP0ct11.pdf>
 - Bering Sea and Aleutian Islands Crab Rationalization Program: <http://www.npfmc.org/crabrationalization/>
 - BSAI Crab Plan Team: <http://www.npfmc.org/fishery-management-plan-team/bsai-crab-plan-team/>
- ADF&G Shellfish Management
 - Westward Region, Bering Sea & Aleutian Islands Area Shellfish: <http://www.adfg.alaska.gov/index.cfm?adfg=commercialbyareaaleutianislands.shellfish>
 - Arctic-Yukon-Kuskokwim Region, Norton Sound and Kotzebue Shellfish (for information on the Norton Sound red king crab fishery): <http://www.adfg.alaska.gov/index.cfm?adfg=commercialbyareanortonsound.shellfish>

1.2. Data Sources

The current report summarizes information available to date, largely comprising data reported through 2019 for the 2018 calendar year, spanning the end of the 2017/18 and beginning of the

2018/19 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 (EDR) 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 Crab EDR program administered by NMFS Alaska Fisheries Science Center, Economic and Social Sciences Research Program (AFSC, 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 historical (pre-2005) reporting requirement was tied to issuance of fishing and processing quota in the rationalized fishery. As such, the historical 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.

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 of 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 (through the 2011/2012 crab seasons) 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 information on fishing activity occurring in the most recent fishing season. Citations for these and other sources used in compiling this report are provided in figure and table footnotes and in the References section.

1.3. Data Conventions

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

²With 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>)

All price, revenue, and other monetary values in the report, unless otherwise noted. The Gross Domestic Production (GDP) chain-type price index (<https://research.stlouisfed.org/fred2/series/GDPCTPI>) accounts for change in the general price level of US domestic production of all goods and services, and is used in this report to deflate estimates of production revenues and costs reported for the crab processing sector, and with some exceptions, for costs and revenues in the harvest sector. Where noted, the Personal Consumption Expenditures (PCE) chain-type price index (<https://fred.stlouisfed.org/series/PCEPI>) is used to deflate estimates of income accruing to vessel owners and crew in the harvest sector. GDP and CPI Index values from 1991 to 2018 are provided in Table 3.51 of Section 3.³

Some notable discontinuities and other limitations in source data 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 current 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 ADF&G 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 presented on a 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:

³Previous 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.

Abbreviations and notations used in tables and figures

*	Data suppressed to prevent disclosure of confidential information
n/a or -	Not applicable
-	No data available (data not collected, no observations in reported data, or available data are insufficient for public reporting).
2005 or 05	Calendar year, or FMP crab fishing season that occurred wholly within calendar year
2005/06 or 05/06	FMP crab fishing year
lbs.	Pounds
mt or <i>t</i>	Metric tons
obs or observations for measure of interest	Number of observations with value > 0
sd	Standard deviation
\$	US dollars; inflation-adjusted to 2018-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.

1.4. Changes from Previous Editions

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:

Section ??:

Table 3.26 and Figure 2.9 have been revised to add additional indices of quota lease market activity - aggregate volume of quota pounds leased as a percentage of total landings, and aggregate quota lease cost as a percentage of gross ex-vessel revenue.

Section 2.1.1:

The table reporting catch deadloss by IFQ type in the 2016 edition is not included in the 2019 report pending revisions to the data summary process.

Section 2.2:

Table 3.11 was revised for the 2017 edition 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.

Section 2.3.1:

Substantial new content was added for the 2017 edition 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.

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 2019 for the 2018 calendar year and the early (August - December) portion of the 2017/18 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. In future iterations of this report, as data and methods are developed, the authors intend to incorporate improved analytical 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

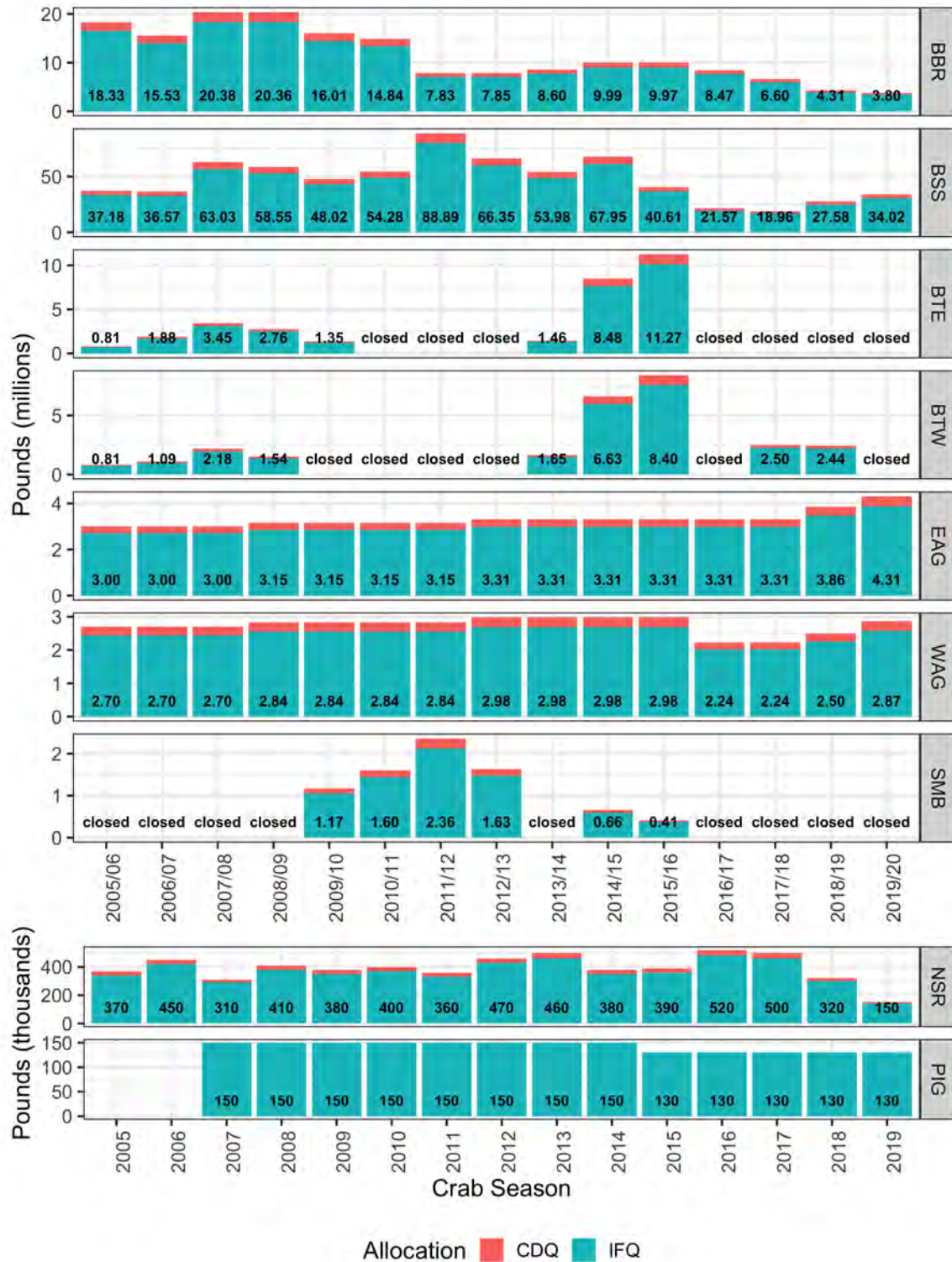
2.1.1 Annual TAC/GHL, Landings, and Finished Product Volume

Crab season Total Allowable Catch (TAC) and Guideline Harvest Limit (GHL) levels are reported by crab fishery in Table 3.1 and summarized graphically in Figure 2.1, including TACs issued for 2018/19 and 2019/20. TACs in the BSS fishery for the 2018/19 and 2019/20 seasons were increased to 27.58 million pounds (+46%) and 34.02 million pounds (+23%) after three previous seasons of decline. Both EAG and WAG fisheries have also seen moderately increased TACs for the most recent seasons, while TACs in the BBR fishery have declined steadily over the last five seasons, with the 3.8 million pounds issued for 2019/20 representing the lowest TAC since the closure of the fishery in 1995/96. The 320,000 GHL issued for the 2018 combined winter and summer fisheries NSR

fisheries was reduced 36% from the 2017 GHL. Reductions in the BTW fishery TAC in 2017/18 and 2018/19 were followed in 2019/20 with closure of the fishery under ADF&G's harvest management strategy. As a result of 2018 and subsequent stock assessments, fishery closures in the EBT and SMB fisheries, continued through the two most recent seasons into 2019/20, as did those in other crab fisheries that have remained closed since rationalization.

Since the 2014/15 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 WBT and NSR fisheries, which varied below 50% during some seasons (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) maintained greater than 75% exploitation of allowable catch during open seasons.

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.

Across all fisheries managed under the BSAI Crab FMP, the total volume of commercial ex-vessel landings during 2018 was 31.9 million pounds (14.5 thousand metric tons), a 9% decrease from the previous year and the lowest level of production in the last two decades. (Figure 2.2). The decrease in aggregate production during 2018 reflected declines across two of the three largest crab fisheries compared to 2017. The total catch of 18.9 million pounds (8.6 thousand mt) landed in the Bering Sea snow crab (BSS) fishery was a decline of 11.6% from 21.3 million pounds in 2017, and reflected a historical low for the fishery. Landings in the western portion of the Bering Sea Tanner (BST) fisheries during 2018 increased relative to 2017 levels, to 2.3 million pounds (1.04 thousand mt), and landings in the Bristol Bay red king crab (BBR) fishery declined 35% to 4.2 million pounds (1.9 thousand mt). The 6.5 million pounds (3.0 thousand mt) landed in the Aleutian Islands golden king crab (AIG) fisheries during 2018 was an increase of 17% from 2017 production.

Crab processors produced 20.9 million pounds (9.5 thousand mt) of finished crab product volume in 2018, aggregated over all active crab fisheries, a 9% decrease in processing sector output from 2017, and also a historically low level of production. Similar to ex-vessel production, the BSS fishery represented the largest share of production volume at 12.3 million pounds (5.6 thousand mt), a 1.6 million pound (12%) decline from the previous year. Finished volume in the BBR fishery of 2.9 million pounds (1.3 thousand mt), also 1.6 million pounds less than the previous year, represented a 35% decline. Finished volume in the AIG fisheries increased by 17%, to 4.1 million pounds (1.9 thousand mt), and processing output of 1.57 million pounds from BST fisheries was an increase of 64% from the previous year.

Figures 2.2 and 2.3 summarize 1998 to 2018 annual (calendar year) values for total landed live catch and gross ex-vessel revenue (detailed in Tables 3.4 to 3.7). Finished production volume and first wholesale value are reported in Tables 3.8 to 3.10 for all crab fisheries managed under the BSAI crab FMP. Figure 2.3 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 2.2 displays values of revenue and volume, respectively, aggregated over all crab fisheries and color coded by fishery in proportional area of vertical bars.

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

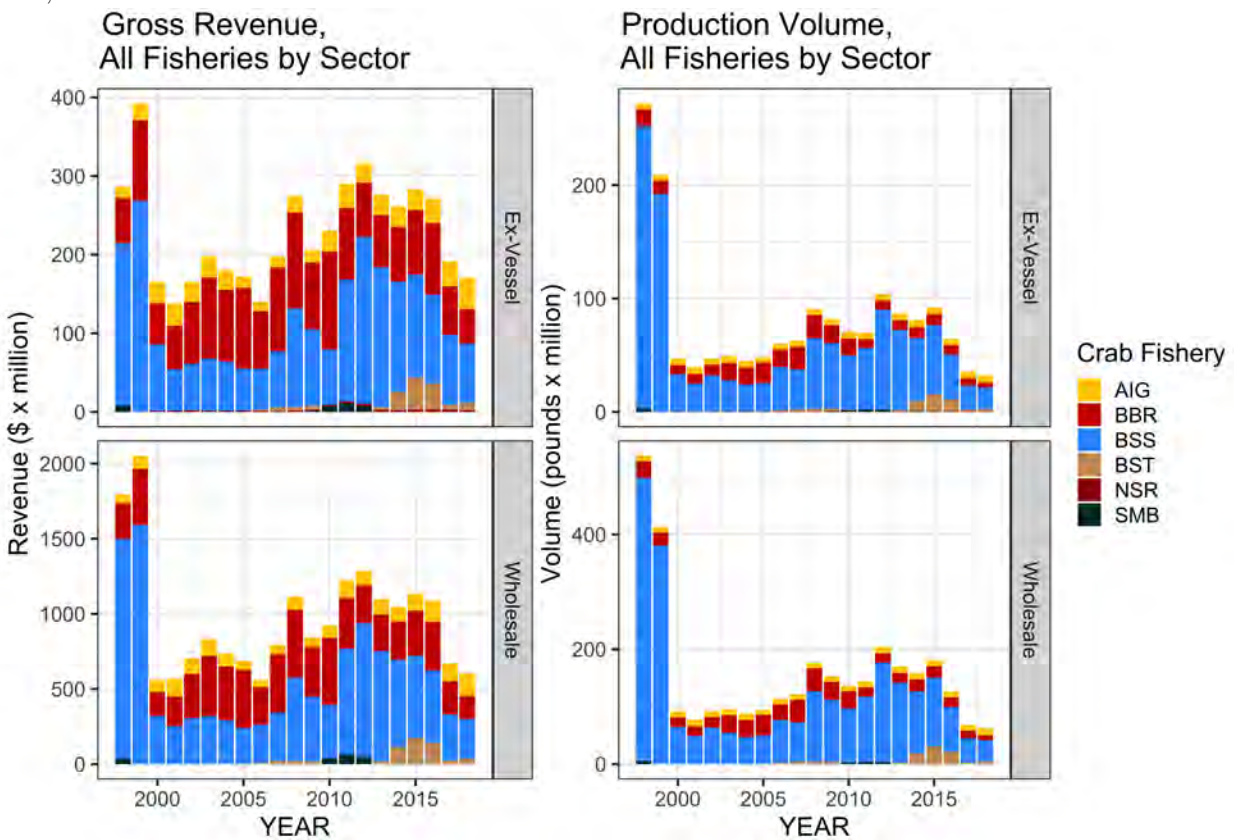
The combined effect of declining production levels due to allowable catch levels and fishery closures with market-driven price changes across crab fisheries produced an overall 10% decline in gross ex-vessel revenue to \$169 million, and a 10% decline to \$201 million in the processing sector for 2018 (Figure 2.2 and Tables 3.4 and 3.8). This follows substantial reductions in annual revenue in both sectors during 2017 and represents a third year of consecutive decline in aggregate revenue for both sectors, resulting in the lowest annual revenue total in both sectors since 2007.

Price and production declines in both sectors of the BSS fishery produced gross revenue of \$75.2 million in the harvest sector (-16%) compared to 2017, and \$87.8 million in the processing sector (-14%). The BST fishery produced gross revenue of \$9.5 million ex-vessel and \$12.2 million in the processing sector, increasing by 64% and 50%, respectively. Gross ex-vessel earnings declined by 28% to \$43.9 million in the BBR fishery, and by 30% to \$51.2 million first wholesale. Ex-vessel revenues in the AIG fisheries increased 27% from 2017, to \$40.2 million, and by 25% in the processing sector to \$50.2 million.

Results for ex-vessel sale volume, value, and prices reported in Tables 3.5 through 3.7 provide additional detail on regional distribution of ex-vessel earnings in terms of vessel owner state-of-residence, between crab vessel size classes, and between crab harvest quota categories. Additional details for statewide (including both FMP crab fisheries and those in Alaska state waters) processing sector sale volume, value, and prices are reported in Table 3.9, and sales by crab species and product type in Table 3.10.

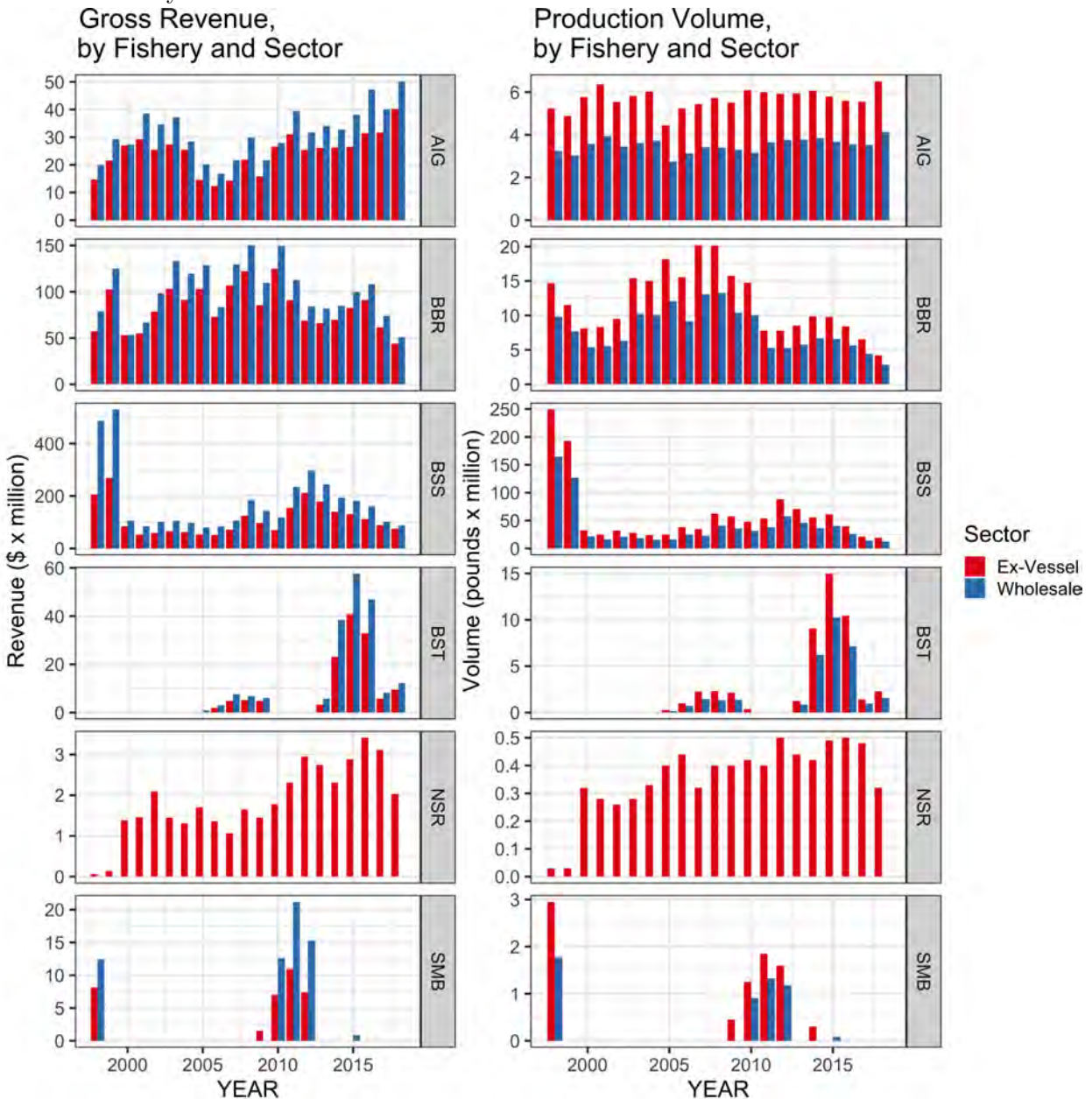
Regional and community-level effects of the distribution of crab vessel ownership and fishery earnings are important concerns, and are influenced by the incentive established under rationalized management. This report provides limited detail on spatial distribution of crab resources and benefits at the regional level. The forthcoming *Community Participation in Alaska Groundfish and Crab Fisheries* from Alaska Fisheries Science Center is intended to provide a more comprehensive analysis of community-level distributional aspects of crab fishery management, including income and employment effects, and ownership of crab harvest and processing quota assets and vessels. This report is being developed to accompany the Groundfish and Crab Economic SAFE documents and will be updated annually.

Figure 2.2: 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; NSR is not included in production volume and value.

Figure 2.3: 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; NSR is not included in production volume and value.

With respect to aggregate revenues accruing to active participants within the respective sectors, increases in ex-vessel and first wholesale prices in the AIG, BBR, and BST fisheries partially mitigated the effect of production declines, while prices declined moderately in the BSS fishery (Figure 2.4) concurrent with reduced production. The average ex-vessel price in the BBR fishery increased 11% in 2018 to \$10.39 per pound, and the first wholesale price increased 8% to \$17.91

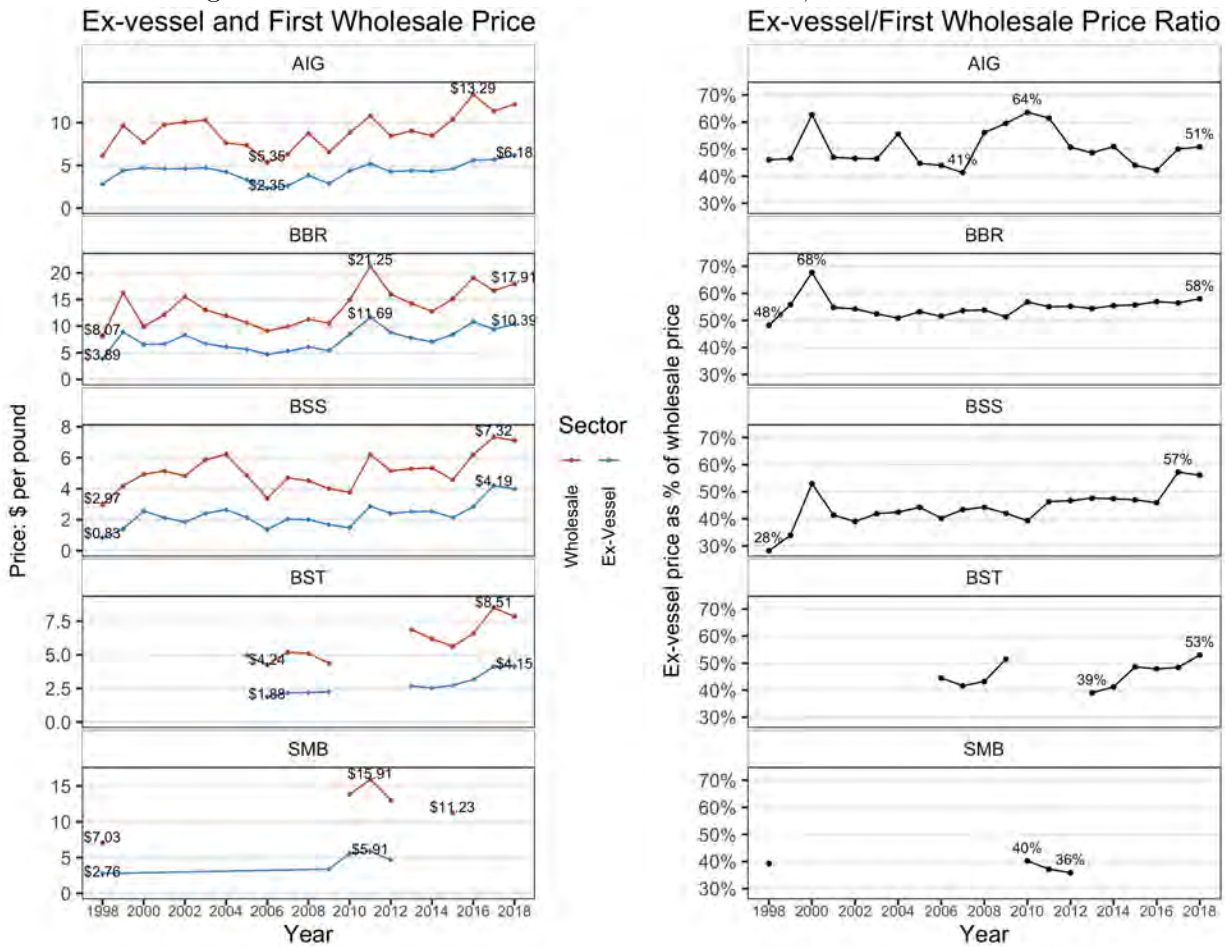
per finished pound. The average ex-vessel price increased by 9% to \$6.18 per pound landed in the AIG fishery, while the first wholesale price increased 7% to \$12.15 per pound. The ex-vessel price in the BST fishery increased slightly from 2017 to \$4.15 ex-vessel, while declining 8% to \$7.83 at first wholesale. BSS prices declined by 5% to \$3.99 average ex-vessel, and by 3% to \$7.11 average first wholesale.

Figure 2.4 summarizes the corresponding time series of aggregate ex-vessel and first wholesale prices by crab fishery (excluding WAI, PIG, and PIK fisheries, for which data cannot be reported due to confidentiality), represented as weighted average price per pound, and displaying a relative comparison of ex-vessel and first wholesale prices (i.e., ex-vessel price as percentage of wholesale price) over time.¹ Across all crab fisheries shown in Figure 2.4, prices during the 2016 to 2018 period in both sectors have reached the highest values of the last 20 years, with the exception of peak prices in the BBR fishery during 2011.

The right panel of Figure 2.4 reports the ratio of ex-vessel to first wholesale price, noting that both series represent weighted average prices over all categories of sales within a given fishery and year. Comparison of prices between the harvest and processing sectors is complicated by a number of factors, including price arbitration and differences in ex-vessel prices by harvest quota share type, regional differences, variation in timing of final sales from product inventory, and affiliations between entities in the respective sectors. Tables 3.4 and 3.8 report price statistics including weighted average values as well as mean and standard deviation calculated over observation-level unit values, which indicate substantial variation in both ex-vessel and first wholesale prices reported in the same year and fishery. Notwithstanding factors influencing variation in per-unit price values, Figure 2.4 provides a general indication of the relative value of ex-vessel and first wholesale prices over time. Since 1998, the price ratio 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 28% in the 1998 BSS fishery to a high of 57% in 2017. In the BBR fishery, the ratio reached a high of 58% during 2018. While the ratio of ex-vessel to first wholesale prices has been comparatively stable in the BBR and BSS fisheries since 2000, both exhibit a long-term upward trend.

¹A note on the term “price” as used in this report: a variety of price indices are presented herein that are derived from data on volume and revenue of sales of landed crab and/or finished crab product, collected and reported at different levels of aggregation. The typical representation of ex-vessel or first-wholesale prices in fishery management reports (e.g., NMFS, 2012) is fishery- or fleet-level average price, calculated as aggregate revenue divided by aggregate volume. Rather than representing the per-unit market “price” for a uniform commodity, this index is equivalent to the weighted arithmetic mean calculated over individual sale price observations, weighted by volume of individual sale. For example, ex-vessel price calculated as the quotient $\frac{\sum_i r_i}{\sum_i v_i}$, where $\sum_i r_i$ is the ex-vessel sale revenue and $\sum_i v_i$ is volume of sold landings, aggregated over all vessels $i \dots j$, is equivalent to the weighted arithmetic mean price calculated as $p = \frac{\sum_i v_i p_i}{\sum_i v_i} = \frac{\sum_i v_i \left(\frac{r_i}{v_i}\right)}{\sum_i v_i} = \frac{\sum_i r_i}{\sum_i v_i}$, 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.

Figure 2.4: Ex-Vessel and First Wholesale Prices, Selected Fisheries



Source: NMFS AFSC BSAI Crab Economic Data, and CFEC pricing based on COAR buying reports. Data shown by calendar year. Tabular results are shown in Tables 3.4 and 3.8; note that ex-vessel and first whole prices shown in figure represent weighted mean of values derived from aggregate volume and revenue from calendar year sales reported in crab catcher vessel and processor EDR data; see table notes for additional detail on calculation and sourcing for price and value statistics.

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.

The values shown in Figure 2.4 are reported by calendar year and therefore pool prices from successive crab fishery years (i.e., 2017 BSS data late season 2016/17 and early season 2017/18 sales). Calendar year data on first wholesale sales includes sales from inventory and excludes production that was not sold during the same year. These factors may result in pooling non-contemporaneous ex-vessel sales of landed crab and the sale of associated finished product to a certain degree, and likely accounts for smaller inter-annual variations in the price ratio in fisheries with stable price arbitration formulae. As the values shown the 2.4 and associated tables also pool over all IFQ and

CDQ landings, variation in the price ratio is also driven by the relative differential between the arbitrated ex-vessel price for share-matched IFQ-A class quota landings and landings on CDQ and non-share-matched IFQ. Ex-vessel sales volume, revenue, and average price statistics for landings sold to processors (excluding CP catch processed on-board) are reported by quota category in Table 3.7, and indicate some variation in the relative share of volume and value of landings by quota type. Further analysis is needed to quantify these market effects more completely and assess the inter-sectoral distributional changes that they suggest, and causal factors including changes in quota share holdings (particularly the proportion of crab QS held directly and indirectly by CDQ groups; see Section 2.4.4 below).

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).²

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 CR program fisheries. Crab processing employment in 2018, as measured by hours of processing labor input (including employees at shore-base plants as well as processing employees on crab catcher/processors) is estimated at 382 thousand labor hours, a historical low and a decline of 10% from 2017. Aggregate wages paid to crab processing line employees across all CR fisheries during 2018 generated labor earnings of \$4.7 million, 11% less than the previous year. Based on number of processing labor hours and wage payments in each CR fishery reported by crab processors, average hourly labor earnings over all CR fisheries reached \$11.85 per hour in 2018, declining for a second year from a peak of \$12.66 in 2016. Processing labor in the BBR fishery during 2018 accounted for 55 thousand hours and \$700 thousand in wages, both declining by approximately 32% from 2017, while labor hours in the BSS fishery declined by 13% to 232 thousand hours and wages declined 14% to \$2.85 million.

As indicated in Figure 2.5, inter-annual variation in aggregate processing labor hours and gross earnings are generally consistent with catch and production volume fluctuations. Average hourly wages (represented as daily earnings in Figure 2.5 assuming 12-hour daily shifts per employee), estimated from gross wage and payroll hours reported in EDR data, have varied between positive and negative inter-annual changes, while indicating a long term decline in real wage rates over the 2005-2014 period. This trend reversed beginning in 2014, with successive gains of 5% to 12% in annual average wages in the BBR and BSS fisheries, reaching \$12.66 and \$12.45 per hour in the 2016 BBR and BSS fisheries, the highest reported wage rates since 2004. These increases correspond with Alaska State minimum wage increases beginning January 1, 2015 under Alaska Statute 23.10.050 - 23.10.150, under which minimum hourly wage (in nominal terms) increased from \$7.75 to \$8.75 for 2015 and \$9.75 for 2016, with required annual inflation adjustments beginning in 2017 to maintain the minimum equivalent to \$9.75 in 2016 terms, or \$9.80 as of January 1, 2017. Average hourly crab processing wages declined following 2016, to \$12.06 per hour in the BSS fishery, and \$12.19 in the BBR fishery.

²Available at https://www.afsc.noaa.gov/News/pdfs/Wholesale_Market_Profiles_for_Alaskan_Groundfish_and_Crab_Fisheries.pdf

An important factor in estimating average hourly wages paid to processing labor is the relative amount of overtime hours required by processors in a given fishery and year, with the associated overtime wage premiums contributing substantially to labor earnings. No data are available to identify overtime hours in the total processing labor hours reported in correspond with EDR data, such that inter-annual changes in base wage rates are confounded with variation processors use of overtime hours. Table 3.11 provides estimated indices of crab processing labor productivity in terms of labor input and cost (aggregate labor hours and wages) per unit output (1000 pounds of raw crab processed), and also provide piece-rate metrics of processing labor and wages that control for over-time premia.³ Aggregating over all crab fisheries and active plants, median plant-level labor hours per 1,000 pounds processed has ranged between 11.0 and 15.9 over the 2012-2018 period, and have been at the low end of the range in the most recent two years, while labor cost per 1,000 pounds ranged between \$138 and \$233 and do not show a discernible trend over the time period.

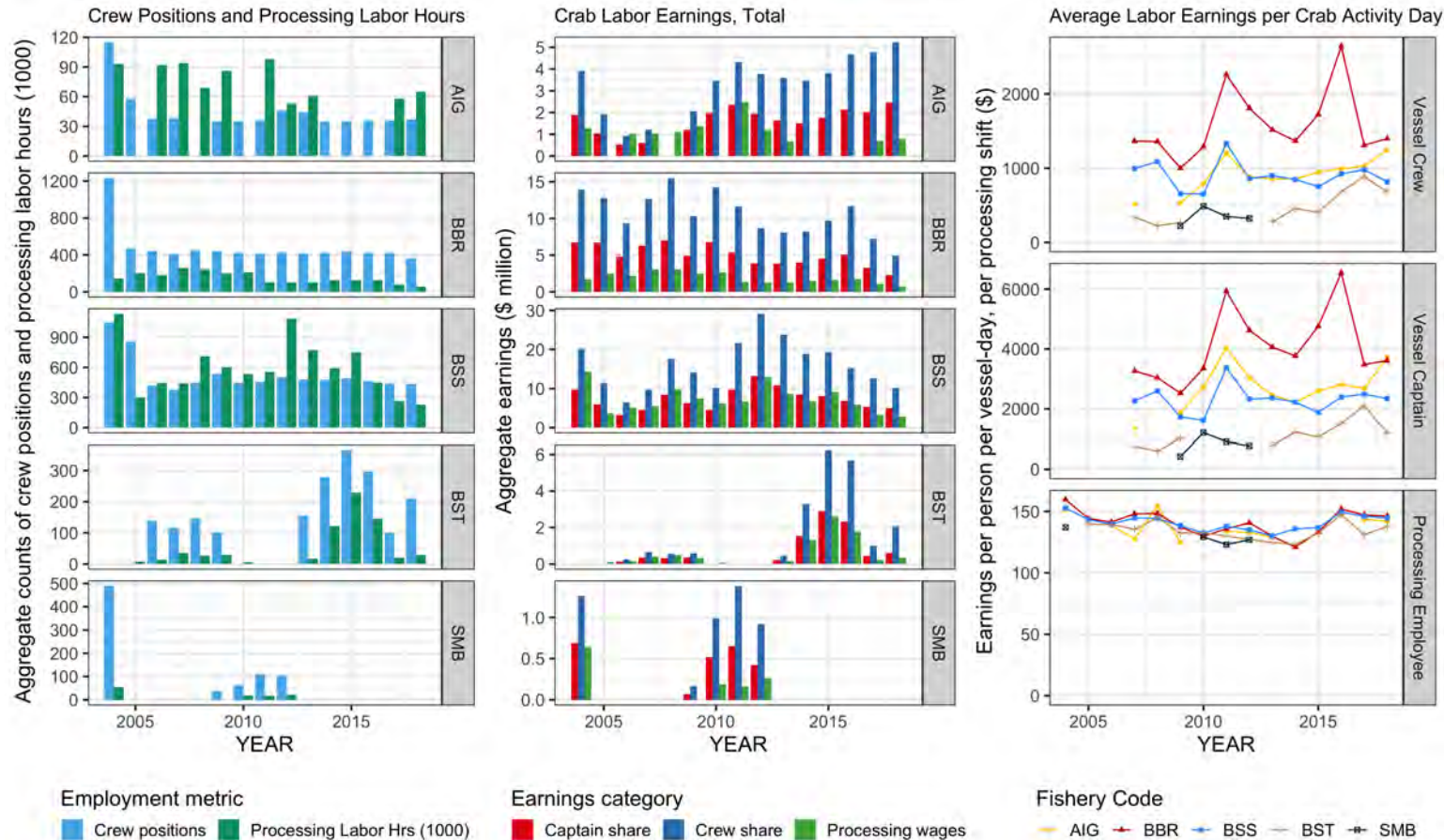
Table 3.13 reports the total number of individual crab processing workers employed by shore-based crab processing plants annually, by location of residence, aggregated to Alaska, Pacific Northwest states (Washington, Oregon, and Idaho), other U.S. states, and non-U.S.. Beginning in 2014, the number of active crab processing plants has varied between 8 and 9, compared to 17 active plants in 2005, and variation between 12 to 15 plants from 2006 to 2013. The total count of processing employees reported, aggregated over all plants, increased from 2,405 in 2017, to 2,512 in 2018. The distribution of the processing labor pool by location of residence represents the effects of labor recruitment by processors sourcing from different regions of the U.S. and elsewhere. Historically, the proportional share of employment sourced from three regions (Alaska; Pacific Northwest states - Washington, Oregon, and Idaho; and other U.S states) has averaged approximately 30%-30%-40%, respectively. In the most recent crab seasons, however, the distribution has shifted toward a larger proportion of processing employees identified as residents of other U.S. states. In 2018, the number of Alaska state residents employed in crab processing declined from 671 to 515, and residents of Pacific Northwest declined from 320 to 317, while residents of other U.S states increased from 1,354 to 1,675, bringing the proportional employment shares by region to 21%-13%-67%. The relative attrition of Alaska and Pacific Northwest residents from the crab processing labor pool reported for the two most recent seasons may be an incidental effect, but may be an indication of increasingly competitive regional labor markets, labor recruitment efforts of processing firms, and/or longer-term demographic changes in Alaska fishing industry labor participation.

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 2018.⁴ Data reported for 2012 to 2018 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, and are not exclusive to crab. Aggregating over all shore-based processing plants that actively processed in crab fisheries during 2018, salaried and other non-processing employment totaled 1,397 individuals, and 136 per plant (median). Total wage and salary expenditures of \$52.8 million (exclusive of non-wage benefits, taxes, and other payroll and employment expenses) declined by 9% from 2017, while median salary payments per plant and per employee increased.

³As measures of productivity, both metrics invert the standard output-per unit input metrics, such that a negative change shown in the productivity values reported in Table 3.11 indicate increased labor efficiency. Note that statistics shown for both indices use data from shore-based crab processing plants, and do not include catcher-processor labor data; see table notes for additional details.

⁴See table notes regarding discontinuities in processor sector salary cost data.

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 and later 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

A summary of selected indicators from the most recent employment and labor earnings data available for CR program fisheries are presented in Tables 3.14 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.⁵ 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 overall during 2018 fell to 67 from 72 in 2017. The active fleets in the AIG and BSS fisheries remained constant at 5 and 63 vessels, respectively, while 55 vessels active in the BBR fishery during 2018 declined from 61 in 2017, and the fleet fishing in the WBT fishery during 2018 doubled from 16 to 30. 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 1,049 crew positions in aggregate across all 67 vessels in CR fisheries in 2018, a 5% increase from the previous year, largely due to increased participation in the WBT fishery.⁶ The reduced fleet in the BBR fishery resulted in 365 positions, 54 fewer than the previous year, while increased participation in the WBT fishery during 2018 increased the number of crew participating in the fishery from 100 to 211. Using counts of individual captains and crew members identified by license or permit number in EDR records, it is estimated that 572 unique individuals worked on-board crab fishing vessels during 2018 CR fisheries, 32 fewer than in 2017 and the lowest number of individual crab crew participants reported since 2006 when the collection of this data began (Table 3.15). Of the 489 ADF&G commercial fishing crew license holders participating in CR crab fisheries during 2018, 165 (34%) were identified as Alaska state residents, as well as 23 (28%) of the 83 CFEC gear operator permit holders, indicating minimal change in the proportional representation of Alaska residents in the population of participating fishing crew in BSAI crab fisheries.

⁵Prior 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.

⁶Note 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.

Total labor payments⁷ to crab vessel captains and crews totaled \$10.2 million and \$22.4 million during 2018, declining from 2017 earnings by 8% and 13%, respectively (Figure 2.5 and Table 3.17). Aggregate crew earnings in the AIG fishery increased by 10% to \$5.2 million and captain earnings increased by 21% to \$2.44 million, while captain earnings of \$600 thousand in the BST fishery was an increase of 33%, and aggregate crew earnings more than doubled from 2017 to \$2.07 million. Aggregate crew earnings in the BSS fishery declined by 20% to \$10.2 million and captain earnings decreased by 9% to \$4.9 million, while crew and captain earnings in the BBR fishery each declined by 31%, to \$4.94 million and \$2.26 million, respectively.

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.

Median seasonal settlement payments to vessel crews (vessel-level aggregated settlement payments to the fishing crew, exclusive of payments to captain) 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 \$130 thousand in 2005 (excluding crab C/P's), and have varied between \$100 thousand to \$210 thousand from 2009 to 2017. Median vessel-level crew and captain settlement earnings from 2018 BBR fishing, at \$81 thousand and \$40 thousand, respectively, returned to the low end of the range established since rationalization of the fishery 2005. The median crew settlement cost per vessel of \$139 thousand in the BSS fishery during 2018, and \$65 thousand median captain pay per vessel, were the lowest level of vessel-level crew earnings since 2010.

As shown in Figure 2.5 (right panel), average pro-rata daily earnings for crew and captains across all CR fisheries were in a declining trend from 2011 to 2014, but from 2015 to 2016, increased sharply in the BBR fishery, and more modestly in AIG and BSS fisheries. Despite reduced gross earnings in the BBR fishery during, the effect of higher ex-vessel price and reduced number of days-at-sea during 2018 (Table 3.19⁸) resulted in average pro-rata daily captain and crew earnings increasing somewhat, with crew members earning \$1,400 per day on average, and captains earning approximately \$3,600 per day on average. In contrast, the total vessel days at sea in the BSS fishery during 2018 declined despite the increased TAC. The effect of the reduced ex-vessel price during 2018 resulted in average daily earnings to captains and crew declining from the previous year, to \$820 per individual crew member, and \$2340 per crab vessel captain.

⁷In 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).

⁸See 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.

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. The variability of crew settlements, from 1.5 to over 3 times the median earnings in the BBR fishery prior 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 combined captain and crew share payment costs to gross ex-vessel revenue) have remained relatively constant in both BBR and BSS fisheries over the 2006 to 2018 period, but appear to have shifted from a range of 22-23% during the first 5-6 years under the CR program, to 17-19% during the most recent five seasons.

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.⁹

Total fuel expenditures reached \$5.4 million over all fisheries and vessels in 2018, and \$3.4 million in the BSS fishery, on par with 2017. Fuel costs in the BSS fishery declined 47% from the previous year to \$4 million, while fuel costs of \$1.3 million in the BBR fishery were reduced by 20% from 2017. Table 3.22 also reports median and total vessel fuel consumption (gallons purchased) by fishery, and average fuel cost per gallon.¹⁰ 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 \$2.3 million during 2018, with the BSS fishery accounting for the majority of bait expenditures, with \$0.9 million during 2018 compared to \$0.5 million in the BBR fishery. Reported expenditures for food and provisions costs totaled \$830 thousand over all fisheries during 2018, 20% less than in 2017.

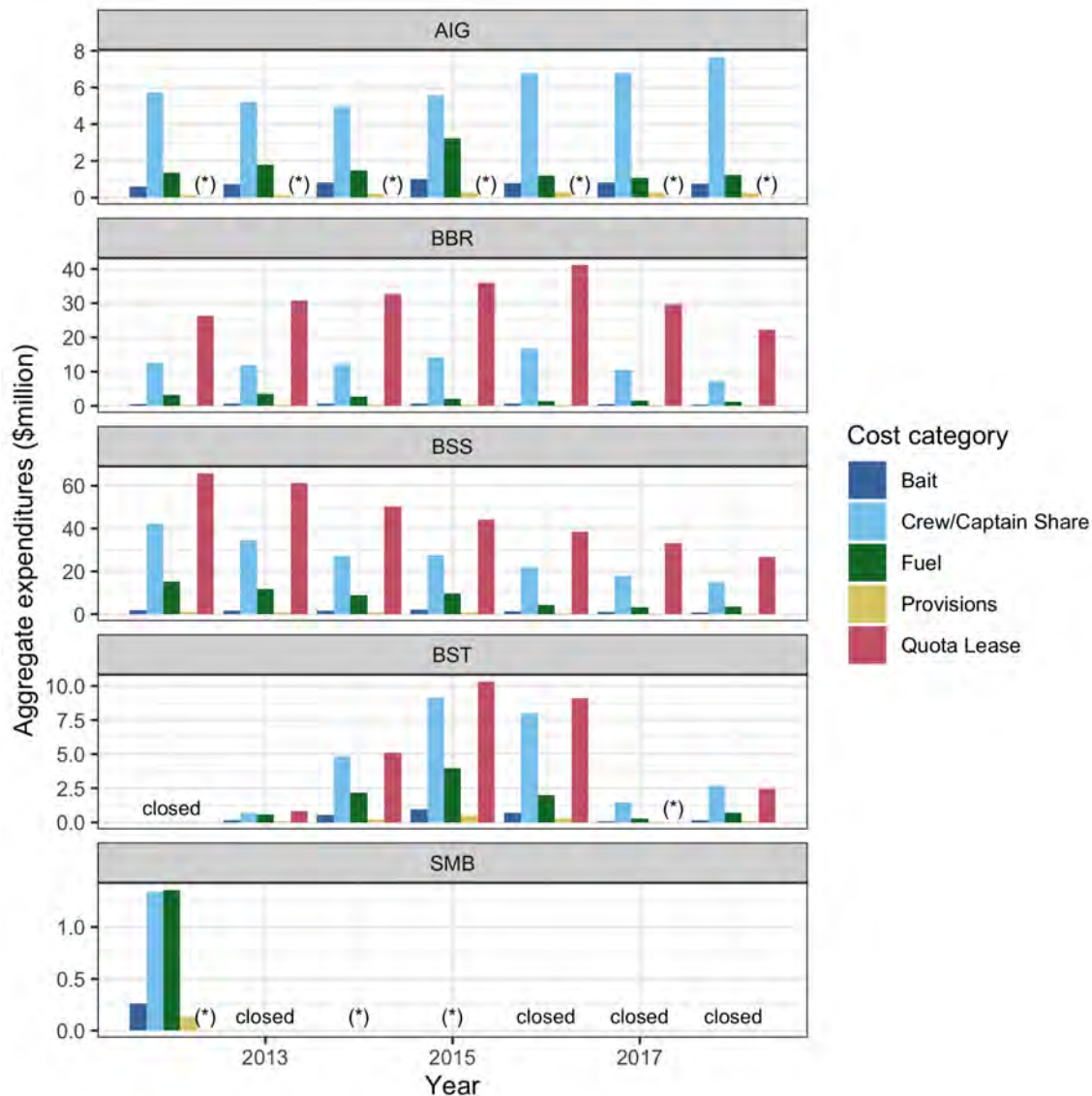
2.3.1 Harvest Sector Net Earnings Indices

Tables 3.24 and 3.25 present 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 2018. Results presented as gross ex-vessel profit in the tables, and illustrated in Figures 2.7 and 2.8, 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

⁹Cost 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. 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.

¹⁰Table 3.23 provides a compilation of diesel prices per gallon from 1999 to current for the five principal fueling ports for Alaska fishing vessels.

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 1998-2018 where available, or 2012-2018 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.

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 essence, these separate totals and averages into separate tables rather than in adjacent columns as in most other tables in this report, except that quota

lease costs are treated differently in the vessel-average values than in the harvest sector or fleet aggregate values.

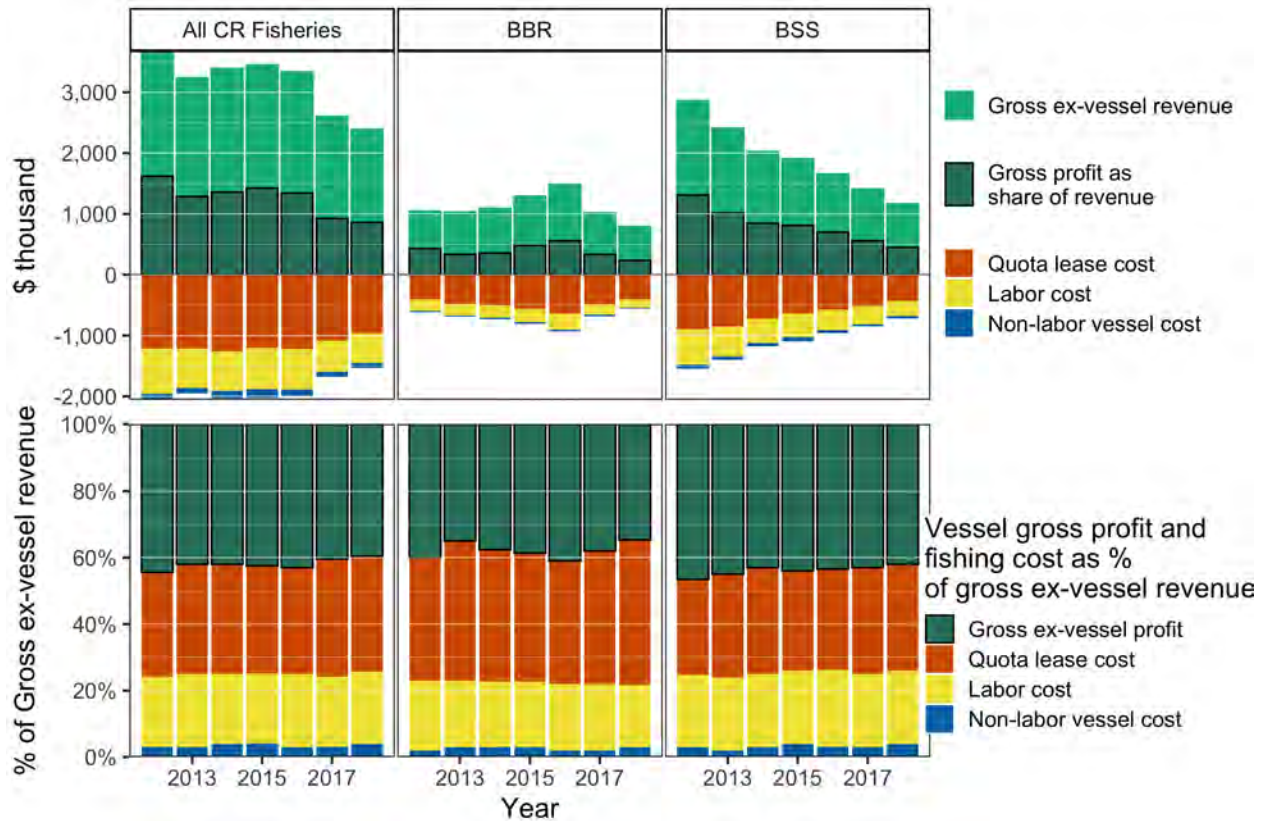
CR fisheries in aggregate generated average gross ex-vessel revenues ranging from \$2.4 million to \$3.7 million per-vessel between 2012-2017, from landings ranging from 450 thousand pounds to 1.25 million pounds. In 2018, average ex-vessel gross revenue, aggregating across CR fisheries, declined by 8% from \$2.6 million in 2017 to \$2.4 million in 2018, from crab landings of 451 thousand pounds. As a proportion of total ex-vessel pounds and value of catch in CR program fisheries, the average quantity and cost of leased quota pounds reported by vessels comprises approximately 74% of landings on average over the period, with quota lease costs ranging from 31% to 42% of gross revenue. For 2018, quota lease costs of \$960 thousand accounted for 40% of average vessel gross crab landing revenue, leaving a gross revenue residual after quota lease royalties of \$1.43 million. Vessel non-labor operating costs of \$83 thousand during 2018 include vessel fuel, bait, and provisions costs, accounting for 4% of gross revenue, leaving an average gross revenue residual after all non-labor vessel costs of \$1.35 million, or 62% of ex-vessel gross. Average vessel crab fishing labor costs paid as crew and captain share payments in 2018 totaled \$490 thousand per vessel, 22% of ex-vessel revenue, bringing average vessel-level operating and quota lease costs for 2018 BSAI crab fishing to \$1.53 million, 64% of gross revenue. The remaining \$860 gross profit after deducting costs represented a 36% gross profit margin, compared to gross margins of 40% to 41% from 2014 to 2016.

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 financially 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 direct share of gross ex-vessel value of the leased quota pounds. Labor share payments to crew and captain are typically paid on the basis of gross residual revenue after lease royalties and fishing costs (fuel, bait, provisions) are paid (Gross-residual non-labor in Table 3.24). In the context of gauging the economic benefits generated by the fishery, in contrast to the financial performance of vessel operations, 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, its 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 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.

Results shown for 2012 to 2018 in Figure 2.7 and Table 3.24 indicate that a slightly smaller proportion of landed pounds in the BBR fishery are reported as leased in EDR data, 70% on average over the most recent five years, compared to 73% in the BSS fishery. Quota lease costs in the BSS fishery represent a substantially smaller share of gross ex-vessel revenue, 35% on average compared to 45% in the BBR fishery (consistent with the proportion of leased pounds and average lease rates of approximately 50% and 65% for BSS and BBR quota)¹¹. Labor and materials expenses in the BBR fishery, at 18% and 2% of gross revenue on average, were marginally, but consistently, lower than those in the BSS, at 20% and 3%, respectively. On this basis, average vessel-level profit margins of fleets in the BBR and BSS fisheries since 2012 have averaged 35% and 42%, respectively. In these results, the relative financial performance of vessels operating in the BBR and BSS fisheries is

¹¹More precisely, weighted average lease rates over all quota types reported in Table 3.26 in the BSS and BBR fisheries average 48% and 64% over the 2012 - 2018 period

Figure 2.7: Vessel-level mean operating costs and gross revenue residuals, BBR, BSS, and all CR fisheries in aggregate, 2012 through 2018



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 2012-2017, 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.

principally a function of the differential in quota lease rates between fisheries. which is a result of the higher profit margins in the BBR fishery historically, given lower fishing costs in Bristol Bay and higher market value of red king crab.

It is not readily apparent how much of the 60% to 80% of the volume of quota landings that are reported as leased in EDR data is owned independently of the pool of owners operating active crab vessels, and there is substantial variation across the fleet in the relative proportion of leased pounds to ex-vessel landing volume. The results shown in the vessel-level analysis represents the effects of quota lease costs Without controlling for true arms-length transfers of income from vessel owners to third-party QS holders.

Figure 2.8 demonstrates an alternative perspective on harvest sector economic performance of CR Program fisheries, treating quota lease royalties paid by vessel operations as a distribution of aggregate gross profit in the harvest sector. Over all CR fisheries, accounting for operating labor and materials costs captured in EDR data, gross profit ranged from a high of \$234 million in 2012 to a low of \$122 million in 2018, with gross profit margins of 76% to 77%. Quota lease royalty transfers averaged 49% of the gross profit margin over the period, ranging from \$101 million in 2012 (43% of gross profit) to \$64 million in 2018 (53% of gross profit). Fleet aggregate gross revenue in the

BBR fishery reached a high for the period in 2016 of \$93 million, and a low in 2018 of \$44 million, corresponding to gross profits of \$75 million and \$35 million, respectively. Over this recent period, gross profit margin in the BBR fishery has trended from 79% to 81%, with a substantial increase in the proportion of gross profits accruing to QS holders as lease royalties, from 48% of fleet aggregate gross profit in 2012 to 63% in 2018. In the BSS fishery, fleet-aggregate gross revenue has declined each year over the period, from \$206 million in 2012 to \$72 million in 2018, corresponding to gross profit declining from \$159 million in 2012 to \$55 million. Gross profit margins have maintained at 76% to 77% over the period, with the proportion accruing to BSS QS owners increasing substantially, from 41% in 2012 to 49% in 2018.

Note that the trend toward higher quota lease costs at the vessel level, and higher distribution of gross profits to QS owners within the harvest sector, are driven primarily by an increase in the volume of quota pounds being leased as a proportion of total pounds landed. This corresponds to the reduced number of active vessels as the fleet adjusts to reduced TACs. Lease rates, the proportion of ex-vessel value per pound leased paid to QS holders, have remained largely constant over the period as reported by vessel owners in EDR data (see Section 2.4.1). Also, any apparent systematic differences in financial performance between fleets operating in distinct crab fisheries may be more of a function of the degree to which the fleets and the population of associated businesses are distinct between fisheries, rather than differences that are intrinsic to the fisheries and their associated markets.

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

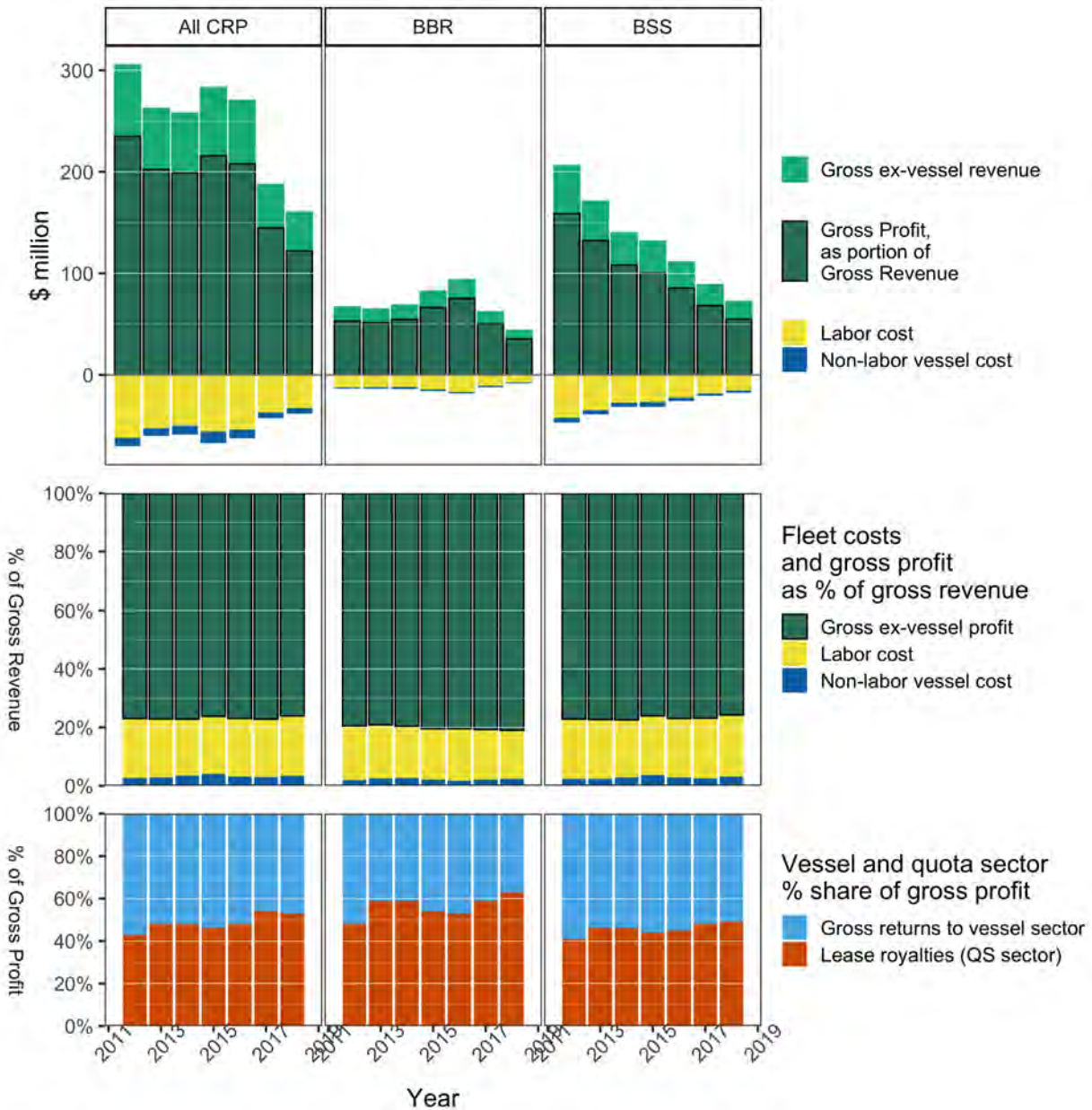
The following section provides information regarding lease market activity associated with transfers of Individual Fishing Quota (IFQ) and Individual Processing Quota (IPQ) annual permits in the CRP, and several indices measuring changes in the status of crab harvesting and processing quota share (QS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

2.4.1 Harvest Quota Lease Activity and Average Prices

Table 3.26, summarized in Figure 2.9 displays aggregated results for indicators of quota lease market activity and value reported for crab vessels active during 2012 through 2018 calendar year CR fisheries¹². Indicators shown in Figure 2.9 include weighted average statistics for average lease rates (lease price as percentage of ex-vessel price) per vessel, aggregate volume of quota pounds leased as a percentage of total landings, and aggregate quota lease cost as a percentage of gross ex-vessel revenue. Table 3.26 also reports volume (in pounds) and cost reported for crab vessels active during fishing year, including total quantities summed over all reporting vessels, and average values (both

¹²EDR 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 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.

Figure 2.8: Fleet-level aggregate operating costs and gross revenue residuals, BBR, BSS, and all CR fisheries in aggregate, 2012 through 2018



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.

median and mean) per vessel. Median and arithmetic mean values are presented together to show information on the variation in reported values within each stratum, with 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 total volume of leased quota in the BBR fishery during 2018, aggregating over all IFQ and CDQ pounds leased, represented 90% of total ex-vessel pounds landed in the fishery, a notable increase compared to previous seasons when leased quota varied annually between 78% and 84% of annual pounds landed. Similarly, aggregate quota costs in the BBR fishery increased proportionally during 2018; after ranging between 51% and 53% of total ex-vessel value over the previous four years, quota lease royalties paid by crab vessel operators increased to 58% of aggregate ex-vessel revenue. A similar increasing trend in aggregate lease volume relative to total catch in the BSS fishery, with the volume of quota leases reported by the 63 vessels active during 2018 increasing in aggregate to 88% of ex-vessel pounds landed, compared to the range of 81% to 84% observed prior to 2017. However, quota lease payments as a proportion of ex-vessel value have only modestly, if consistently increased in the BBR fishery on recent years, from 39% in 2014 to 42% in 2018.

The relative variability of crew-share IFQ (CVC+CPC) lease volume and value relative to total ex-vessel sales on crew-share quota volume and value indicated by Figure 2.9 is notable. This is indicative of both the relatively small number of crew share leases reported, resulting in higher statistical variation, but is also a reflection of the more informal nature of lease arrangements for crew share compared to CVO Class A quota. In cases of quota held by hired crew members, up to 100% of the ex-vessel value may be paid to the crew member, and may not be reported in EDR data as a “market-rate and/or negotiated price” transfer.

In contrast to more dynamic changes in the volume of lease activity in recent years, quota lease rates (i.e., the per-pound lease cost as a percentage of ex-vessel value) have remained quite stable. The median and weighted average lease rates in the BBR and BSS fisheries shown in Table 3 and Figure 2.9 vary somewhat by quota type within fishery, but are generally quite consistent over time. The median lease rate reported for BBR CVO Class A allocation has remained at 62% to 63% of ex-vessel price, and between 62 to 65% as a weighted mean. A lease rate premium of 2-5% is typically reported for CDQ and non-share-matched IFQ types over the rate received for BBR CVO Class A, and the 67% average rate reported for 2018 for both CDQ and Crew IFQ (CVO and CPO), as compared to 64% for CVO IFQ, was consistent with this pattern. The median lease rate for CVO Class A quota in the BSS fishery has remained constant over the period at 46% of ex-vessel value, and varied slightly on a weighted mean basis, between 46-49%, but the premium paid for CDQ quota is consistently larger, typically 4% to 6% over rates paid for CVO Class A quota.

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.¹³ Correspondingly, since 2008/09, virtually

¹³For 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

all IFQ lease transactions registered with NMFS (Table 3.27) have taken place within harvest 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 215 leases registered in 2017/18. Noncooperative IFQ leases (i.e., leases of IFQ held directly by QS holders, and not assigned to cooperatives) 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. PQS sales are relatively infrequent, from none to less than 10 in most years.

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, with a relatively low volume of 128 sales in 2017/18 (Table 3.27). Sales of PQS peaked during the early period of the CR program, with 42 transfers during 2008/09, substantially higher than any other year. No PQS sales occurred for 2015/16 and 2016/17, with 5 and 3 during 2016/17 and 2017/18; the number of IPQ transfers over the most recent seasons has been relatively variable, with 55 and 50 transfers in two of the last four years.

Cooperative Permits and Information section of NMFS AKRO Crab Rationalization webpage for more information:
<https://alaskafisheries.noaa.gov/fisheries/bsai-crab-rationalization>.

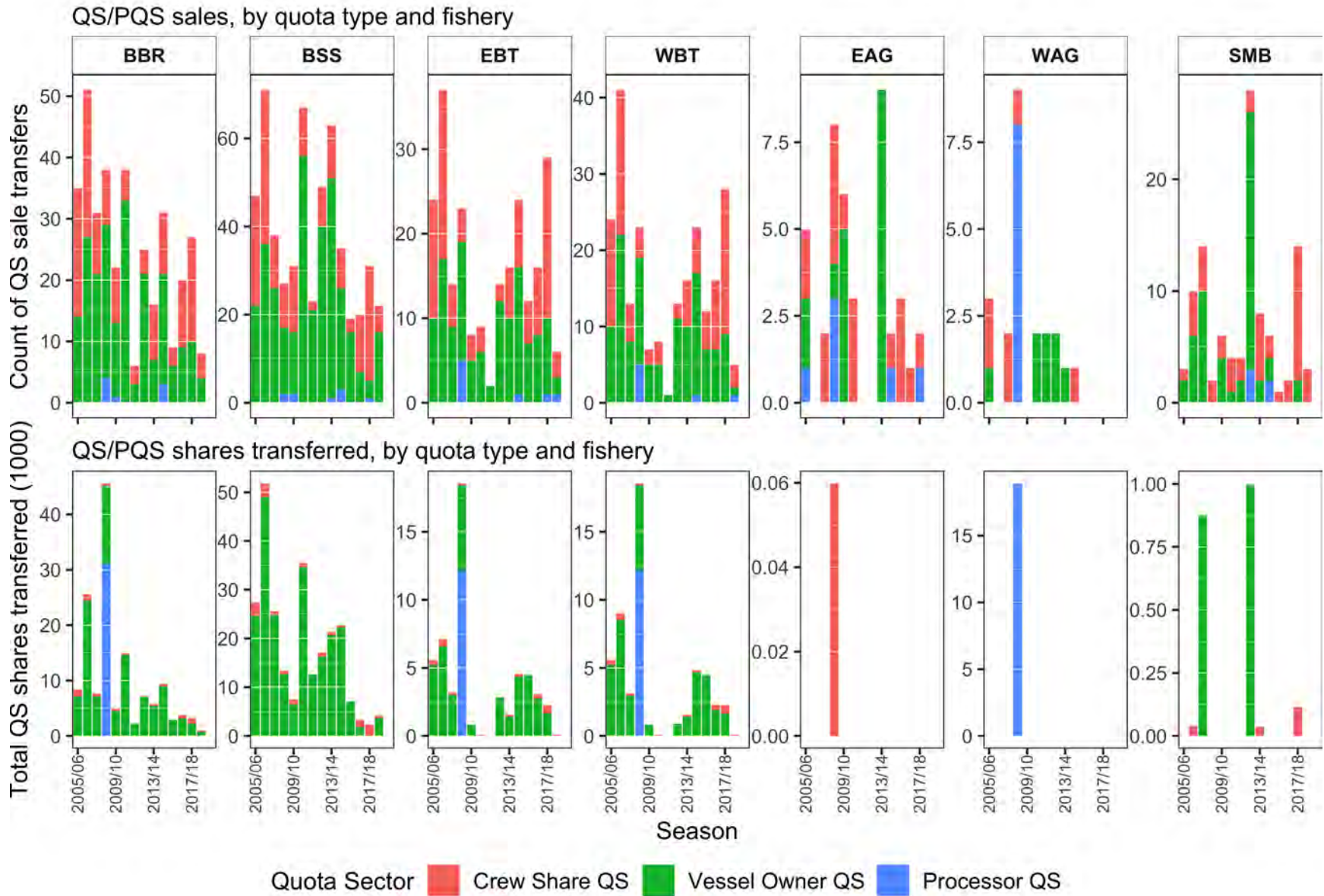
Figure 2.9: Crab Harvest Quota Lease Market Indicators



Source: NMFS AFSC BSAI Crab Economic Data. Tabular data available in Table 3.26. Lease data shown represent “market-rate and/or negotiated price” lease transactions as reported for active crab fishing vessels in the 2012 through 2018 Crab EDR, which includes both true arm’s length transactions as well as transfers between related parties at market-rate value. Quota lease 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.

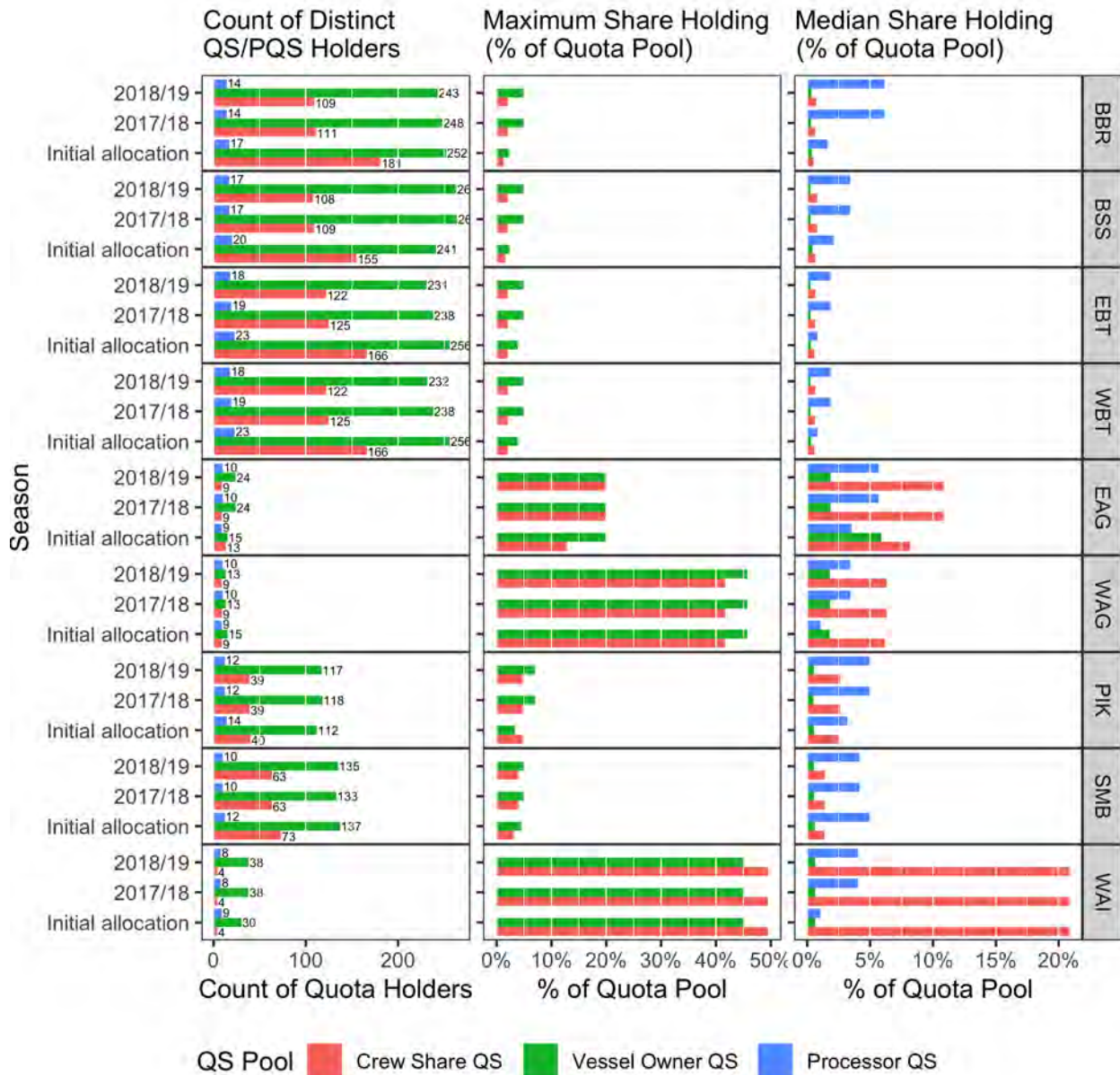
Figure 2.10: QS and PQS Sales

85



Source: NMFS AKRO RAM division, Quota share transfer data. Tabular data presented in Table 3.28. Counts of QS sales are non-confidential, however, number of shares transferred in individual QS sales is confidential information and aggregate QS units sold is suppressed in the figure where fewer than 3 transfers occurred during the reporting year.

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 to 97 across all CR fisheries, exceeding the 34 total CVO QS sales during 2016/17, and with 2.3 million CVC QS units transferred in the BSS pool and 1 million units in the BBR pool represented approximately 8% of both share pools. In contrast, 10 sales of BSS CVO QS were completed for 2016/17, totaling 2.2 million QS units (less than 1% of the pool). Transfer activity in the QS markets was low in 2018/19.

With the high volume of CVC transfers in the BBR and BSS pools during 2016/17, average price per unit dropped to low values, declining to \$0.59/unit for BBR CVC and \$0.29/unit for BSS CVC. Median price per unit for BSS CVO QS reached a historical high of \$1.16 per unit for 2013/14, substantially higher than the previous range of \$0.34 - \$0.95 per unit observed previously, and declining to \$0.51 in 2017/18.

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.

Table 3.31 presents a comparison of contemporaneous QS transfer prices and IFQ lease prices where sufficient observations allow reporting. Although harvest quota share privileges represent a share interest in the future stream of TAC allocations, which are indeterminate, brokered sales of CR program QS are typically conducted on the basis of price per pound. Such terms of sale imply conversion of QS units to the contemporaneous IFQ pounds-equivalent (a particular transaction may or may not include current-season permitted IFQ pounds). As such, the ‘QS price/IFQ Pound’ values shown in Table 3.31 are the average of observed selling prices for completed sales of crab QS, denominated in units under which such sales are commonly valued.¹⁴ Assuming competitive market conditions, variation over time in QS sale price is indicative of both the contemporaneous lease value of IFQ, and buyers’ expectations of future returns on the QS investment. The ‘IFQ/QS Price Ratio’ values reported in Table 3.31 provide an inverse index of contemporary expectations of QS buyers. In principle, holding IFQ lease price constant, increasing QS sale price reduces the value of the IFQ/QS price ratio, such that higher ratio values indicate low QS valuation at time of sale relative to contemporaneous ex-vessel market value.¹⁵

¹⁴QS price per IFQ pound values are comparable to current brokerage offers, for example: <https://dockstreetbrokers.com/crab-ifqs/crew-shares>).

¹⁵In principal, in a well-functioning competitive market, price per pound of IFQ reflects QS holders and fishermen’s expectations regarding the surplus to be produced from fishing the leased quota during the current season, taking account of uncertainty regarding factors that influence fishing costs and ex-vessel revenue. Similarly, QS sale prices reflect holder’s expectations for the surplus value of the fishery over time, defined as the present value of the stream of annual lease earnings for the indefinite future, where distant future expected lease revenues are ascribed a lower value (discounted) relative to near-term expected earnings. Implicit in the ratio of IFQ price to QS price is the average discount rate, r , such that

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

In this relation, the index $r = \frac{IFQ_{\text{lease price}}}{QS_{\text{price}}}$ reflects QS holders’ expected rate of return for holding QS, which in principal can provide an indicator of QS holders’ collective expectations regarding the rate of return for holding QS. Changes over time in this index can suggest changing expectations of future value of the fishery, e.g. a negative change in over time would indicate a reduced perceived risk of declining stock productivity, product prices, or other adverse management or market conditions. As a capital asset, the expected rate of return on QS is comparable to that of

2.4.3 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. In the BBR, BSS, EBT and WBT share pools and fisheries for both QS and PQS holdings, marginal reductions (1-3 fewer distinct QS holders) occurred between 2016/17 and 2017/18 in the size of Crew QS the share holder population across CR fisheries, with the largest change in concentration of share holdings indicated

other investments of comparable risk, e.g. bond yields. As such, it is lower than the market rate, the holder could expect to earn more over time by selling the QS and investing in alternative assets.

for the BBR pool, with median share holding increasing from 0.65% to 0.7%. Larger numbers of QS holders exited Owner QS pools between 2016/17 and 2017/18, but did median share holding percentages were minimally affected.

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 Crew QS pool. As of 2017/18, the number of entities holding CVO QS in the BBR since the initial allocation is reduced from 252 to 243, while BSS owner QS entities increased in number from 241 to 263. In the EAG fishery, where the count of distinct CVO QS share holder entities went from 15 to 24, the median share holding decreased from 5.9% 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 224 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 172 as of the start of the 2018/19 crab season. With respect to individual CFEC-permitted crab vessel operators active on-board crab vessels¹⁶, 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.¹⁷ CVC and CPC QS holders active as gear operators in one or more crab fishery as of the 2018/19 season have declined from 95 during the 2005/06 season to 58, representing 34% of the 172 individual CVC and CPC QS holders, and 41% of the aggregate pool of crew QS shares across all fisheries.

Tables 3.35 and 3.36 report the change in regional distribution of Owner and Crew QS holdings, distinguishing between Alaska, Pacific Northwest (PNW; includes Oregon, Washington, and Idaho), and Other U.S., from initial issuance and in the two most recent seasons. The regional distribution of share holdings and number of individuals holding Crew QS s has shifted from PNW to Alaska residents, by 3% to 5% in the BBR, BSS, EBT/WBT, and SMB pools, with substantially fewer individual QS holders in both regions comprising the larger pools than at initial issuance. EAG and WAG crew QS began at 94% PNW held and is now 100% held by 9 PNW residents. Regional changes in Owner QS pools has been more pronounced. Across all CR fisheries, the number of Owner QS holders and share of Owner QS pools held by residents of Alaska have increased relative to PNW-resident holders. In each of the BBR, BSS and EBT/WBT pools, 16% of the pool was held by Alaska residents compared to 82% held by PNW residents, which shifted to 32% and 64% prior to the 2016/17 season. The values shown for Owner QS include CVO and CPO QS holding acquired by CDQ groups, which account for a substantial fraction of the distributional change since initial issuance, as shown in Table 3.38, which indicates that, compared to less than 2% at initial issuance, between 14% and 18% of the combined CVO/CPO QS pools in the BBR, BSS, and

¹⁶Except 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.

¹⁷Note 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.

WBT/EBT pools is currently held by CDQ groups, including through wholly-owned subsidiaries, but not including QS holdings through indirect interest in other QS entities.

Tables 3.39 and 3.40 report statistics showing 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, 197 out of 532 (37%) of initial issuees have exited from holding QS in one or more fisheries since 2005, of which 12 exited after the end of the 2017/18 season. Within individual quota pools, higher proportional rates of attrition have occurred, including approximately 42% of initial QS issuees exiting from each of the BBR, BSS, BST, and SMB fisheries (184, 165, 162, and 83 exits as of 2018, respectively).

Table 3.40 provides statistics on new entrants to respective QS/PQS pools in each fishery as of the end of the 2018/19 season, relative to initial issuance and to the previous season 2017/18. The table provides counts of new entrants and total share of the quota pool acquired, and differentiates entrants that were new to CR program holdings in general ("New crab entrant"), or only to the respective quota pool (i.e., where the entrant previously held quota in another fishery or sector ("New in fishery"). The number of individuals newly entering the fishery between the 2017/18 and 2018/19 seasons by either measure was low, with 2, 3 and 4 new QS holders entering the EBT/WBT, BBR, and BSS Owner QS pools, in each case representing acquisition of 1% of the respective QS pools. Entry to the Crew QS pools was limited to less than 2 individuals in each pool, and only the EAG saw the entry of one new entity to the PQS pool.

2.4.4 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 calculated¹⁸, 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

¹⁸The index is calculated as $\frac{\sum_{i=1 \dots n} (2P_i - n - 1)x_i}{n^2 u}$ where P_i is the landings rank of vessel i , with landings of x_i pounds, such that the vessel with the highest landings is ranked 1 and the lowest is ranked n . Note that the number of active vessels n is generally decreasing over time, such that index values as calculated represent relative concentration among the set of active vessels in each crab fishery for each year. If calculated over a larger population that included inactive vessels with zero catch (not performed for this report), the index would indicate increasing concentration consistent with the overall consolidation of catch.

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 displays Gini coefficient index values by calendar year for 1998-2018, 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 and BSS fisheries, the index has varied between 0.24 and 0.37, with the concentration of catch highest in the first rationalized season (2005 and 2007, respectively), and a recent increasing trend beginning in 2015 as TACs have declined and fleets have consolidated in response.

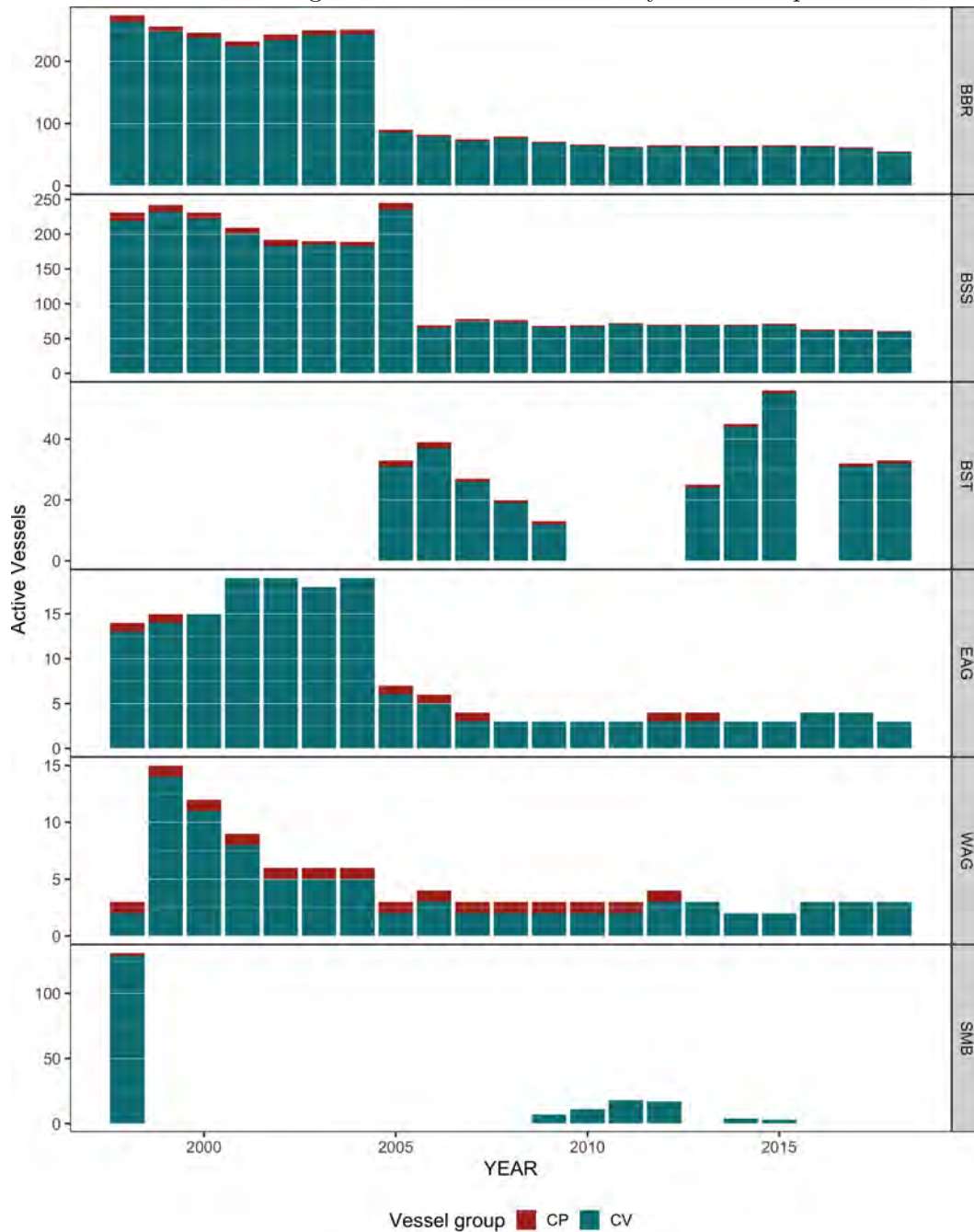
For purchasing of live-landed crab in the BBR fishery prior to the CR program (Table 3.43), concentration index values varied between 0.58 - 0.66, with the number of active buyers averaging 25 per year; following program implementation, index values have varied within a slightly lower range (0.54 - 0.61), 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 - 0.53 subsequently, with the average number of buyers per season decreasing from 28 in 2000 to 12 in 2016. 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 1998-2018 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



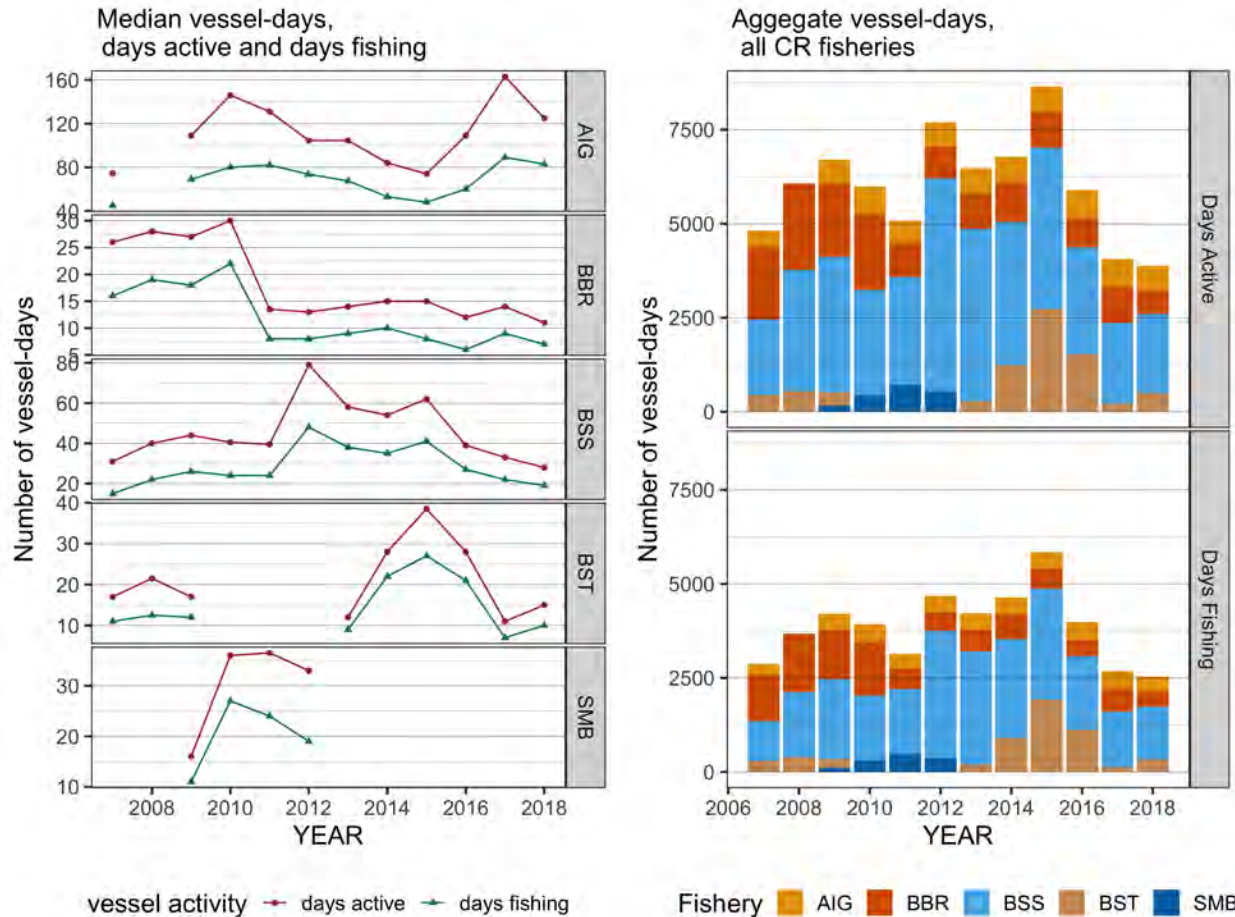
Source: *ADF&G fish tickets, eLandings*. Tabular data available in Tables 3.2 and 3.3. Gaps in time series for BST, FIG, PIK, SMB, and WAI indicate fishery closure years. All crab fishery total (“ALL” panel in figure) represents counts of distinct vessels fishing in one or more crab fisheries during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

Table 3.19¹⁹ 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,

¹⁹See 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 626 vessel days during 2018, the lowest level in the time series. 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 2018 BSS fishery declined marginally from 2017, by 59 days total, and 5 fewer days per vessel.

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 2018. 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.

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.²⁰

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.

²⁰Note 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.

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 2018, to 636 total trips (9 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 111 thousand pounds per trip in 2017/18. Across all vessel activity metrics reported for the BSS in Table 3.44, 2018 was the least active year to date.

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, as defined by State of Alaska as 93 days for BBR, 229 days for BSS, 274 for EAG/WAG, and 110 days for SMB (with extended seasons subject to approval as needed). Details for seasons 1998 through 2017/18 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, number of days during the season that vessels were active, and percentage of the open season during which vessels actively prosecuted the fishery. The longest season in the BSS fishery occurred during 2011/12 at 245 days (extended due to sea ice conditions), with vessels actively fishing on 231 days (94% of the open season); the 95 active fishing days (42% of the open season) during the 2017/18 BSS fishery is the lowest since pre-rationalization. The WAG fishery occurs over the longest season and active fishing period; 189 days of active fishing during 2010/11 is the lowest since rationalization, with 263 active days during the 2015/16 the longest active fishery. 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 2016/17 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 historically limited 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 processors holding IPQ (CVO B- and crew share IFQ, shown as the dashed line). This difference is most in evidence during the 2014/15 season, 93% of A-type IFQ had been landed as of the 26th 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 2017/18 BSS

season was completed earlier than recent years, with 100% IFQ-A quota landed by the 25th week of the season, and the remaining 1% of un-matched quota landed by the 27th 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 48 thousand for 2017/18. 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 2017/18, 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 \$388 to \$1100 per pot lift during the pre-rationalization period (nominal dollars), compared to \$906 - \$2,022 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 2,600 per vessel, a 100% increase. CPUE has increased from a range of 76-242 and an average of 143 legal crab per pot over the period 1998-2004, to 222-353 crabs per pot, increasing 83% to an average of 270 over the period 2005/06 to 2017/18. Vessel average RPUE ranged from \$178 to \$743 per pot lift during the pre-rationalization period, compared to \$445 - \$1,026 subsequently.

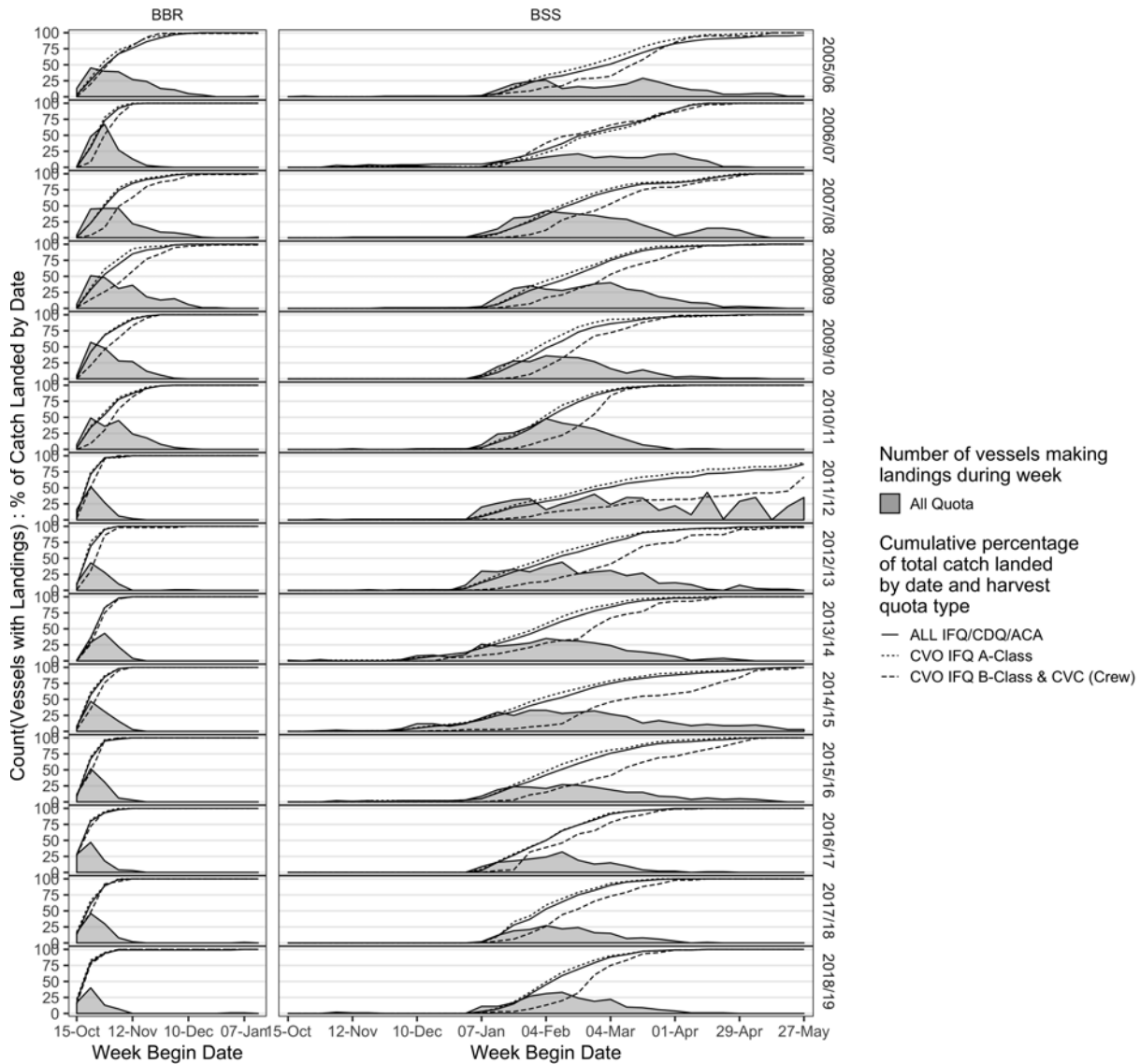
2.6. International Trade in Crab Commodities

U.S. foreign trade statistics for frozen, processed king and snow crab are summarized for the period 1991-2018 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.

The trade deficit in frozen king crab product reached a recent peak in 2018, at \$318 million and 9.7 thousand metric tons (*t*) in net imports, compared to \$38 million in export value on 11 thousand *t*. Over the last 20 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 \$93 million in 2010 to a low of \$18 million in 2015. Imports over the same period have been more variable, surging to 30,000 *t* at a value of \$433 million in 2007, from which point they tapered on an annual basis to the lowest recent amount in 2011 of 8.5 thousand *t* and \$188 million. Import value has increased in each of the last four years,, to \$356 million in 2018 and 11 thousand *t*.

In 2017, the U.S. trade deficit in frozen snow crab product reached a peak of \$681 million and 43 thousand *t* in net imports. U.S. exports of frozen snow crab product since 2003 has varied from a recent peak in 2012 of \$12,720 *t* with a value of \$141 million, to a low in 2018 at \$41.6 million on 2.5 thousand *t*. Snow crab imports imports have varied between a 29 thousand *t* to 52 thousand *t*, and \$369 million to \$727 million in total value 2017.

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

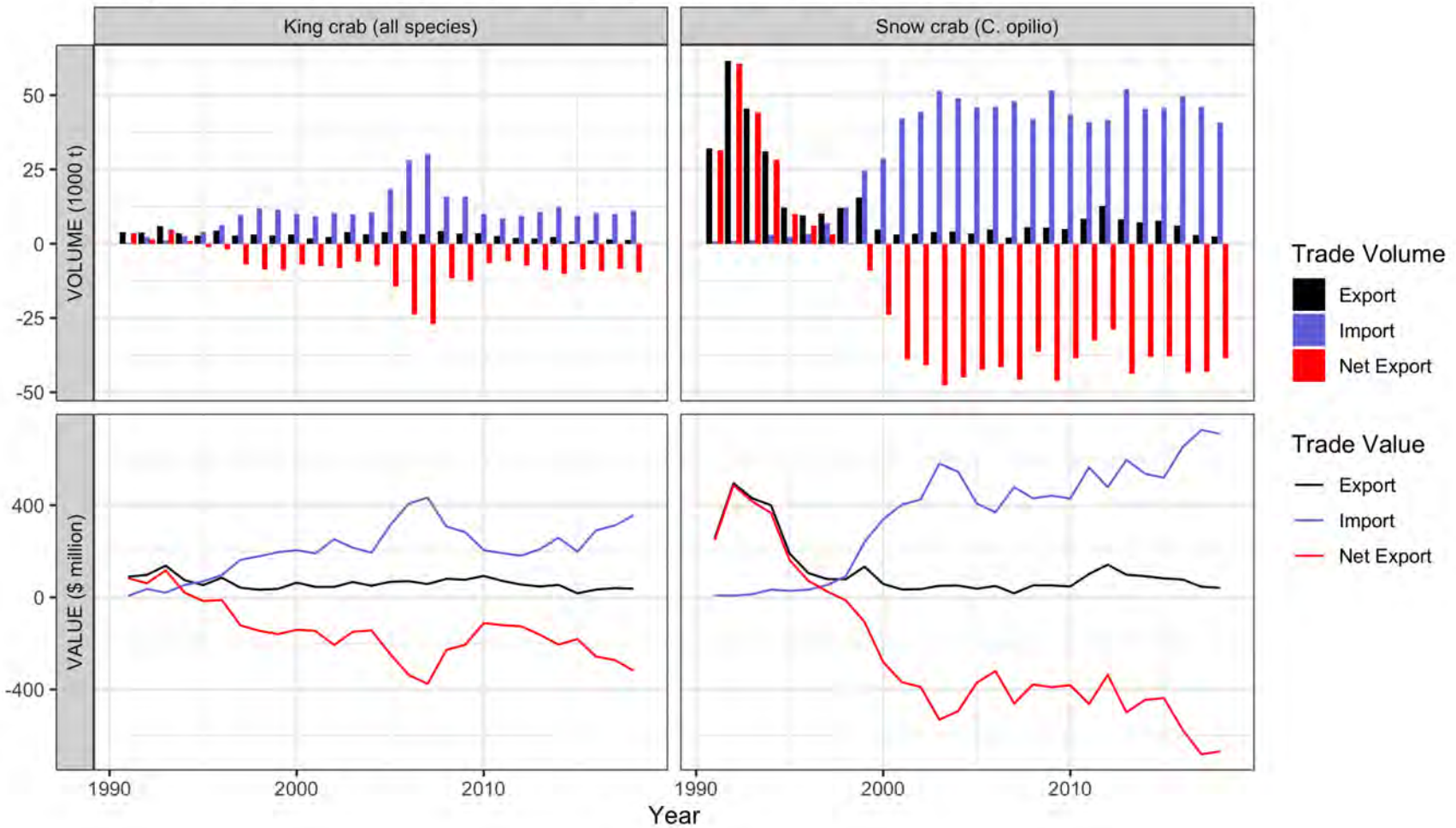


Source: *ADF&G fish tickets via eLandings; NMFS RAM Division, IFQ accounting database.* Tabular data available in Tables 3.47 and 3.48.

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

King and Snow crab imports and exports, volume and value, 1991-2017



65

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).

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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	2005/06	2.70	0.30	3.00	95%	*
	2006/07	2.70	0.30	3.00	100%	*
	2007/08	2.70	0.30	3.00	100%	100%
	2008/09	2.84	0.32	3.15	100%	100%
	2009/10	2.84	0.32	3.15	*	*
	2010/11	2.84	0.32	3.15	*	*
	2011/12	2.84	0.32	3.15	*	100%
	2012/13	2.98	0.33	3.31	*	100%
	2013/14	2.98	0.33	3.31	*	100%
	2014/15	2.98	0.33	3.31	*	100%
	2015/16	2.98	0.33	3.31	*	100%
	2016/17	2.98	0.33	3.31	*	100%
	2017/18	2.98	0.33	3.31	*	100%
	2018/19	3.47	0.39	3.86	100%	100%
2019/20	3.88	0.43	4.31	0%	0%	
WAG	2005/06	2.43	0.27	2.70	98%	*
	2006/07	2.43	0.27	2.70	82%	*
	2007/08	2.43	0.27	2.70	92%	*
	2008/09	2.55	0.28	2.84	88%	*
	2009/10	2.55	0.28	2.84	*	*
	2010/11	2.55	0.28	2.84	*	*
	2011/12	2.55	0.28	2.84	*	*
	2012/13	2.68	0.30	2.98	*	*
	2013/14	2.68	0.30	2.98	*	*
	2014/15	2.68	0.30	2.98	*	*
	2015/16	2.68	0.30	2.98	*	*
	2016/17	2.01	0.22	2.24	*	*
	2017/18	2.01	0.22	2.24	100%	*
	2018/19	2.25	0.25	2.50	100%	*
2019/20	2.58	0.29	2.87	0%	0%	

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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
BBR	2005/06	16.50	1.83	18.33	100%	100%
	2006/07	13.97	1.55	15.53	99%	100%
	2007/08	18.34	2.04	20.38	100%	100%
	2008/09	18.33	2.04	20.36	100%	100%
	2009/10	14.41	1.60	16.01	100%	100%
	2010/11	13.36	1.48	14.84	100%	100%
	2011/12	7.05	0.78	7.83	100%	100%
	2012/13	7.07	0.79	7.85	100%	100%
	2013/14	7.74	0.86	8.60	100%	100%
	2014/15	8.99	1.00	9.99	100%	100%
	2015/16	8.98	1.00	9.97	100%	100%
	2016/17	7.62	0.85	8.47	100%	100%
	2017/18	5.94	0.66	6.60	100%	100%
	2018/19	3.88	0.43	4.31	100%	100%
2019/20	3.42	0.38	3.80	0%	0%	
BSS	2005/06	33.47	3.72	37.18	99%	100%
	2006/07	32.91	3.66	36.57	99%	100%
	2007/08	56.73	6.30	63.03	100%	100%
	2008/09	52.70	5.86	58.55	100%	100%
	2009/10	43.22	4.80	48.02	100%	100%
	2010/11	48.85	5.43	54.28	100%	100%
	2011/12	80.00	8.89	88.89	100%	100%
	2012/13	59.72	6.64	66.35	100%	100%
	2013/14	48.58	5.40	53.98	100%	100%
	2014/15	61.16	6.80	67.95	100%	100%
	2015/16	36.55	4.06	40.61	100%	100%
	2016/17	19.41	2.16	21.57	100%	100%
	2017/18	17.06	1.90	18.96	100%	100%
	2018/19	24.82	2.76	27.58	100%	100%
2019/20	30.62	3.40	34.02	0%	0%	
BST	2005/06	1.46	0.16	1.62	54%	100%
EBT	2006/07	1.69	0.19	1.88	75%	72%
	2007/08	3.10	0.34	3.45	46%	42%
	2008/09	2.49	0.28	2.76	62%	100%
	2009/10	1.22	0.14	1.35	98%	100%
	2013/14	1.32	0.15	1.46	99%	100%
	2014/15	7.63	0.85	8.48	100%	100%
	2015/16	10.14	1.13	11.27	100%	100%
WBT	2006/07	0.98	0.11	1.09	64%	79%
	2007/08	1.96	0.22	2.18	24%	26%
	2008/09	1.38	0.15	1.54	8%	1%
	2013/14	1.48	0.16	1.65	81%	73%
	2014/15	5.96	0.66	6.63	78%	93%
	2015/16	7.56	0.84	8.40	100%	100%
	2017/18	2.25	0.25	2.50	100%	100%
2018/19	2.20	0.24	2.44	100%	100%	

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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	2009/10	1.05	0.12	1.17	44%	0%
	2010/11	1.44	0.16	1.60	77%	98%
	2011/12	2.12	0.24	2.36	80%	77%
	2012/13	1.47	0.16	1.63	99%	100%
	2014/15	0.59	0.07	0.66	*	*
	2015/16	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%
2018	0.30	0.02	0.32	103%	100%	
2019	0.14	0.01	0.15	0%	0%	
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	*	-
2018	0.13	-	0.13	*	-	
2019	0.13	-	0.13	100%	-	

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

	Year	CFEC permits	Vessels	Buyers/processors
All BSAI Crab	1998	790	294	54
	1999	607	293	43
	2000	562	277	39
	2001	529	280	36
	2002	576	280	37
	2003	570	278	37
	2004	538	281	34
	2005	355	212	30
	2006	272	128	20
	2007	232	114	27
	2008	262	116	23
	2009	242	112	27
	2010	232	102	24
	2011	235	102	27
	2012	284	113	26
	2013	237	115	29
	2014	257	109	25
	2015	270	117	22
	2016	262	118	21
2017	276	108	23	
2018	236	101	20	
BBR	1998	281	274	28
	1999	266	256	24
	2000	255	244	22
	2001	240	230	23
	2002	253	241	24
	2003	264	250	26
	2004	268	251	25
	2005	115	89	16
	2006	100	81	15
	2007	85	73	18
	2008	98	79	17
	2009	86	70	16
	2010	79	65	17
	2011	71	62	18
	2012	74	64	17
	2013	73	63	17
	2014	72	63	17
	2015	71	64	15
	2016	70	63	17
2017	69	61	17	
2018	62	55	15	

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Table 3.2: Continued

	Year	CFEC permits	Vessels	Buyers/processors
BSS	1998	276	230	44
	1999	298	241	37
	2000	244	231	28
	2001	219	207	23
	2002	205	191	26
	2003	202	190	21
	2004	200	189	23
	2005	178	167	20
	2006	106	78	13
	2007	89	68	18
	2008	108	78	17
	2009	103	77	18
	2010	87	68	13
	2011	88	68	16
	2012	109	72	16
	2013	91	71	15
	2014	93	70	13
	2015	94	70	14
	2016	86	68	12
2017	78	63	14	
2018	80	63	13	
EBT	2006	22	21	6
	2007	32	23	9
	2008	27	19	10
	2009	21	15	11
	2010	5	4	7
	2013	22	19	12
	2014	44	33	12
	2015	51	41	11
	2016	34	25	11
2017	2	1	2	
WBT	2005	5	4	5
	2006	41	32	9
	2007	22	18	8
	2008	18	18	8
	2009	9	9	7
	2013	4	3	3
	2014	26	22	13
	2015	51	38	13
	2016	39	31	10
	2017	21	16	11
2019	22	18	10	

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Table 3.2: Continued

	Year	CFEC permits	Vessels	Buyers/processors
EAG	1998	15	14	7
	1999	15	15	7
	2000	16	15	4
	2001	19	19	4
	2002	20	19	4
	2003	18	18	4
	2004	19	19	4
	2005	9	6	4
	2006	12	6	6
	2007	7	4	5
	2008	8	4	6
	2009	9	3	6
	2010	8	3	7
	2011	9	3	10
	2012	9	3	11
	2013	8	3	10
	2014	8	3	8
	2015	7	3	7
	2016	8	3	9
2017	9	4	9	
2018	10	4	9	
WAG	1998	13	8	6
	1999	15	12	5
	2000	22	15	7
	2001	20	13	7
	2002	13	8	6
	2003	8	7	5
	2004	8	6	4
	2005	7	4	5
	2006	7	3	3
	2007	6	4	4
	2008	6	3	5
	2009	4	2	6
	2010	7	3	5
	2011	6	3	9
	2012	6	4	9
	2013	7	4	8
	2014	3	2	9
	2015	5	2	8
	2016	6	3	8
2017	5	3	9	
2018	6	3	6	
PIK	1998	58	58	17
SMB	1998	136	131	16
	2009	7	7	6
	2010	14	11	9
	2011	23	18	11
	2012	22	17	11
	2015	3	3	4

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Table 3.2: Continued

	Year	CFEC permits	Vessels	Buyers/processors
WAI	1998	1	1	1
	1999	0	0	0
	2002	33	33	9
	2003	30	30	10
	2004	0	0	0
NSR	1998	16	8	2
	1999	13	10	2
	2000	29	15	7
	2001	36	29	4
	2002	54	32	4
	2003	53	25	4
	2004	41	26	2
	2005	44	30	3
	2006	41	26	2
	2007	42	28	4
	2008	34	22	2
	2009	29	23	3
	2010	37	23	3
	2011	38	24	2
	2012	64	29	3
	2013	52	33	5
	2014	65	33	4
	2015	72	36	3
2016	75	36	2	
2017	110	36	2	
2018	71	33	1	
PIG	1998	4	3	3
	1999	4	3	2
	2000	8	6	4
	2001	6	6	3
	2002	9	8	3
	2003	3	3	2
	2004	5	5	2
	2005	4	4	2
	2010	1	1	2
	2011	2	2	1
	2012	1	1	1
	2013	1	1	1
	2014	1	1	1
	2017	2	2	2
2018	2	1	1	

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.

Table 3.3: Fleet Composition by Season, CR Program Fisheries

	Season	Total vessels	Catcher vessels	Catcher/processors
All CR Fisheries	1998	286	274	13
	1999	283	274	11
	2000	262	254	12
	2001	251	244	12
	2002	248	239	11
	2003	253	244	9
	2004	256	247	9
	2005	169	162	7
	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	
2017/18	70	69	2	
2018/19	66	64	2	
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
2017/18	61	60	2	
2018/19	55	53	2	

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Table 3.3: Continued

	Season	Total vessels	Catcher vessels	Catcher/processors
BSS	1998	230	219	12
	1999	241	232	10
	2000	231	222	9
	2001	207	201	8
	2002	191	183	9
	2003	190	185	5
	2004	189	183	6
	2005	167	161	6
	2005/06	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
2017/18	63	61	2	
2018/19	61	59	2	
BST	2005/06	33	31	2
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
	2017/18	1	1	0
WBT	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
	2017/18	32	31	1
	2018/19	33	32	1

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Table 3.3: Continued

	Season	Total vessels	Catcher vessels	Catcher/processors
	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
EAG	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
	2017/18	4	4	0
	2018/19	3	3	0
	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
WAG	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
	2017/18	3	3	0
	2018/19	3	3	0

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Table 3.3: Continued

	Season	Total vessels	Catcher vessels	Catcher/processors
PIK	1998	58	58	0
	1998	131	129	2
SMB	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

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	\$14.75	\$2.81	\$2.85(0.20)
	1999	4.89	\$21.50	\$4.40	-
	2000	5.76	\$27.05	\$4.70	-
	2001	6.36	\$29.24	\$4.60	\$4.65(0.51)
	2002	5.54	\$25.49	\$4.60	-
	2003	5.82	\$27.35	\$4.70	-
	2004	6.02	\$25.45	\$4.23	\$4.22(0.10)
	2005	4.44	\$14.64	\$3.30	\$3.27(0.29)
	2006	5.24	\$12.34	\$2.35	\$2.52(0.41)
	2007	5.44	\$14.24	\$2.62	\$2.65(0.35)
	2008	5.73	\$21.87	\$3.82	*
	2009	5.51	\$15.79	\$2.86	*
	2010	6.09	\$26.47	\$4.35	*
	2011	6.00	\$31.06	\$5.18	*
	2012	5.92	\$25.35	\$4.28	\$4.23(0.37)
	2013	5.94	\$26.12	\$4.39	\$4.38(0.38)
	2014	6.07	\$26.21	\$4.32	\$4.46
	2015	5.80	\$26.46	\$4.56	\$4.72
	2016	5.60	\$31.39	\$5.60	\$5.96
2017	5.56	\$31.60	\$5.68	\$5.73	
2018	6.51	\$40.20	\$6.18	\$6.40	
BBR	1998	14.70	\$57.20	\$3.89	\$3.92(0.72)
	1999	11.53	\$102.42	\$8.88	-
	2000	8.07	\$52.99	\$6.56	-
	2001	8.30	\$55.05	\$6.64	\$6.64(0.55)
	2002	9.48	\$78.67	\$8.30	-
	2003	15.39	\$103.24	\$6.71	-
	2004	15.02	\$91.36	\$6.08	\$6.11(0.30)
	2005	18.14	\$102.81	\$5.67	\$5.63(0.17)
	2006	15.55	\$72.85	\$4.69	\$4.71(0.22)
	2007	20.17	\$106.89	\$5.30	\$5.37(0.63)
	2008	20.13	\$122.21	\$6.07	\$6.01(0.34)
	2009	15.78	\$85.36	\$5.41	\$5.45(0.19)
	2010	14.73	\$124.73	\$8.47	\$8.53(0.73)
	2011	7.79	\$91.06	\$11.69	\$11.77(1.56)
	2012	7.80	\$68.80	\$8.82	\$8.89(0.44)
	2013	8.52	\$66.02	\$7.75	\$7.87(0.55)
	2014	9.87	\$69.72	\$7.06	\$7.16(0.64)
	2015	9.77	\$82.37	\$8.43	\$8.54(0.38)
	2016	8.41	\$91.10	\$10.84	\$11.31(1.33)
2017	6.55	\$61.51	\$9.39	\$9.45(0.21)	
2018	4.23	\$43.95	\$10.39	\$10.51(0.78)	

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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	\$206.42	\$0.83	\$0.83(0.06)
	1999	192.41	\$268.17	\$1.39	-
	2000	32.81	\$84.05	\$2.56	-
	2001	24.78	\$52.76	\$2.13	\$2.14(0.13)
	2002	31.94	\$59.00	\$1.85	-
	2003	27.51	\$66.35	\$2.41	-
	2004	23.69	\$62.54	\$2.64	\$2.65(0.10)
	2005	24.86	\$53.43	\$2.15	\$2.27(0.22)
	2006	38.02	\$51.91	\$1.37	\$1.38(0.18)
	2007	34.76	\$71.06	\$2.04	\$2.03(0.24)
	2008	62.23	\$124.57	\$2.00	\$2.10(0.52)
	2009	57.68	\$97.16	\$1.68	\$1.70(0.25)
	2010	47.84	\$70.57	\$1.48	\$1.48(0.22)
	2011	54.05	\$154.88	\$2.87	\$2.89(0.36)
	2012	88.23	\$212.16	\$2.40	\$2.45(0.25)
	2013	70.69	\$178.08	\$2.52	\$2.59(0.11)
	2014	55.22	\$140.06	\$2.54	\$2.67(0.45)
	2015	60.91	\$130.64	\$2.14	\$2.16(0.14)
2016	39.57	\$112.48	\$2.84	\$2.94(0.74)	
2017	21.32	\$89.30	\$4.19	\$4.27(0.64)	
2018	18.84	\$75.20	\$3.99	\$4.08(0.27)	
BST	2005	0.26	*	*	*
	2006	0.99	\$1.87	\$1.88	\$1.79(0.43)
	2007	2.25	\$4.85	\$2.16	\$2.14(0.69)
	2008	2.33	\$5.14	\$2.20	\$2.17(0.27)
	2009	2.14	\$4.81	\$2.25	\$2.23(0.20)
	2010	0.37	*	*	*
	2013	1.25	\$3.35	\$2.68	\$2.68(0.74)
	2014	9.09	\$23.12	\$2.54	\$2.61(0.34)
	2015	14.98	\$40.83	\$2.73	\$2.81(0.43)
	2016	10.45	\$32.88	\$3.15	\$3.11(0.20)
	2017	1.41	\$5.80	\$4.12	\$4.19(0.29)
2018	2.29	\$9.51	\$4.15	\$4.18(0.56)	
PIK	1998	1.03	\$3.57	\$3.47	\$3.54(0.56)
SMB	1998	2.95	\$8.14	\$2.76	\$2.79(0.21)
	2009	0.45	\$1.53	\$3.39	\$3.45(0.29)
	2010	1.25	\$6.98	\$5.56	\$5.65(0.29)
	2011	1.85	\$10.95	\$5.91	\$6.32(0.67)
	2012	1.59	\$7.42	\$4.66	\$4.67(0.28)
	2014	0.30	*	*	*
2015	*	*	*	*	
WAI	1998	*	*	*	*
	2002	0.50	\$4.15	\$8.27	-
	2003	0.48	\$3.19	\$6.71	-

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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)
	1998	0.03	\$0.06	\$2.32	-
	1999	0.03	\$0.14	\$4.60	-
	2000	0.32	\$1.38	\$4.31	-
	2001	0.28	\$1.46	\$5.24	-
	2002	0.26	\$2.09	\$8.07	-
	2003	0.28	\$1.45	\$5.16	-
	2004	0.33	\$1.31	\$3.94	-
	2005	0.40	\$1.70	\$4.27	-
	2006	0.44	\$1.36	\$3.07	-
	2007	0.32	\$1.06	\$3.36	-
NSR	2008	0.40	\$1.65	\$4.12	-
	2009	0.40	\$1.45	\$3.65	-
	2010	0.42	\$1.78	\$4.21	-
	2011	0.40	\$2.31	\$5.73	-
	2012	0.50	\$2.95	\$5.94	-
	2013	0.44	\$2.74	\$6.17	-
	2014	0.42	\$2.31	\$5.54	-
	2015	0.49	\$2.88	\$5.91	-
	2016	0.50	\$3.41	\$6.89	-
	2017	0.48	\$3.11	\$6.45	-
	2018	0.32	\$2.03	\$6.31	-

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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)
	1998	*	*	*	-
	1999	*	*	*	-
	2000	0.12	\$0.59	\$4.83	-
	2001	*	*	*	-
	2002	*	*	*	-
	2003	*	*	*	-
	2004	*	*	*	-
PIG	2005	*	*	*	-
	2010	*	*	*	-
	2011	*	*	*	-
	2012	*	*	*	-
	2013	*	*	*	-
	2014	*	*	*	-
	2017	*	*	*	-
	2018	*	*	*	-

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 where available (1998, 2001, 2004, and 2005-current 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	AK	3(2)	-	-	*	*
	98/01/04 WA	43(18)	-	-	\$3.94	\$4.02(0.85)
	Other	6(2)	-	-	*	*
	2005 WA	8	80%	80%	\$3.32	\$3.22(0.25)
	Other	2	*	*	*	*
	2006 WA	5	80%	80%	\$2.35	\$2.45(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	*	*	*	*	
2017 WA	4	*	*	*	*	
Other	1	*	*	*	*	
2018 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)	-	-	\$1.10	\$1.85(0.80)
	98/01/04	WA	354(143)	-	-	\$1.11	\$1.88(0.77)
		Other	70(30)	-	-	\$1.11	\$1.85(0.77)
	2005	AK	29	16%	17%	\$2.28	\$2.29(0.04)
		WA	103	73%	71%	\$2.10	\$2.26(0.26)
		Other	18	11%	12%	\$2.30	\$2.31(0.10)
	2006	AK	17	20%	20%	\$1.34	\$1.36(0.09)
		WA	48	67%	67%	\$1.37	\$1.38(0.20)
		Other	9	13%	13%	\$1.39	\$1.39(0.17)
	2007	AK	14	23%	23%	\$2.02	\$2.04(0.22)
		WA	43	66%	66%	\$2.06	\$2.04(0.26)
		Other	7	11%	11%	\$2.02	\$1.96(0.15)
	2008	AK	15	22%	21%	\$1.95	\$1.98(0.31)
		WA	50	66%	69%	\$2.07	\$2.15(0.56)
		Other	9	12%	11%	\$1.75	\$1.95(0.48)
	2009	AK	19	32%	33%	\$1.71	\$1.75(0.36)
		WA	45	59%	59%	\$1.68	\$1.68(0.18)
		Other	9	9%	9%	\$1.63	\$1.66(0.24)
	2010	AK	14	23%	23%	\$1.48	\$1.49(0.08)
		WA	40	65%	65%	\$1.48	\$1.48(0.27)
		Other	12	11%	11%	\$1.44	\$1.46(0.12)
	2011	AK	15	24%	24%	\$2.86	\$2.92(0.17)
		WA	40	62%	63%	\$2.88	\$2.86(0.44)
		Other	11	14%	13%	\$2.84	\$2.94(0.22)
	2012	AK	18	22%	22%	\$2.38	\$2.40(0.40)
		WA	46	67%	67%	\$2.42	\$2.46(0.16)
		Other	7	11%	10%	\$2.38	\$2.47(0.16)
2013	AK	19	23%	23%	\$2.51	\$2.60(0.12)	
	WA	43	68%	69%	\$2.52	\$2.58(0.12)	
	Other	7	9%	9%	\$2.51	\$2.59(0.10)	
2014	AK	19	23%	23%	\$2.57	\$2.65(0.22)	
	WA	41	66%	66%	\$2.53	\$2.63(0.32)	
	Other	8	11%	11%	\$2.53	\$3.01(1.11)	
2015	AK	19	25%	25%	\$2.13	\$2.14(0.14)	
	WA	41	65%	65%	\$2.14	\$2.17(0.08)	
	Other	8	10%	10%	\$2.22	\$2.13(0.35)	
2016	AK	18	23%	23%	\$2.85	\$3.07(1.37)	
	WA	41	69%	69%	\$2.84	\$2.88(0.14)	
	Other	6	8%	8%	\$2.82	\$2.88(0.10)	
2017	AK	18	23%	23%	\$4.17	\$4.29(0.28)	
	WA	36	68%	68%	\$4.19	\$4.26(0.81)	
	Other	7	9%	9%	\$4.26	\$4.32(0.20)	
2018	AK	17	21%	21%	\$3.95	\$3.98(0.28)	
	WA	37	70%	70%	\$4.00	\$4.11(0.27)	
	Other	6	9%	9%	\$4.03	\$4.10(0.15)	

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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)
98/01/04	AK	122(49)	-	-	\$5.51	\$5.54(1.29)
	WA	429(174)	-	-	\$5.42	\$5.56(1.29)
	Other	82(33)	-	-	\$5.31	\$5.62(1.23)
2005	AK	19	16%	16%	\$5.62	\$5.59(0.20)
	WA	53	69%	70%	\$5.68	\$5.65(0.15)
	Other	13	14%	14%	\$5.67	\$5.62(0.21)
2006	AK	24	24%	23%	\$4.65	\$4.68(0.24)
	WA	48	66%	67%	\$4.70	\$4.73(0.22)
	Other	8	10%	10%	\$4.64	\$4.64(0.20)
2007	AK	17	22%	23%	\$5.32	\$5.40(1.17)
	WA	44	67%	68%	\$5.30	\$5.37(0.40)
	Other	9	10%	10%	\$5.13	\$5.34(0.24)
2008	AK	17	20%	20%	\$6.25	\$6.11(0.61)
	WA	51	71%	71%	\$6.02	\$5.98(0.21)
	Other	8	9%	9%	\$6.06	\$6.00(0.14)
2009	AK	19	28%	28%	\$5.36	\$5.42(0.16)
	WA	40	62%	62%	\$5.44	\$5.47(0.16)
	Other	9	10%	10%	\$5.36	\$5.45(0.36)
BBR 2010	AK	12	25%	24%	\$8.33	\$8.38(0.81)
	WA	38	62%	63%	\$8.57	\$8.67(0.68)
	Other	13	14%	13%	\$8.23	\$8.26(0.73)
2011	AK	12	23%	22%	\$11.12	\$10.16(0.91)
	WA	36	60%	61%	\$11.99	\$9.53(2.18)
	Other	11	17%	17%	\$11.43	\$9.50(2.55)
2012	AK	15	24%	24%	\$8.94	\$8.97(0.50)
	WA	41	68%	68%	\$8.80	\$8.87(0.39)
	Other	7	8%	8%	\$8.60	\$8.76(0.61)
2013	AK	16	28%	28%	\$7.72	\$7.75(0.39)
	WA	37	61%	62%	\$7.77	\$7.92(0.41)
	Other	8	10%	10%	\$7.69	\$7.65(0.43)
2014	AK	15	25%	24%	\$6.97	\$7.09(0.45)
	WA	37	65%	65%	\$7.09	\$7.20(0.63)
	Other	8	10%	11%	\$7.15	\$7.08(1.05)
2015	AK	16	27%	27%	\$8.44	\$8.51(0.41)
	WA	38	63%	63%	\$8.41	\$8.55(0.38)
	Other	8	10%	10%	\$8.48	\$8.55(0.33)
2016	AK	15	29%	27%	\$10.37	\$11.22(1.86)
	WA	38	62%	63%	\$10.99	\$11.34(1.12)
	Other	8	9%	10%	\$11.23	\$11.31(0.32)
2017	AK	15	25%	25%	\$9.39	\$9.41(0.26)
	WA	37	66%	66%	\$9.42	\$9.48(0.14)
	Other	7	8%	8%	\$9.24	\$9.32(0.35)
2018	AK	15	30%	30%	\$10.36	\$10.49(0.46)
	WA	33	62%	62%	\$10.41	\$10.51(0.93)
	Other	5	8%	8%	\$10.35	\$10.54(0.30)

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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)
2005	AK	1	*	*	*	*
	WA	3	*	*	*	*
2006	AK	6	11%	12%	\$1.94	\$1.77(0.32)
	WA	30	81%	81%	\$1.88	\$1.83(0.45)
	Other	5	7%	7%	\$1.81	\$1.49(0.24)
2007	AK	7	26%	25%	\$2.08	\$2.07(0.29)
	WA	17	55%	57%	\$2.26	\$2.16(0.84)
	Other	3	*	*	*	*
2008	AK	6	5%	4%	\$1.94	\$1.81(0.51)
	WA	19	61%	61%	\$2.19	\$2.22(0.17)
	Other	4	*	*	*	*
2009	AK	5	17%	17%	\$2.27	\$2.25(0.13)
	WA	10	43%	41%	\$2.16	\$2.20(0.21)
	Other	2	*	*	*	*
BST 2010	AK	1	*	*	*	*
	WA	1	*	*	*	*
	Other	2	*	*	*	*
2013	AK	6	20%	22%	\$2.85	\$2.69(0.69)
	WA	10	54%	49%	\$2.44	\$2.52(0.79)
	Other	3	*	*	*	*
2014	AK	11	19%	19%	\$2.59	\$2.64(0.31)
	WA	20	55%	53%	\$2.49	\$2.56(0.35)
	Other	7	27%	27%	\$2.61	\$2.72(0.37)
2015	AK	13	23%	24%	\$2.75	\$2.81(0.42)
	WA	32	56%	57%	\$2.78	\$2.87(0.44)
	Other	8	21%	20%	\$2.55	\$2.53(0.25)
2016	AK	9	23%	23%	\$3.12	\$3.17(0.11)
	WA	27	54%	56%	\$3.24	\$3.10(0.18)
	Other	6	23%	21%	\$2.95	\$3.04(0.36)
2017	AK	2	*	*	*	*
	WA	11	64%	66%	\$4.23	\$4.28(0.11)
	Other	3	*	*	*	*
2018	AK	6	25%	26%	\$4.27	\$4.22(0.28)
	WA	21	67%	65%	\$4.06	\$4.12(0.65)
	Other	2	*	*	*	*

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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)	-	-	\$3.53	\$3.72(0.78)
		WA	28(28)	-	-	\$3.76	\$3.61(0.70)
		Other	5(5)	-	-	\$3.36	\$3.38(0.06)
	98/01/04	AK	20(20)	-	-	\$2.73	\$2.73(0.08)
		WA	61(61)	-	-	\$2.78	\$2.82(0.25)
		Other	14(14)	-	-	\$2.74	\$2.75(0.10)
	2009	AK	1	*	*	*	*
		WA	5	71%	72%	\$3.45	\$3.50(0.31)
		Other	1	*	*	*	*
SMB	2010	AK	3	*	*	*	*
		WA	5	47%	49%	\$5.78	\$5.77(0.07)
		Other	2	*	*	*	*
	2011	AK	6	25%	26%	\$6.21	\$6.47(0.71)
		WA	9	50%	50%	\$5.92	\$6.32(0.61)
		Other	3	*	*	*	*
	2012	AK	6	30%	31%	\$4.69	\$4.67(0.26)
		WA	9	50%	50%	\$4.58	\$4.63(0.31)
		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)
98/01/04	85'-99'	12(5)	0%	0%	\$3.76	\$3.86(0.78)
	100'-124'	16(7)	0%	0%	\$4.18	\$4.28(0.92)
	125' and over	24(10)	0%	0%	\$3.95	\$3.92(0.74)
2005	85'-99'	1	*	*	*	*
	100'-124'	3	*	*	*	*
	125' and over	6	0.57%	0.57%	\$3.30	\$3.32(0.31)
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	*	*	*	*
2015	85'-99'	1	*	*	*	*
	100'-124'	4	*	*	*	*
2016	85'-99'	1	*	*	*	*
	100'-124'	4	*	*	*	*
2017	85'-99'	1	*	*	*	*
	100'-124'	4	*	*	*	*
2018	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)
98/01/04	Under 85'	44(23)	0%	0%	\$5.33	\$5.51(1.24)
	85'-99'	129(59)	0%	0%	\$5.50	\$5.56(1.30)
	100'-124'	298(118)	0%	0%	\$5.40	\$5.59(1.27)
	125' and over	162(69)	0%	0%	\$5.43	\$5.53(1.31)
2005	Under 85'	3	*	*	*	*
	85'-99'	12	0.11%	0.10%	\$5.65	\$5.60(0.17)
	100'-124'	46	0.44%	0.44%	\$5.66	\$5.62(0.20)
	125' and over	24	0.42%	0.42%	\$5.69	\$5.66(0.11)
2006	Under 85'	3	*	*	*	*
	85'-99'	12	0.10%	0.10%	\$4.68	\$4.79(0.19)
	100'-124'	44	0.46%	0.46%	\$4.67	\$4.69(0.24)
	125' and over	21	0.41%	0.42%	\$4.71	\$4.72(0.20)
2007	Under 85'	1	*	*	*	*
	85'-99'	9	0.10%	0.10%	\$5.22	\$5.11(1.15)
	100'-124'	40	0.49%	0.49%	\$5.28	\$5.40(0.50)
	125' and over	20	0.39%	0.39%	\$5.31	\$5.44(0.56)
2008	Under 85'	2	*	*	*	*
	85'-99'	10	0.09%	0.10%	\$6.45	\$5.92(0.30)
	100'-124'	43	0.50%	0.50%	\$6.07	\$6.05(0.41)
	125' and over	21	0.37%	0.37%	\$5.99	\$5.98(0.14)
2009	Under 85'	3	*	*	*	*
	85'-99'	9	0.11%	0.11%	\$5.38	\$5.39(0.22)
	100'-124'	35	0.46%	0.46%	\$5.42	\$5.48(0.19)
	125' and over	21	0.39%	0.39%	\$5.41	\$5.45(0.19)
2010	Under 85'	1	*	*	*	*
	85'-99'	8	0.09%	0.09%	\$8.22	\$8.44(0.64)
	100'-124'	33	0.45%	0.45%	\$8.43	\$8.47(0.86)
	125' and over	21	0.44%	0.44%	\$8.55	\$8.66(0.52)
2011	Under 85'	1	*	*	*	*
	85'-99'	8	0.12%	0.10%	\$10.52	\$10.45(0.50)
	100'-124'	29	0.39%	0.39%	\$11.84	\$9.84(1.94)
	125' and over	21	0.48%	0.48%	\$11.83	\$6.76(2.88)
2012	Under 85'	3	*	*	*	*
	85'-99'	22	0.30%	0.29%	\$8.71	\$8.84(0.53)
	100'-124'	32	0.59%	0.59%	\$8.90	\$8.95(0.39)
	125' and over	6	0.09%	0.09%	\$8.59	\$8.72(0.44)
2013	Under 85'	2	*	*	*	*
	85'-99'	21	0.26%	0.26%	\$7.67	\$7.83(0.46)
	100'-124'	34	0.62%	0.62%	\$7.78	\$7.84(0.42)
	125' and over	4	*	*	*	*
2014	Under 85'	2	*	*	*	*
	85'-99'	21	0.29%	0.30%	\$7.13	\$7.12(0.79)
	100'-124'	33	0.59%	0.59%	\$7.01	\$7.19(0.55)
	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)
2015	Under 85'	3	*	*	*	*
	85'-99'	21	0.29%	0.29%	\$8.40	\$8.47(0.48)
	100'-124'	34	0.60%	0.60%	\$8.46	\$8.60(0.28)
	125' and over	4	*	*	*	*
2016	Under 85'	2	*	*	*	*
	85'-99'	20	0.26%	0.27%	\$11.32	\$11.48(0.25)
	100'-124'	35	0.62%	0.61%	\$10.54	\$11.16(1.77)
	125' and over	4	*	*	*	*
2017	Under 85'	2	*	*	*	*
	85'-99'	21	0.28%	0.28%	\$9.37	\$9.42(0.25)
	100'-124'	32	0.58%	0.58%	\$9.40	\$9.46(0.18)
	125' and over	4	*	*	*	*
2018	Under 85'	2	*	*	*	*
	85'-99'	18	0.25%	0.25%	\$10.41	\$10.40(1.13)
	100'-124'	28	0.56%	0.56%	\$10.36	\$10.56(0.46)
	125' and over	5	0.16%	0.16%	\$10.44	\$10.72(0.28)

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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)
98/01/04	Under 85'	25(14)	0%	0%	\$1.07	\$1.90(0.80)
	85'-99'	103(51)	0%	0%	\$1.04	\$1.78(0.79)
	100'-124'	245(98)	0%	0%	\$1.12	\$1.88(0.76)
	125' and over	151(63)	0%	0%	\$1.12	\$1.91(0.79)
2005	Under 85'	5	0.02%	0.02%	\$2.27	\$2.27(0.00)
	85'-99'	25	0.20%	0.15%	\$1.67	\$2.20(0.42)
	100'-124'	77	0.48%	0.51%	\$2.27	\$2.29(0.20)
	125' and over	43	0.30%	0.32%	\$2.26	\$2.27(0.06)
2006	Under 85'	2	*	*	*	*
	85'-99'	8	0.08%	0.07%	\$1.33	\$1.36(0.43)
	100'-124'	39	0.41%	0.41%	\$1.38	\$1.38(0.11)
	125' and over	25	0.49%	0.49%	\$1.36	\$1.37(0.15)
2007	Under 85'	2	*	*	*	*
	85'-99'	7	0.09%	0.08%	\$1.99	\$1.92(0.18)
	100'-124'	35	0.44%	0.43%	\$2.02	\$2.02(0.24)
	125' and over	20	0.45%	0.46%	\$2.07	\$2.07(0.26)
2008	Under 85'	1	*	*	*	*
	85'-99'	9	0.09%	0.09%	\$1.99	\$2.37(1.40)
	100'-124'	43	0.51%	0.51%	\$2.02	\$2.07(0.20)
	125' and over	21	0.39%	0.38%	\$1.98	\$2.04(0.29)
2009	Under 85'	2	*	*	*	*
	85'-99'	8	0.09%	0.09%	\$1.63	\$1.68(0.09)
	100'-124'	40	0.46%	0.45%	\$1.66	\$1.68(0.20)
	125' and over	23	0.43%	0.44%	\$1.72	\$1.75(0.35)
2010	Under 85'	2	*	*	*	*
	85'-99'	9	0.08%	0.08%	\$1.46	\$1.50(0.08)
	100'-124'	33	0.43%	0.44%	\$1.48	\$1.49(0.29)
	125' and over	22	0.47%	0.47%	\$1.47	\$1.46(0.13)
2011	Under 85'	1	*	*	*	*
	85'-99'	9	0.08%	0.10%	\$3.49	\$2.97(0.15)
	100'-124'	33	0.44%	0.43%	\$2.80	\$2.86(0.44)
	125' and over	23	0.46%	0.45%	\$2.82	\$2.89(0.31)
2012	Under 85'	2	*	*	*	*
	85'-99'	26	0.32%	0.31%	\$2.33	\$2.39(0.35)
	100'-124'	36	0.54%	0.55%	\$2.44	\$2.50(0.14)
	125' and over	7	0.13%	0.13%	\$2.42	\$2.46(0.15)
2013	Under 85'	2	*	*	*	*
	85'-99'	26	0.30%	0.30%	\$2.54	\$2.60(0.10)
	100'-124'	34	0.57%	0.57%	\$2.51	\$2.57(0.12)
	125' and over	7	0.12%	0.12%	\$2.50	\$2.58(0.09)
2014	Under 85'	2	*	*	*	*
	85'-99'	25	0.28%	0.28%	\$2.58	\$2.61(0.35)
	100'-124'	36	0.60%	0.60%	\$2.53	\$2.71(0.54)
	125' and over	5	0.12%	0.11%	\$2.48	\$2.68(0.22)

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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)
2015	Under 85'	2	*	*	*	*
	85'-99'	25	0.30%	0.30%	\$2.12	\$2.13(0.19)
	100'-124'	35	0.56%	0.57%	\$2.16	\$2.18(0.10)
	125' and over	6	0.12%	0.12%	\$2.14	\$2.16(0.07)
2016	Under 85'	2	*	*	*	*
	85'-99'	23	0.27%	0.27%	\$2.80	\$2.85(0.19)
	100'-124'	34	0.58%	0.58%	\$2.86	\$3.02(1.02)
	125' and over	6	0.14%	0.14%	\$2.84	\$2.90(0.07)
2017	Under 85'	1	*	*	*	*
	85'-99'	20	0.24%	0.24%	\$4.18	\$4.28(1.04)
	100'-124'	34	0.58%	0.58%	\$4.20	\$4.27(0.17)
	125' and over	6	0.18%	0.17%	\$4.16	\$4.30(0.19)
2018	Under 85'	2	*	*	*	*
	85'-99'	21	0.26%	0.26%	\$3.92	\$4.04(0.36)
	100'-124'	31	0.55%	0.55%	\$4.02	\$4.10(0.19)
	125' and over	6	0.16%	0.16%	\$4.00	\$4.06(0.26)

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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)
2005	85'-99'	1	*	*	*	*
	100'-124'	1	*	*	*	*
	125' and over	2	*	*	*	*
2006	Under 85'	2	*	*	*	*
	85'-99'	5	0.12%	0.12%	\$1.84	\$1.74(0.27)
	100'-124'	22	0.70%	0.69%	\$1.87	\$1.75(0.28)
	125' and over	12	0.16%	0.16%	\$1.89	\$1.73(0.31)
2007	Under 85'	2	*	*	*	*
	85'-99'	2	*	*	*	*
	100'-124'	16	0.52%	0.49%	\$2.03	\$2.05(0.33)
	125' and over	7	0.33%	0.34%	\$2.21	\$1.99(0.52)
2008	Under 85'	3	*	*	*	*
	85'-99'	4	*	*	*	*
	100'-124'	17	0.60%	0.60%	\$2.20	\$2.16(0.25)
	125' and over	5	0.13%	0.13%	\$2.15	\$2.24(0.21)
2009	Under 85'	2	*	*	*	*
	85'-99'	1	*	*	*	*
	100'-124'	11	0.77%	0.80%	\$2.31	\$2.29(0.20)
	125' and over	3	*	*	*	*
2010	Under 85'	1	*	*	*	*
	100'-124'	3	*	*	*	*
2013	85'-99'	7	0.37%	0.41%	\$2.96	\$2.94(0.35)
	100'-124'	11	0.56%	0.53%	\$2.50	\$2.51(0.87)
	125' and over	1	*	*	*	*
2014	85'-99'	15	0.38%	0.39%	\$2.61	\$2.69(0.34)
	100'-124'	21	0.52%	0.51%	\$2.52	\$2.57(0.35)
	125' and over	2	*	*	*	*
2015	85'-99'	19	0.34%	0.33%	\$2.67	\$2.75(0.39)
	100'-124'	31	0.60%	0.60%	\$2.74	\$2.84(0.46)
	125' and over	3	*	*	*	*
2016	85'-99'	15	0.44%	0.44%	\$3.09	\$3.12(0.22)
	100'-124'	24	0.47%	0.48%	\$3.21	\$3.10(0.19)
	125' and over	3	*	*	*	*
2017	85'-99'	5	0.25%	0.23%	\$3.78	\$3.97(0.44)
	100'-124'	10	0.70%	0.72%	\$4.24	\$4.30(0.11)
	125' and over	1	*	*	*	*
2018	85'-99'	9	0.27%	0.26%	\$4.03	\$4.08(0.83)
	100'-124'	16	0.51%	0.53%	\$4.28	\$4.25(0.38)
	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)	
PIK	98/01/04	Under 85'	9(9)	0%	0%	\$3.80	\$3.95(1.01)
		85'-99'	12(12)	0%	0%	\$3.54	\$3.50(0.30)
		100'-124'	17(17)	0%	0%	\$3.48	\$3.46(0.42)
		125' and over	7(7)	0%	0%	\$4.04	\$3.75(1.07)
	98/01/04	Under 85'	2(2)	0%	0%	*	*
		85'-99'	17(17)	0%	0%	\$2.78	\$2.80(0.28)
		100'-124'	48(48)	0%	0%	\$2.73	\$2.78(0.22)
		125' and over	28(28)	0%	0%	\$2.79	\$2.81(0.16)
2009		100'-124'	5	0.90%	0.90%	\$3.40	\$3.48(0.26)
		125' and over	2	*	*	*	*
2010		100'-124'	8	0.89%	0.88%	\$5.54	\$5.62(0.32)
		125' and over	2	*	*	*	*
SMB		Under 85'	1	*	*	*	*
	2011	85'-99'	1	*	*	*	*
		100'-124'	9	0.71%	0.69%	\$5.79	\$6.16(0.74)
		125' and over	7	0.24%	0.26%	\$6.26	\$6.57(0.53)
2012	85'-99'	5	0.36%	0.36%	\$4.68	\$4.72(0.20)	
	100'-124'	11	0.59%	0.59%	\$4.66	\$4.69(0.31)	
	125' and over	1	*	*	*	*	
2014		85'-99'	1	*	*	*	*
		100'-124'	3	*	*	*	*
2015		85'-99'	2	*	*	*	*
		100'-124'	1	*	*	*	*
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	CVOA	6	75%	72%	\$2.24	\$2.31(0.16)
	CVOB/CPO/CDQ/ADAK	5	23%	27%	\$2.72	\$2.74(0.58)
	CVC/CPC	3	*	*	*	*
	CVOA	5	81%	81%	\$2.63	\$2.66(0.33)
	CVOB/CPO/CDQ/ADAK	6	17%	16%	\$2.53	\$2.56(0.42)
	CVC/CPC	3	*	*	*	*
	CVOA	4	*	*	*	*
	CVOB/CPO/CDQ/ADAK	4	*	*	*	*
	CVC/CPC	4	*	*	*	*
	CVOA	4	*	*	*	*
	CVOB/CPO/CDQ/ADAK	4	*	*	*	*
	CVC/CPC	4	*	*	*	*
	CVOA	4	*	*	*	*
	CVOB/CPO/CDQ/ADAK	4	*	*	*	*
	CVC/CPC	4	*	*	*	*
	CVOA	4	*	*	*	*
	CVOB/CPO/CDQ/ADAK	4	*	*	*	*
	CVC/CPC	4	*	*	*	*
	CVOA	4	*	*	*	*
	CVOB/CPO/CDQ/ADAK	6	36%	35%	\$4.18	\$4.20(0.30)
	CVC/CPC	4	*	*	*	*
	CVOA	4	*	*	*	*
	CVOB/CPO/CDQ/ADAK	6	41%	39%	\$4.17	\$4.26(0.34)
	CVC/CPC	5	3%	3%	\$4.35	\$4.34(0.51)
	CVOA	5	69%	69%	\$4.33	\$4.34(0.36)
	CVOB/CPO/CDQ/ADAK	5	29%	28%	\$4.26	\$4.44(0.28)
	CVC/CPC	5	2%	2%	\$4.62	\$4.58(0.23)
CVOA	5	60%	61%	\$4.64	\$4.77(0.49)	
CVOB/CPO/CDQ/ADAK	5	36%	35%	\$4.42	\$4.57(0.64)	
CVC/CPC	5	3%	4%	\$4.67	\$4.81(0.72)	
CVOA	4	*	*	*	*	
CVOB/CPO/CDQ/ADAK	5	38%	40%	\$5.93	\$6.12(0.69)	
CVC/CPC	4	*	*	*	*	
CVOA	5	58%	58%	\$5.73	\$5.90(0.56)	
CVOB/CPO/CDQ/ADAK	5	38%	38%	\$5.60	\$5.55(0.80)	
CVC/CPC	5	4%	4%	\$5.66	\$5.73(1.18)	
CVOA	5	62%	60%	\$6.01	\$5.98(0.12)	
CVOB/CPO/CDQ/ADAK	5	36%	37%	\$6.38	\$6.50(0.72)	
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	CVOA	77	77%	77%	\$4.67	\$4.67(0.20)
	CVOB/CPO/CDQ/ADAK	65	19%	19%	\$4.75	\$4.74(0.22)
	CVC/CPC	49	4%	3%	\$4.64	\$4.73(0.26)
	CVOA	69	78%	78%	\$5.29	\$5.31(0.31)
	CVOB/CPO/CDQ/ADAK	53	19%	19%	\$5.29	\$5.35(0.90)
	CVC/CPC	41	3%	3%	\$5.18	\$5.52(0.63)
	CVOA	73	76%	76%	\$6.09	\$6.01(0.46)
	CVOB/CPO/CDQ/ADAK	56	22%	22%	\$6.02	\$6.00(0.20)
	CVC/CPC	38	2%	2%	\$6.06	\$6.06(0.18)
	CVOA	68	77%	77%	\$5.39	\$5.39(0.11)
	CVOB/CPO/CDQ/ADAK	53	20%	20%	\$5.46	\$5.49(0.22)
	CVC/CPC	39	3%	3%	\$5.48	\$5.51(0.23)
	CVOA	63	76%	76%	\$8.39	\$8.36(0.54)
	CVOB/CPO/CDQ/ADAK	52	20%	21%	\$8.79	\$8.62(0.92)
	CVC/CPC	33	4%	4%	\$8.35	\$8.72(0.67)
	CVOA	58	79%	78%	\$11.59	\$10.12(0.92)
	CVOB/CPO/CDQ/ADAK	48	19%	20%	\$12.17	\$9.65(2.42)
	CVC/CPC	34	2%	2%	\$11.13	\$8.82(3.01)
	CVOA	61	77%	76%	\$8.75	\$8.74(0.44)
	CVOB/CPO/CDQ/ADAK	47	21%	21%	\$9.04	\$8.99(0.38)
	CVC/CPC	33	3%	3%	\$9.07	\$9.02(0.45)
	CVOA	58	76%	76%	\$7.67	\$7.65(0.34)
	CVOB/CPO/CDQ/ADAK	51	21%	22%	\$8.00	\$7.96(0.43)
	CVC/CPC	30	2%	3%	\$7.97	\$8.01(0.38)
CVOA	59	75%	75%	\$7.13	\$7.14(0.35)	
CVOB/CPO/CDQ/ADAK	48	23%	22%	\$6.82	\$7.15(0.72)	
CVC/CPC	32	3%	3%	\$7.16	\$7.20(0.88)	
CVOA	60	76%	75%	\$8.34	\$8.32(0.39)	
CVOB/CPO/CDQ/ADAK	47	21%	22%	\$8.69	\$8.66(0.30)	
CVC/CPC	33	3%	3%	\$8.78	\$8.76(0.22)	
CVOA	59	72%	75%	\$11.28	\$11.27(0.15)	
CVOB/CPO/CDQ/ADAK	46	20%	21%	\$11.50	\$11.59(0.21)	
CVC/CPC	29	9%	4%	\$5.64	\$10.90(2.87)	
CVOA	59	77%	77%	\$9.37	\$9.35(0.18)	
CVOB/CPO/CDQ/ADAK	50	21%	21%	\$9.48	\$9.50(0.20)	
CVC/CPC	33	2%	2%	\$9.53	\$9.54(0.18)	
CVOA	52	77%	76%	\$10.32	\$10.28(0.32)	
CVOB/CPO/CDQ/ADAK	40	20%	21%	\$10.62	\$10.66(0.58)	
CVC/CPC	34	3%	3%	\$10.50	\$10.66(1.26)	

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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	CVOA	73	80%	79%	\$1.36	\$1.36(0.13)
	CVOB/CPO/CDQ/ADAK	63	18%	18%	\$1.37	\$1.38(0.26)
	CVC/CPC	52	3%	3%	\$1.40	\$1.39(0.10)
	CVOA	62	80%	80%	\$2.04	\$2.04(0.16)
	CVOB/CPO/CDQ/ADAK	53	17%	18%	\$2.08	\$2.03(0.28)
	CVC/CPC	41	3%	3%	\$1.98	\$2.02(0.29)
	CVOA	73	75%	75%	\$2.01	\$1.98(0.23)
	CVOB/CPO/CDQ/ADAK	62	22%	22%	\$1.96	\$2.20(0.83)
	CVC/CPC	42	3%	3%	\$2.17	\$2.15(0.05)
	CVOA	73	78%	78%	\$1.68	\$1.66(0.17)
	CVOB/CPO/CDQ/ADAK	59	19%	19%	\$1.68	\$1.69(0.23)
	CVC/CPC	40	2%	3%	\$1.83	\$1.80(0.36)
	CVOA	66	73%	73%	\$1.48	\$1.49(0.23)
	CVOB/CPO/CDQ/ADAK	53	24%	24%	\$1.48	\$1.47(0.19)
	CVC/CPC	38	3%	3%	\$1.37	\$1.49(0.25)
	CVOA	63	75%	74%	\$2.84	\$2.76(0.28)
	CVOB/CPO/CDQ/ADAK	60	23%	23%	\$2.95	\$2.98(0.40)
	CVC/CPC	37	2%	2%	\$2.90	\$2.96(0.38)
	CVOA	68	76%	75%	\$2.36	\$2.37(0.11)
	CVOB/CPO/CDQ/ADAK	64	21%	22%	\$2.52	\$2.46(0.34)
	CVC/CPC	41	3%	4%	\$2.59	\$2.56(0.19)
	CVOA	68	74%	73%	\$2.49	\$2.50(0.07)
	CVOB/CPO/CDQ/ADAK	58	23%	24%	\$2.61	\$2.64(0.11)
	CVC/CPC	38	3%	3%	\$2.66	\$2.66(0.07)
CVOA	67	74%	73%	\$2.52	\$2.54(0.25)	
CVOB/CPO/CDQ/ADAK	56	23%	24%	\$2.56	\$2.79(0.65)	
CVC/CPC	40	3%	3%	\$2.72	\$2.73(0.29)	
CVOA	68	74%	74%	\$2.13	\$2.10(0.16)	
CVOB/CPO/CDQ/ADAK	58	23%	24%	\$2.20	\$2.20(0.10)	
CVC/CPC	32	2%	3%	\$2.23	\$2.21(0.09)	
CVOA	65	73%	72%	\$2.80	\$2.79(0.13)	
CVOB/CPO/CDQ/ADAK	57	24%	25%	\$2.93	\$2.93(0.12)	
CVC/CPC	33	3%	3%	\$3.14	\$3.25(1.55)	
CVOA	60	74%	74%	\$4.19	\$4.25(0.70)	
CVOB/CPO/CDQ/ADAK	49	24%	24%	\$4.19	\$4.29(0.53)	
CVC/CPC	31	3%	3%	\$4.14	\$4.29(0.69)	
CVOA	58	74%	74%	\$3.95	\$3.93(0.23)	
CVOB/CPO/CDQ/ADAK	49	23%	24%	\$4.12	\$4.17(0.22)	
CVC/CPC	31	2%	3%	\$4.23	\$4.21(0.27)	

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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)
2006	CVOA	39	75%	74%	\$1.86	\$1.77(0.52)
	CVOB/CPO/CDQ/ADAK	14	23%	24%	\$1.97	\$1.86(0.17)
	CVC/CPC	12	2%	2%	\$1.77	\$1.80(0.31)
2007	CVOA	28	87%	87%	\$2.16	\$2.23(0.83)
	CVOB/CPO/CDQ/ADAK	14	12%	12%	\$2.18	\$2.13(0.35)
	CVC/CPC	9	1%	1%	\$2.03	\$1.88(0.63)
2008	CVOA	26	73%	72%	\$2.17	\$2.15(0.28)
	CVOB/CPO/CDQ/ADAK	12	26%	27%	\$2.28	\$2.17(0.31)
	CVC/CPC	5	2%	2%	\$2.26	\$2.26(0.07)
2009	CVOA	17	75%	74%	\$2.23	\$2.20(0.19)
	CVOB/CPO/CDQ/ADAK	9	22%	23%	\$2.34	\$2.31(0.22)
	CVC/CPC	9	3%	3%	\$2.15	\$2.19(0.18)
2010	CVOA	4	*	*	*	*
	CVOB/CPO/CDQ/ADAK	2	*	*	*	*
	CVC/CPC	2	*	*	*	*
2013	CVOA	17	76%	76%	\$2.70	\$2.53(0.75)
	CVOB/CPO/CDQ/ADAK	15	21%	20%	\$2.56	\$2.78(0.69)
	CVC/CPC	11	3%	4%	\$2.93	\$2.77(0.80)
2014	CVOA	36	76%	76%	\$2.53	\$2.55(0.23)
	CVOB/CPO/CDQ/ADAK	28	21%	22%	\$2.57	\$2.64(0.39)
	CVC/CPC	23	3%	3%	\$2.71	\$2.66(0.44)
2015	CVOA	52	75%	75%	\$2.72	\$2.79(0.35)
	CVOB/CPO/CDQ/ADAK	38	21%	21%	\$2.71	\$2.74(0.54)
	CVC/CPC	25	3%	3%	\$2.91	\$2.96(0.35)
2016	CVOA	42	74%	71%	\$3.02	\$3.02(0.19)
	CVOB/CPO/CDQ/ADAK	36	21%	21%	\$3.14	\$3.14(0.22)
	CVC/CPC	24	4%	7%	\$5.35	\$3.23(0.11)
2017	CVOA	16	74%	74%	\$4.07	\$4.08(0.29)
	CVOB/CPO/CDQ/ADAK	14	24%	24%	\$4.27	\$4.24(0.28)
	CVC/CPC	13	2%	2%	\$4.32	\$4.28(0.30)
2018	CVOA	28	72%	72%	\$4.16	\$4.16(0.33)
	CVOB/CPO/CDQ/ADAK	25	24%	24%	\$4.21	\$4.16(0.76)
	CVC/CPC	19	4%	4%	\$3.73	\$4.21(0.56)

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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	CVOA	7	95%	95%	\$3.37	\$3.34(0.22)
	2009 CVOB/CPO/CDQ/ADAK	1	*	*	*	*
	CVC/CPC	1	*	*	*	*
	CVOA	10	79%	78%	\$5.52	\$5.56(0.38)
	2010 CVOB/CPO/CDQ/ADAK	8	19%	20%	\$5.74	\$5.73(0.19)
	CVC/CPC	5	2%	2%	\$5.62	\$5.71(0.24)
	CVOA	18	79%	78%	\$5.78	\$5.91(0.44)
	2011 CVOB/CPO/CDQ/ADAK	15	17%	19%	\$6.46	\$6.50(0.54)
	CVC/CPC	9	4%	4%	\$6.20	\$6.82(0.81)
	CVOA	17	77%	77%	\$4.64	\$4.62(0.21)
	2012 CVOB/CPO/CDQ/ADAK	14	21%	21%	\$4.71	\$4.71(0.33)
	CVC/CPC	12	2%	2%	\$4.68	\$4.71(0.30)
	CVOA	4	*	*	*	*
	2014 CVOB/CPO/CDQ/ADAK	4	*	*	*	*
	CVC/CPC	1	*	*	*	*
	CVOA	3	*	*	*	*
	2015 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	\$19.91	\$6.12	\$6.09(0.26)
	1999	8	3.03	\$29.23	\$9.64	\$9.38(2.27)
	2000	6	3.57	\$27.36	\$7.66	\$8.56(2.93)
	2001	5	3.95	\$38.58	\$9.77	\$9.72(0.24)
	2002	5	3.44	\$34.57	\$10.06	\$9.85(1.02)
	2003	5	3.61	\$37.22	\$10.31	\$10.41(0.45)
	2004	5	3.73	\$28.44	\$7.62	\$8.22(1.43)
	2005	6	2.75	\$20.26	\$7.36	\$7.26(0.46)
	2006	6	3.13	\$16.76	\$5.35	\$5.06(0.45)
	2007	6	3.42	\$21.62	\$6.32	\$6.26(0.62)
	2008	7	3.41	\$29.85	\$8.75	\$8.49(0.72)
	2009	8	3.30	\$21.68	\$6.58	\$7.05(2.04)
	2010	8	3.17	\$27.92	\$8.82	\$9.33(1.58)
	2011	14	3.64	\$39.38	\$10.80	\$11.12(2.55)
	2012	13	3.76	\$31.72	\$8.44	\$9.29(2.74)
	2013	12	3.77	\$34.08	\$9.03	\$8.18(3.03)
	2014	10	3.85	\$32.68	\$8.48	\$7.69(3.31)
	2015	8	3.68	\$38.13	\$10.36	\$9.25(3.60)
	2016	10	3.56	\$47.26	\$13.29	\$12.50(4.08)
2017	12	3.53	\$40.11	\$11.36	\$10.78(3.52)	
2018	9	4.13	\$50.20	\$12.15	\$11.68(3.74)	
BBR	1998	22	9.79	\$79.02	\$8.07	\$7.90(1.27)
	1999	21	7.68	\$124.74	\$16.24	\$16.18(1.94)
	2000	20	5.38	\$53.38	\$9.93	\$12.14(2.25)
	2001	20	5.53	\$66.90	\$12.11	\$12.70(1.64)
	2002	20	6.32	\$98.15	\$15.54	\$15.55(2.05)
	2003	25	10.25	\$133.34	\$13.01	\$12.79(1.29)
	2004	23	10.01	\$119.54	\$11.95	\$12.11(0.68)
	2005	16	12.08	\$128.79	\$10.66	\$10.83(0.94)
	2006	15	9.17	\$83.43	\$9.10	\$8.78(1.09)
	2007	17	13.09	\$129.32	\$9.88	\$9.79(0.83)
	2008	16	13.31	\$150.09	\$11.28	\$10.71(2.90)
	2009	15	10.40	\$109.73	\$10.55	\$10.15(1.30)
	2010	16	10.03	\$149.33	\$14.89	\$14.85(1.91)
	2011	18	5.30	\$112.70	\$21.25	\$19.75(3.98)
	2012	16	5.27	\$84.13	\$15.96	\$16.17(4.70)
	2013	17	5.75	\$81.91	\$14.24	\$14.06(4.20)
	2014	17	6.66	\$84.88	\$12.74	\$12.26(4.24)
	2015	15	6.60	\$99.81	\$15.12	\$14.90(3.44)
	2016	17	5.68	\$108.06	\$19.04	\$18.69(4.76)
2017	17	4.42	\$73.54	\$16.63	\$16.12(3.73)	
2018	14	2.86	\$51.15	\$17.91	\$17.29(4.69)	

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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	\$487.12	\$2.97	\$2.89(0.41)
	1999	31	126.92	\$530.20	\$4.18	\$4.01(0.82)
	2000	24	21.64	\$106.64	\$4.93	\$5.64(1.36)
	2001	21	16.34	\$83.94	\$5.14	\$5.07(0.39)
	2002	21	21.06	\$101.61	\$4.82	\$4.91(0.60)
	2003	19	18.15	\$106.39	\$5.86	\$5.85(0.31)
	2004	21	15.62	\$97.11	\$6.22	\$6.15(0.38)
	2005	20	16.40	\$79.48	\$4.85	\$4.61(0.63)
	2006	13	24.92	\$84.14	\$3.38	\$3.36(0.23)
	2007	18	22.66	\$106.57	\$4.70	\$4.83(0.41)
	2008	16	41.02	\$185.14	\$4.51	\$4.40(1.25)
	2009	16	35.97	\$143.97	\$4.00	\$4.00(0.19)
	2010	12	31.41	\$118.25	\$3.76	\$3.85(0.34)
	2011	16	37.89	\$234.53	\$6.19	\$6.38(0.83)
	2012	15	57.79	\$297.51	\$5.15	\$4.87(1.68)
	2013	15	46.31	\$244.45	\$5.28	\$5.07(1.51)
	2014	13	36.17	\$193.16	\$5.34	\$5.06(1.62)
	2015	14	39.90	\$182.20	\$4.57	\$4.38(1.45)
	2016	12	25.92	\$160.41	\$6.19	\$5.89(1.88)
2017	14	13.97	\$102.20	\$7.32	\$7.90(0.99)	
2018	12	12.34	\$87.75	\$7.11	\$7.73(1.06)	
BST	2005	4	0.18	\$0.89	\$4.96	\$4.49(0.69)
	2006	9	0.72	\$3.05	\$4.24	\$4.11(0.35)
	2007	9	1.46	\$7.58	\$5.19	\$5.17(0.35)
	2008	10	1.34	\$6.79	\$5.09	\$5.10(0.26)
	2009	10	1.39	\$6.07	\$4.37	\$4.36(0.80)
	2010	7	*	*	*	*
	2013	12	0.86	\$5.87	\$6.86	\$7.31(1.48)
	2014	12	6.23	\$38.45	\$6.18	\$5.67(2.24)
	2015	13	10.26	\$57.61	\$5.62	\$5.03(1.65)
	2016	12	7.15	\$47.03	\$6.58	\$6.20(2.07)
2017	11	0.96	\$8.20	\$8.51	\$8.33(0.88)	
2018	12	1.57	\$12.27	\$7.83	\$8.32(1.38)	

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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	\$5.42	\$8.13	\$7.99(0.96)
	1998	13	1.77	\$12.41	\$7.03	\$7.12(0.28)
	2009	6	*	*	*	*
	2010	8	0.91	\$12.65	\$13.83	\$11.98(3.35)
SMB	2011	11	1.33	\$21.19	\$15.91	\$15.45(3.07)
	2012	10	1.18	\$15.28	\$13.00	\$12.06(4.71)
	2014	6	*	*	*	*
	2015	4	0.08	\$0.87	\$11.23	\$11.32(1.74)
	1998	1	*	*	*	*
WAI	2002	9	0.34	\$5.28	\$15.47	\$15.10(3.00)
	2003	9	0.32	\$4.20	\$13.02	\$12.78(0.52)

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.

^aExcludes 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	\$74.48	\$8.07	\$7.90(1.96)
	1999	31	7.05	\$114.40	\$16.23	\$14.91(4.05)
	2000	22	6.58	\$65.29	\$9.93	\$11.86(3.71)
	2001	30	6.35	\$76.88	\$12.11	\$11.25(3.90)
	2002	32	6.93	\$106.25	\$15.34	\$13.80(5.47)
	2003	38	10.50	\$135.87	\$12.94	\$11.73(4.17)
	2004	26	9.73	\$116.59	\$11.98	\$11.10(2.68)
	2005	23	12.50	\$132.57	\$10.60	\$10.32(4.18)
	2006	16	10.40	\$94.69	\$9.10	\$8.19(3.35)
	2007	19	13.32	\$135.38	\$10.16	\$8.84(2.73)
	2008	17	13.18	\$149.70	\$11.36	\$9.98(2.89)
	2009	18	10.96	\$109.68	\$10.01	\$8.83(3.05)
	2010	18	9.27	\$144.56	\$15.59	\$13.60(4.67)
	2011	25	6.03	\$119.47	\$19.82	\$18.66(6.93)
	2012	19	5.25	\$86.21	\$16.42	\$14.70(4.52)
	2013	22	6.50	\$88.76	\$13.65	\$13.80(3.33)
	2014	21	7.36	\$91.59	\$12.45	\$12.36(3.19)
	2015	19	7.26	\$103.55	\$14.27	\$14.10(3.05)
	2016	18	5.59	\$107.27	\$19.20	\$16.86(5.40)
2017	23	5.05	\$77.04	\$15.26	\$14.78(4.94)	
2018	16	3.25	\$55.09	\$16.95	\$16.66(4.95)	
Snow (opilio)	1998	34	157.20	\$466.58	\$2.97	\$2.73(0.84)
	1999	31	116.91	\$488.55	\$4.18	\$3.46(1.29)
	2000	23	22.78	\$112.37	\$4.93	\$5.05(1.95)
	2001	20	15.15	\$77.72	\$5.13	\$4.60(1.54)
	2002	25	20.84	\$99.91	\$4.79	\$4.30(1.27)
	2003	19	17.38	\$101.91	\$5.86	\$5.93(2.62)
	2004	22	15.30	\$95.12	\$6.22	\$5.82(1.35)
	2005	20	16.29	\$78.94	\$4.85	\$4.47(1.03)
	2006	13	27.89	\$98.41	\$3.53	\$3.48(0.92)
	2007	16	20.38	\$95.30	\$4.68	\$4.75(1.13)
	2008	16	31.35	\$148.28	\$4.73	\$4.50(1.05)
	2009	16	35.89	\$142.49	\$3.97	\$3.84(0.52)
	2010	12	29.91	\$112.15	\$3.75	\$3.73(1.16)
	2011	16	35.58	\$213.93	\$6.01	\$5.72(1.48)
	2012	15	59.05	\$307.25	\$5.20	\$4.93(1.22)
	2013	16	47.53	\$255.93	\$5.38	\$5.37(2.79)
	2014	14	37.28	\$207.20	\$5.56	\$6.40(5.57)
	2015	14	40.18	\$184.37	\$4.59	\$4.52(1.24)
	2016	12	29.02	\$161.18	\$5.55	\$5.29(3.04)
2017	14	17.37	\$113.82	\$6.55	\$6.96(3.51)	
2018	12	14.20	\$87.30	\$6.15	\$6.84(2.58)	

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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	\$10.79	\$6.53	\$6.32(3.26)
	1999	11	1.48	\$8.42	\$5.71	\$6.23(2.75)
	2000	10	1.00	\$8.22	\$8.19	\$7.40(1.80)
	2001	17	1.27	\$8.79	\$6.94	\$6.37(1.56)
	2002	12	0.74	\$5.26	\$7.10	\$6.04(1.99)
	2003	13	0.81	\$6.60	\$8.19	\$7.15(2.68)
	2004	12	0.94	\$8.06	\$8.58	\$8.19(1.65)
	2005	19	2.22	\$12.02	\$5.41	\$6.27(3.42)
	2006	21	2.94	\$14.11	\$4.80	\$4.57(1.46)
	2007	18	2.49	\$13.12	\$5.26	\$5.98(3.54)
	2008	22	2.44	\$13.49	\$5.54	\$5.44(1.95)
	2009	17	2.25	\$10.05	\$4.47	\$4.94(2.15)
	2010	17	1.90	\$8.41	\$4.41	\$4.74(1.16)
	2011	15	3.88	\$28.72	\$7.40	\$7.61(1.72)
	2012	15	3.08	\$21.06	\$6.84	\$7.51(2.89)
	2013	20	1.89	\$12.68	\$6.70	\$7.46(2.78)
	2014	17	6.86	\$41.02	\$5.98	\$7.14(3.25)
	2015	19	11.63	\$57.07	\$4.91	\$5.94(3.21)
	2016	20	8.66	\$51.27	\$5.92	\$6.71(3.03)
2017	15	1.74	\$15.89	\$9.14	\$9.09(4.27)	
2018	23	2.92	\$21.41	\$7.33	\$8.26(3.25)	
Golden (brown) king	1998	13	2.92	\$18.24	\$6.25	\$8.03(2.05)
	1999	16	3.44	\$32.82	\$9.53	\$8.94(3.70)
	2000	16	4.92	\$39.55	\$8.04	\$9.56(3.32)
	2001	16	4.30	\$40.84	\$9.50	\$8.88(3.29)
	2002	16	3.82	\$38.38	\$10.06	\$11.17(4.35)
	2003	16	3.93	\$40.85	\$10.41	\$11.14(3.75)
	2004	13	4.65	\$36.39	\$7.82	\$9.56(3.41)
	2005	13	2.85	\$21.46	\$7.52	\$8.56(4.15)
	2006	14	3.65	\$20.71	\$5.68	\$7.53(4.00)
	2007	11	3.75	\$25.24	\$6.73	\$7.95(3.37)
	2008	13	3.89	\$31.28	\$8.04	\$8.54(2.95)
	2009	15	4.09	\$25.90	\$6.33	\$7.55(3.61)
	2010	17	5.13	\$44.75	\$8.73	\$9.05(3.10)
	2011	20	4.16	\$51.38	\$12.35	\$12.55(4.72)
	2012	21	3.95	\$38.57	\$9.77	\$12.28(5.43)
	2013	19	4.20	\$39.49	\$9.41	\$11.26(5.19)
	2014	16	4.50	\$39.49	\$8.78	\$12.06(4.77)
	2015	12	3.36	\$36.11	\$10.75	\$12.11(2.84)
	2016	15	3.38	\$45.01	\$13.32	\$14.88(5.25)
2017	17	3.45	\$41.61	\$12.06	\$13.44(3.79)	
2018	13	3.23	\$36.65	\$11.35	\$14.10(13.57)	

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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	\$14.63	\$7.03	\$7.02(0.93)
	1999	4	0.01	\$0.07	\$13.01	\$10.50
	2000	2	*	*	*	*
	2001	1	*	*	*	*
	2002	1	*	*	*	*
	2003	1	*	*	*	*
Blue king	2005	1	*	*	*	*
	2009	4	0.19	\$1.44	\$7.54	\$6.73
	2010	7	0.67	\$8.96	\$13.44	\$11.88(3.41)
	2011	12	1.25	\$19.13	\$15.37	\$14.28(5.50)
	2012	11	1.12	\$15.32	\$13.73	\$11.79(3.31)
	2014	6	0.22	\$2.17	\$9.91	\$9.49(3.15)
	2015	5	0.08	\$0.71	\$8.81	\$9.21(4.44)

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	131.95	10.26	10.33(0.95)
	Whole crab	10	0.36	3.09	8.58	8.77(2.07)	
	Other	8	0.10	0.35	3.55	3.61(1.29)	
	2008	Sections	17	12.58	143.85	11.44	11.31(1.31)
	Whole crab	8	0.44	5.09	11.49	10.00(2.56)	
	Other	7	0.16	0.76	4.83	4.61(1.58)	
	2009	Sections	17	10.34	107.59	10.41	10.20(2.18)
	Whole crab	11	0.51	1.62	3.18	8.54(2.61)	
	Other	8	0.12	0.47	4.05	4.28(1.82)	
	2010	Sections	17	8.91	140.83	15.80	16.12(2.96)
	Whole crab	11	0.22	3.07	14.02	13.22(3.52)	
	Other	8	0.14	0.66	4.72	6.42(2.87)	
	2011	Sections	23	5.72	114.67	20.03	21.61(3.56)
	Whole crab	15	0.23	4.28	18.94	17.15(4.58)	
	Other	11	0.08	0.53	6.65	12.57(11.57)	
	2012	Sections	18	4.93	81.48	16.54	17.11(2.79)
	Whole crab	10	0.29	4.50	15.26	13.50(3.61)	
	Other	6	0.03	0.22	7.54	7.21(2.57)	
	2013	Sections	19	6.15	84.25	13.69	15.12(2.56)
	Whole crab	13	0.31	4.06	13.08	12.56(3.68)	
	Other	7	0.04	0.44	10.91	11.17(3.02)	
	2014	Sections	19	6.95	86.52	12.45	13.14(2.85)
	Whole crab	13	0.35	4.62	13.02	12.53(2.39)	
	Other	7	0.05	0.44	8.74	9.49(4.30)	
	2015	Sections	17	6.87	98.28	14.31	14.53(3.20)
	Whole crab	10	0.30	4.24	14.06	14.72(2.70)	
	Other	8	0.09	1.03	11.90	11.93(2.24)	
	2016	Sections	18	5.36	104.48	19.48	19.13(3.10)
Whole crab	6	0.14	1.78	12.92	18.38(4.03)		
Other	8	0.08	1.01	11.87	10.12(5.44)		
2017	Sections	21	4.74	72.65	15.34	15.76(4.55)	
Whole crab	11	0.26	3.68	14.02	13.58(3.58)		
Other	11	0.05	0.71	13.98	13.70(6.66)		
2018	Sections	16	3.08	52.44	17.01	17.10(5.63)	
Whole crab	5	0.13	2.15	16.06	17.58(4.05)		
Other	6	0.03	0.50	14.74	14.29(1.56)		

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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)
2007	Sections	16	20.19	94.73	4.69	4.79(0.23)
	Whole crab	1	*	*	*	*
	Other	2	*	*	*	*
2008	Sections	16	29.60	140.41	4.74	4.82(0.31)
	Whole crab	1	*	*	*	*
	Other	3	*	*	*	*
2009	Sections	16	35.60	141.82	3.98	3.99(0.20)
	Other	1	*	*	*	*
2010	Sections	12	29.80	111.79	3.75	3.83(1.17)
	Whole crab	1	*	*	*	*
	Other	1	*	*	*	*
2011	Sections	16	35.30	212.46	6.02	5.69(1.53)
	Whole crab	1	*	*	*	*
	Other	1	*	*	*	*
Snow (opilio)	Sections	15	58.86	306.97	5.22	5.06(0.96)
	Whole crab	2	*	*	*	*
	Other	1	*	*	*	*
2013	Sections	16	47.50	255.92	5.39	5.17(1.77)
	Whole crab	1	*	*	*	*
	Other	1	*	*	*	*
2014	Sections	14	36.98	205.86	5.57	6.26(5.65)
	Whole crab	2	*	*	*	*
	Other	1	*	*	*	*
2015	Sections	14	39.83	182.97	4.59	4.47(1.21)
	Whole crab	1	*	*	*	*
	Other	1	*	*	*	*
2016	Sections	12	28.65	160.04	5.59	5.44(1.33)
	Whole crab	1	*	*	*	*
	Other	3	*	*	*	*
2017	Sections	14	17.22	113.55	6.60	7.61(3.12)
	Other	3	*	*	*	*
2018	Sections	12	14.20	87.30	6.15	6.66(2.74)
	Whole crab	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)
2007	Sections	18	2.46	12.99	5.29	5.72(1.07)
	Whole crab	4	0.01	0.02	3.83	7.32
	Other	1	*	*	*	*
2008	Sections	22	2.39	13.30	5.57	5.74(1.30)
	Whole crab	4	0.00	0.01	3.78	3.17
	Other	4	0.04	0.18	4.07	5.99
2009	Sections	16	2.20	9.94	4.52	4.99(1.41)
	Whole crab	3	*	*	*	*
	Other	4	0.02	0.08	3.17	6.17
2010	Sections	16	1.45	6.93	4.79	5.06(0.92)
	Whole crab	6	0.44	1.41	3.20	3.79(1.49)
	Other	1	*	*	*	*
2011	Sections	14	3.49	25.52	7.32	7.74(1.26)
	Whole crab	5	0.30	2.57	8.52	6.20(2.25)
	Other	4	0.10	0.63	6.61	8.65
Tanner (bairdi) 2012	Sections	13	2.73	18.01	6.60	7.22(1.48)
	Whole crab	6	0.35	3.05	8.64	6.73(2.24)
	Other	1	*	*	*	*
2013	Sections	19	1.60	10.39	6.49	6.76(1.14)
	Whole crab	4	0.29	2.23	7.75	7.05
	Other	4	0.00	0.07	14.21	11.94
2014	Sections	15	6.78	40.32	5.95	6.57(1.63)
	Whole crab	4	0.08	0.63	7.69	6.33
	Other	2	*	*	*	*
2015	Sections	17	10.73	54.74	5.10	5.46(1.37)
	Whole crab	6	0.84	2.01	2.39	4.77(2.44)
	Other	5	0.06	0.32	5.51	10.27(7.16)
2016	Sections	18	8.38	49.47	5.90	6.46(1.73)
	Whole crab	6	0.17	1.28	7.40	6.03(1.84)
	Other	5	0.10	0.51	5.00	9.27(7.48)
2017	Sections	15	1.73	15.80	9.12	8.23(2.67)
	Whole crab	1	*	*	*	*
	Other	3	*	*	*	*
2018	Sections	22	2.91	21.29	7.32	7.95(2.49)
	Whole crab	5	0.00	0.02	6.52	6.90(2.69)
	Other	4	0.01	0.11	13.63	13.15

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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)
2007	Sections	7	2.96	19.58	6.62	7.50(2.48)
	Whole crab	6	0.46	3.48	7.61	7.64(1.22)
	Other	4	0.34	2.18	6.45	9.29
2008	Sections	8	2.96	24.06	8.12	9.19(2.05)
	Whole crab	8	0.51	3.95	7.70	7.29(1.28)
	Other	4	0.42	3.27	7.82	9.38
2009	Sections	10	3.31	20.61	6.23	7.88(3.07)
	Whole crab	8	0.78	5.22	6.71	6.42(1.66)
	Other	3	*	*	*	*
2010	Sections	11	4.04	37.44	9.27	10.36(1.46)
	Whole crab	12	1.08	7.23	6.67	7.63(1.56)
	Other	3	*	*	*	*
2011	Sections	14	3.40	42.87	12.62	13.41(4.79)
	Whole crab	10	0.76	8.45	11.10	10.92(1.28)
	Other	3	*	*	*	*
Golden (brown) king	Sections	15	3.32	31.13	9.38	12.33(5.17)
	Whole crab	11	0.62	7.38	11.85	11.65(2.99)
	Other	4	0.01	0.06	10.12	13.75
2013	Sections	14	3.51	32.84	9.37	11.15(5.13)
	Whole crab	10	0.69	6.61	9.63	11.23(3.81)
	Other	6	0.01	0.04	8.48	11.54(7.62)
2014	Sections	12	4.33	36.84	8.50	9.80(3.96)
	Whole crab	8	0.16	2.63	16.18	14.67(3.77)
	Other	2	*	*	*	*
2015	Sections	6	2.94	31.33	10.65	11.02(1.04)
	Whole crab	7	0.41	4.72	11.47	13.81(3.22)
	Other	2	*	*	*	*
2016	Sections	12	3.31	43.90	13.28	15.10(5.05)
	Whole crab	6	0.07	1.05	15.75	16.60(3.08)
	Other	2	*	*	*	*
2017	Sections	13	3.31	39.78	12.01	12.16(3.51)
	Whole crab	6	0.13	1.77	13.37	15.85(2.74)
	Other	2	*	*	*	*
2018	Sections	9	2.98	34.62	11.61	10.10(5.54)
	Whole crab	5	0.25	1.98	8.07	20.73(23.34)
	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	Sections	4	0.19	1.42	7.66	7.86
	2009 Whole crab	1	*	*	*	*
	Other	1	*	*	*	*
	Sections	7	0.65	8.84	13.63	13.00(2.59)
	2010 Whole crab	1	*	*	*	*
	Other	1	*	*	*	*
	Sections	12	1.22	18.96	15.50	15.21(5.75)
	2011 Whole crab	2	*	*	*	*
	Other	2	*	*	*	*
	Sections	10	1.10	15.12	13.78	12.29(3.76)
	2012 Whole crab	2	*	*	*	*
	Other	2	*	*	*	*
	Sections	6	0.21	2.11	9.97	10.33(2.95)
	2014 Whole crab	1	*	*	*	*
	Other	2	*	*	*	*
	Sections	5	0.07	0.67	9.30	10.03(2.57)
	2015 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

	Year	Processors	Processing labor hours			Labor Payments (\$1,000)		Processing wages, median (\$)	
			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	\$15,715	\$656	\$11.27	\$160.82
	2013	14	956	53.70	12.75	\$10,738	\$604	\$10.97	\$135.12
	2014	11	905	103.11	11.06	\$10,187	\$645	\$10.67	\$129.87
	2015	11	1,179	112.90	15.88	\$14,093	\$1,133	\$11.13	\$171.40
	2016	10	788	95.46	14.17	\$10,248	\$753	\$12.66	\$195.67
	2017	11	426	31.95	13.41	\$5,271	\$313	\$12.19	\$161.49
	2018	10	382	29.90	11.01	\$4,688	\$186	\$11.85	\$145.23
CP	98/01/04	4(2)	-	-	-	*	*	-	*
	2005	2	-	-	-	*	*	-	*
	2006	1	-	-	-	*	*	-	*
	2007	1	-	-	-	*	*	-	*
	2008	1	-	-	-	*	*	-	*
AIG	98/01/04	13(7)	93	14.59	19.74	\$1,284	\$169	\$12.60	\$289.98
	2005	4	*	*	*	*	*	*	*
	2006	6	92	9.96	13.12	\$1,035	\$120	\$11.58	\$195.37
	2007	5	94	13.19	17.86	\$1,038	\$142	\$10.61	\$177.07
	2008	6	69	2.83	8.55	\$1,113	\$161	\$12.87	\$179.54
SF & CP	2009	5	86	15.69	15.89	\$1,381	\$149	\$10.39	\$160.05
	2010	4	*	*	*	*	*	*	*
	2011	7	98	4.79	16.97	\$2,470	\$84	\$11.13	\$193.21
	2012	8	53	2.60	6.89	\$1,202	\$64	\$11.07	\$80.88
	2013	6	61	5.96	9.19	\$658	\$66	\$10.76	\$113.74
	2014	4	*	*	*	*	*	*	*
	2015	3	*	*	*	*	*	*	*
	2016	4	*	*	*	*	*	*	*
	2017	5	58	9.67	12.70	\$688	\$106	\$11.96	\$154.80
	2018	5	65	8.23	11.54	\$788	\$123	\$11.84	\$140.66

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Table 3.11: Continued

	Year	Processors	Processing labor hours			Labor Payments (\$1,000)		Processing wages, median (\$)	
			Total (1,000)	Median per plant (1,000)	Median per 1000 pounds (raw)	Total	Median per plant	per hour	per 1000 pounds (raw)
CP	98/01/04	18(10)	-	-	-	\$294	\$45	-	*
	2005	4	-	-	-	*	*	-	*
	2006	3	-	-	-	*	*	-	*
	2007	3	-	-	-	*	*	-	*
	2008	3	-	-	-	*	*	-	*
BBR	98/01/04	40(20)	142	9.96	12.75	\$1,725	\$111	\$13.30	\$158.41
	2005	11	202	12.12	13.44	\$2,461	\$221	\$12.02	\$146.44
	2006	11	180	10.76	13.73	\$2,205	\$177	\$11.78	\$161.67
	2007	11	261	25.22	13.17	\$3,050	\$250	\$12.33	\$162.35
	2008	11	245	12.58	16.04	\$3,083	\$313	\$12.36	\$174.27
SF & CP	2009	12	199	16.06	14.47	\$2,441	\$141	\$11.44	\$159.85
	2010	13	212	20.09	15.43	\$2,613	\$211	\$10.82	\$168.80
	2011	14	104	6.71	13.97	\$1,352	\$82	\$11.32	\$154.37
	2012	12	100	6.51	13.74	\$1,276	\$73	\$11.73	\$145.69
	2013	10	104	10.00	14.95	\$1,280	\$101	\$10.82	\$152.70
	2014	9	130	21.07	12.11	\$1,496	\$81	\$10.08	\$149.85
	2015	10	127	14.80	14.92	\$1,608	\$126	\$11.10	\$167.83
	2016	10	130	8.93	11.20	\$1,769	\$91	\$12.66	\$143.44
	2017	10	81	8.06	13.47	\$1,059	\$64	\$12.26	\$163.18
	2018	9	55	5.38	11.50	\$700	\$39	\$12.19	\$147.56

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Table 3.11: Continued

	Year	Processors	Processing labor hours			Labor Payments (\$1,000)		Processing wages, median (\$)	
			Total (1,000)	Median per plant (1,000)	Median per 1000 pounds (raw)	Total	Median per plant	per hour	per 1000 pounds (raw)
CP	98/01/04	17(8)	-	-	-	\$768	\$119	-	*
	2005	6	-	-	-	\$301	\$37	-	*
	2006	4	-	-	-	*	*	-	*
	2007	4	-	-	-	*	*	-	*
	2008	4	-	-	-	*	*	-	*
BSS	98/01/04	50(24)	1,134	36.21	12.80	\$14,314	\$455	\$12.73	\$169.92
	2005	13	302	23.68	13.36	\$3,625	\$297	\$11.95	\$160.39
	2006	10	445	49.45	13.76	\$5,070	\$574	\$11.64	\$159.24
	2007	10	442	41.29	13.58	\$5,497	\$505	\$12.06	\$187.33
	2008	12	712	30.52	13.17	\$9,807	\$562	\$12.02	\$164.50
SF & CP	2009	14	600	58.41	13.44	\$7,503	\$344	\$11.53	\$142.54
	2010	11	534	50.90	13.92	\$6,135	\$406	\$11.03	\$143.55
	2011	14	555	45.69	13.90	\$6,695	\$388	\$11.49	\$157.20
	2012	13	1,087	77.94	16.00	\$12,974	\$662	\$11.25	\$174.26
	2013	12	774	63.55	12.84	\$8,625	\$520	\$10.84	\$136.76
	2014	10	590	76.01	12.08	\$6,758	\$488	\$11.32	\$130.40
	2015	10	747	95.42	15.45	\$9,088	\$846	\$11.40	\$166.94
	2016	8	447	69.40	12.96	\$5,903	\$560	\$12.45	\$162.65
	2017	8	266	34.61	11.98	\$3,300	\$215	\$12.17	\$149.94
	2018	8	232	30.48	12.39	\$2,854	\$163	\$12.06	\$149.44

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Table 3.11: Continued

		Year	Processors	Processing labor hours			Labor Payments (\$1,000)		Processing wages, median (\$)	
				Total (1,000)	Median per plant (1,000)	Median per 1000 pounds (raw)	Total	Median per plant	per hour	per 1000 pounds (raw)
CP		2006	1	-	-	-	*	*	-	*
		2007	1	-	-	-	*	*	-	*
		2008	1	-	-	-	*	*	-	*
BST	SF	2005	7	8	0.40	17.54	\$95	\$5	\$11.65	\$185.48
		2006	8	14	1.25	12.57	\$159	\$15	\$11.61	\$130.64
		2007	7	35	4.97	13.85	\$389	\$49	\$11.29	\$157.11
		2008	8	27	2.93	15.95	\$482	\$51	\$12.08	\$203.54
	SF & CP	2009	8	29	4.27	14.34	\$318	\$37	\$11.03	\$148.04
		2010	5	6	0.70	*	\$70	\$8	\$11.05	*
		2013	7	17	1.86	13.77	\$175	\$17	\$10.39	\$141.92
		2014	8	122	8.51	11.96	\$1,309	\$85	\$10.26	\$124.84
	2015	8	230	21.84	13.06	\$2,603	\$219	\$11.03	\$141.55	
	2016	7	145	18.44	11.56	\$1,780	\$208	\$12.29	\$142.24	
	2017	5	20	3.25	12.40	\$224	\$35	\$10.92	\$143.65	
	2018	7	29	2.01	10.37	\$345	\$22	\$11.48	\$123.01	
PIK	SF	98/01/04	13(13)	25	1.03	14.27	\$262	\$18	\$12.00	\$197.73
	CP	98/01/04	1(1)	-	-	-	*	*	-	*
	SF	98/01/04	10(10)	55	3.08	13.64	\$643	\$35	\$11.42	\$184.39
SMB		2009	2	*	*	*	*	*	*	*
		2010	5	19	0.40	14.48	\$187	\$4	\$10.77	\$145.60
	SF & CP	2011	6	17	0.84	15.10	\$163	\$9	\$10.25	\$161.89
		2012	6	21	0.76	11.09	\$263	\$8	\$10.58	\$135.74
		2014	1	*	*	*	*	*	*	*
		2015	1	*	*	*	*	*	*	*

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Table 3.11: Continued

		Year	Processors	Processing labor hours			Labor Payments (\$1,000)		Processing wages, median (\$)	
				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 2018-equivalent value. Information suppressed for confidentiality where indicated by “*”, and data not available where indicated by “-”.

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

Pro rata statistics estimating 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 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. For 2009 to current, results are summarized over all processing sectors (SF & CP) to preserve confidentiality. For the baseline period through 2008, results are shown by processing sector, with CP denoting the catcher-processor sector and SF denoting shore-based processors (shore-plants and stationary floating processors)

Statistics for pre-rationalization base years are calculated as the annual average over the 1998, 2001, and 2004 calendar years, and the Processors column shows the number of unique data records and unique processors (in parentheses) for the period.

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.

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

	Year	Processors	Salaried employees		Salary cost		
			Total	Per plant, median	Total (\\$1,000)	Per plant, median (\\$1,000)	Cost per employee, median (\\$1000)
CP	98/01/04	17(9)	17	2	\$360	\$42	\$18
	2005	8	44	3	\$1,095	\$47	\$12
	2006	4	*	*	*	*	*
	2007	4	*	*	*	*	*
	2008	4	*	*	*	*	*
	2009	5	*	*	*	*	*
	2010	3	*	*	*	*	*
	2011	3	*	*	*	*	*
	SF	98/01/04	65(32)	1,096	17	\$8,606	\$175
2005		17	1,592	20	\$10,819	\$73	\$5
2006		13	2,031	20	\$13,622	\$368	\$4
2007		14	691	15	\$5,893	\$251	\$8
2008		13	1,056	16	\$12,191	\$308	\$11
2009		17	900	29	\$8,287	\$558	\$10
2010		17	786	22	\$6,669	\$114	\$6
2011		17	1,148	25	\$7,507	\$420	\$6
2012		13	1,428	33	\$57,127	\$1,100	\$44
2013		12	1,459	28	\$61,024	\$1,335	\$43
2014	9	1,300	84	\$62,122	\$3,354	\$53	
2015	9	1,572	170	\$62,910	\$5,055	\$33	
2016	8	1,473	174	\$62,836	\$8,169	\$41	
2017	9	1,553	170	\$57,836	\$6,233	\$30	
2018	8	1,397	136	\$52,841	\$6,252	\$42	

Notes: Data shown for all CR program crab fisheries by calendar year. All dollar values are adjusted for inflation to 2018-equivalent value. Information suppressed for confidentiality where indicated by “*”, and data not available where indicated by “-”.

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.

Statistics for pre-rationalization base years are calculated as the annual average over the 1998, 2001, and 2004 calendar years, and the Processors column shows the number of unique data records and unique processors (in parentheses) for the period.

Due to changes in Crab EDR data collection beginning in 2012, reporting of this data was discontinued for the CP sector, and employment and salary data after 2012 represents total annual value over all production and sales activities, including but not exclusively crab production. Prior to 2012, employment and salary values are specific to BSAI crab production and are not directly comparable to values reported for 2012 and later.

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.

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

Table 3.13: Shoreside and Floating Processor Employee Residence, CR Program Fisheries

Year	Processors	Total Employees	Alaska	Washington- Oregon- Idaho	U.S. Other	Non-U.S.
2005	17	2,872	605 (21%)	987 (34%)	1,243 (43%)	37 (1%)
2006	13	2,660	898 (34%)	882 (33%)	878 (33%)	2 (<1%)
2007	14	3,192	738 (23%)	970 (30%)	1,477 (46%)	7 (<1%)
2008	13	3,909	927 (24%)	960 (25%)	2,018 (52%)	4 (<1%)
2009	12	3,112	800 (26%)	774 (25%)	1,515 (49%)	23 (1%)
2010	12	3,323	767 (23%)	868 (26%)	1,321 (40%)	367 (11%)
2011	13	2,816	800 (28%)	815 (29%)	1,193 (42%)	8 (<1%)
2012	13	3,291	647 (20%)	1,087 (33%)	1,545 (47%)	12 (<1%)
2013	15	3,133	932 (30%)	938 (30%)	1,259 (40%)	4 (<1%)
2014	9	2,370	780 (33%)	708 (30%)	876 (37%)	6 (<1%)
2015	9	2,600	688 (26%)	833 (32%)	1,076 (41%)	3 (<1%)
2016	8	2,809	731 (26%)	722 (26%)	1,356 (48%)	0 (<1%)
2017	9	2,405	671 (28%)	380 (16%)	1,354 (56%)	0 (<1%)
2018	9	2,512	515 (21%)	317 (13%)	1,675 (67%)	5 (<1%)

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

Table 3.14: Harvesting Sector Employment, CR Program Fisheries

	Year	Vessels	Crew positions				
			Total	Mean per vessel (sd)	Median per vessel		
AIG	98/01/04	4(2)	-	-	-		
	2005	1	*	*	*		
	2006	1	*	*	*		
	2007	1	*	*	*		
	2008	1	*	*	*		
	CP	98/01/04	52(22)	115	6.65(0.99)	6.5	
		2005	10	58	5.80(1.14)	6.0	
		2006	6	38	6.33(0.52)	6.0	
		2007	6	38	6.33	6.0	
		2008	4	*	*	*	
	CVCP	2009	5	35	7.00	7.0	
		2010	5	35	7.00	7.0	
		2011	5	36	7.20	7.0	
		2012	6	46	7.67(1.21)	7.5	
		2013	6	44	7.33(1.03)	7.0	
		2014	5	35	7.00	7.0	
		2015	5	35	7.00	7.0	
		2016	5	36	7.20	7.0	
		2017	5	36	7.20	7.0	
		2018	5	37	7.40	7.0	
		BBR	98/01/04	20(9)	-	-	-
			2005	3	*	*	*
			2006	3	*	*	*
	2007		3	*	*	*	
	2008		3	*	*	*	
	CP		98/01/04	633(250)	1,233	5.85(0.92)	6.0
			2005	84	472	5.61(0.82)	6.0
			2006	79	445	5.63(0.83)	6.0
2007			70	407	5.81(0.79)	6.0	
2008			76	452	5.95(0.91)	6.0	
CV	2009		70	443	6.33(2.41)	6.0	
	2010		65	422	6.48(2.93)	6.0	
	2011		62	413	6.66(3.23)	6.0	
	2012		64	428	6.68(2.69)	6.0	
	2013		63	418	6.63(2.53)	6.0	
	2014		63	422	6.70(2.49)	6.0	
	2015		64	441	6.89(3.26)	6.0	
	2016		63	423	6.71(2.52)	6.0	
	2017		61	419	6.86(2.98)	6.0	
	2018		55	365	6.64(3.26)	6.0	
	CVCP						

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Table 3.14: Continued

	Year	Vessels	Crew positions				
			Total	Mean per vessel (sd)	Median per vessel		
BSS	98/01/04	18(8)	-	-	-		
	2005	6	69	11.50(4.81)	12.0		
	CP	2006	4	*	*	*	
	2007	4	*	*	*		
	2008	4	*	*	*		
	CV	98/01/04	524(210)	1,049	6.01(0.89)	6.0	
		2005	150	857	5.71(0.73)	6.0	
		2006	74	418	5.65(0.78)	6.0	
		2007	65	377	5.79(0.79)	6.0	
		2008	74	447	6.03(0.79)	6.0	
		CVCP	2009	77	536	6.96(4.12)	6.0
			2010	68	444	6.53(2.61)	6.0
			2011	68	453	6.66(2.87)	6.0
	2012		72	502	6.97(3.61)	6.0	
	2013		71	481	6.77(3.11)	6.0	
	2014		70	480	6.86(2.92)	6.0	
	2015		70	491	7.01(3.50)	6.0	
	2016		68	463	6.81(2.49)	6.0	
	2017		63	441	7.00(3.52)	6.0	
	2018		63	436	6.92(3.21)	6.0	
	BST	CP	2006	1	*	*	*
		2007	1	*	*	*	
		2008	1	*	*	*	
		CV	2005	4	*	*	*
			2006	25	140	5.60(1.00)	5.0
			2007	22	118	5.36(0.66)	5.0
			2008	26	146	5.62(0.75)	6.0
		CVCP	2009	14	102	7.29(5.20)	6.0
2010			4	*	*	*	
2013			22	156	7.09(3.52)	6.0	
2014			41	279	6.80(2.62)	6.0	
2015			55	365	6.63(2.19)	6.0	
2016			46	296	6.42(1.14)	6.0	
2017			16	100	6.25(1.00)	6.0	
2018			30	211	7.03(3.72)	6.0	

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Table 3.14: Continued

		Year	Vessels	Crew positions		
			Total	Mean per vessel (sd)	Median per vessel	
SMB	CP	98/01/04	2(2)	-	-	-
		98/01/04	94(94)	489	5.20(0.80)	5.0
		2009	7	39	5.57(0.79)	6.0
		2010	11	63	5.73(0.65)	6.0
	CV	2011	17	112	6.56(1.12)	6.0
		2012	17	106	6.24(0.97)	6.0
		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.

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 published prior to 2018 used EDR data on number of crew receiving pay settlements for each crab fishery, but was discontinued in the EDR beginning in 2012 - see earlier editions of this report for by-fishery crab crew participant statistics for 1998 through 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

Year	Crew license holders				Gear operators			Crew and gear operators
	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	192	332	10	534	39	93	132	666
2007	188	337	5	530	28	72	100	630
2008	208	413	10	631	31	88	119	750
2009	187	381	1	569	30	80	110	679
2010	164	346	5	515	30	69	99	614
2011	181	347	2	530	27	66	93	623
2012	202	394	4	600	32	80	112	712
2013	188	375	13	576	26	68	94	670
2014	200	379	3	582	26	69	95	677
2015	231	475	23	729	32	76	108	837
2016	185	420	26	631	28	72	100	731
2017	154	353	11	518	22	64	86	604
2018	165	318	6	489	23	60	83	572

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

Year	Alaska residents		Non-residents ^{ab}		
	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	2	*	6	*
	2011	2	*	5	*
	2012	1	*	7	*
	2013	1	*	7	*
	2014	1	*	5	*
	2015	1	*	6	*
	2016	1	*	6	*
2017	2	*	5	*	
2018	2	*	6	*	
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	18	21	51	79
	2011	18	22	44	78
	2012	19	23	46	77
	2013	16	22	48	78
	2014	17	24	46	76
	2015	16	21	48	79
	2016	15	24	48	76
2017	16	24	45	76	
2018	16	23	41	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	18	20	60	80
	2014	22	18	59	82
	2015	22	20	61	80
2016	19	19	55	81	
2017	15	17	53	83	
2018	19	23	49	77	
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	7	31	15	69
	2014	13	19	31	81
	2015	20	33	46	67
	2016	15	32	37	68
	2017	3	*	13	*
2018	8	34	21	66	

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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
	1998	34	25	97	75
	2009	2	*	5	*
	2010	4	33	7	67
SMB	2011	4	24	14	76
	2012	8	44	10	56
	2014	2	*	2	*
	2015	2	*	1	*
	1998	0	0	1	100
WAI	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

	Year	Crew share payment			Captain share payment		CV Crew payment, crab equivalent (1000 lbs)	
		Vessels	Per vessel, median (\\$1000)	Total (\\$million)	Per vessel, median (\\$1000)	Total (\\$million)	Per vessel, median (\\$1000)	Total (\\$million)
CP	98/01/04	4(2)	*	*	*	*	-	-
	2005	1	*	*	*	*	-	-
	2006	1	*	*	*	*	-	-
	2007	1	*	*	*	*	-	-
	2008	1	*	*	*	*	-	-
CV	98/01/04	50(21)	\$140.22	\$3.92	\$68.86	\$1.89	40.24	1,002.58
	2005	10	\$164.64	\$1.93	\$69.11	\$1.04	46.18	583.75
	2006	6	\$120.84	\$0.93	\$68.97	\$0.51	58.24	386.17
	2007	6	\$188.80	\$1.21	\$88.85	\$0.60	66.47	466.01
	2008	4	*	*	*	*	*	*
AIG	2009	5	\$414.90	\$2.06	\$223.77	\$1.21	*	*
	2010	5	\$698.67	\$3.46	\$301.39	\$1.97	*	*
	2011	5	\$733.19	\$4.33	\$390.02	\$2.35	*	*
	2012	6	\$686.99	\$3.77	\$344.17	\$1.94	175.67	739.97
	2013	6	\$578.77	\$3.59	\$295.39	\$1.63	137.26	821.72
	2014	5	\$747.44	\$3.46	\$310.95	\$1.50	167.09	807.83
	2015	5	\$755.59	\$3.82	\$365.15	\$1.75	151.04	845.68
	2016	5	\$1,030.28	\$4.67	\$376.84	\$2.13	177.92	848.56
	2017	5	\$794.52	\$4.77	\$371.04	\$2.01	132.78	842.63
	2018	5	\$998.85	\$5.23	\$384.61	\$2.44	164.57	846.04

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Table 3.17: Continued

	Year	Crew share payment			Captain share payment		CV Crew payment, crab equivalent (1000 lbs)	
		Vessels	Per vessel, median (\\$1000)	Total (\\$million)	Per vessel, median (\\$1000)	Total (\\$million)	Per vessel, median (\\$1000)	Total (\\$million)
CP	98/01/04	20(9)	\$92.77	\$0.70	\$31.22	\$0.22	-	-
	2005	3	*	*	*	*	-	-
	2006	3	*	*	*	*	-	-
	2007	3	*	*	*	*	-	-
	2008	3	*	*	*	*	-	-
BBR	98/01/04	626(249)	\$58.45	\$13.94	\$29.72	\$6.73	10.88	2,551.38
	2005	84	\$125.89	\$12.78	\$68.06	\$6.72	22.81	2,261.70
	2006	79	\$108.47	\$9.37	\$57.35	\$4.75	23.45	2,002.05
	2007	70	\$154.13	\$12.67	\$81.30	\$6.31	27.60	2,391.78
	2008	76	\$176.69	\$15.51	\$85.31	\$7.01	29.74	2,568.73
CV & CP	2009	70	\$132.15	\$10.33	\$69.35	\$4.89	24.50	1,848.95
	2010	65	\$211.18	\$14.25	\$109.21	\$6.79	24.96	1,630.31
	2011	62	\$168.78	\$11.63	\$91.80	\$5.40	14.07	942.64
	2012	66	\$110.19	\$8.66	\$58.65	\$3.90	13.55	958.50
	2013	63	\$101.24	\$8.09	\$57.01	\$3.85	13.13	1,021.99
	2014	63	\$113.16	\$8.23	\$56.24	\$3.98	15.67	1,113.59
	2015	65	\$144.23	\$9.69	\$66.51	\$4.54	16.97	1,114.42
	2016	64	\$164.27	\$11.67	\$72.58	\$5.07	14.77	1,053.67
	2017	61	\$106.67	\$7.24	\$48.91	\$3.29	11.87	761.56
	2018	55	\$80.77	\$4.94	\$39.58	\$2.26	7.64	470.63

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Table 3.17: Continued

	Year	Crew share payment			Captain share payment		CV Crew payment, crab equivalent (1000 lbs)	
		Vessels	Per vessel, median (\\$1000)	Total (\\$million)	Per vessel, median (\\$1000)	Total (\\$million)	Per vessel, median (\\$1000)	Total (\\$million)
CP	98/01/04	18(8)	\$268.58	\$1.73	\$89.02	\$0.55	-	-
	2005	6	\$74.41	\$0.60	\$34.28	\$0.21	-	-
	2006	4	*	*	*	*	-	-
	2007	4	*	*	*	*	-	-
	2008	4	*	*	*	*	-	-
BSS CV	98/01/04	517(210)	\$81.04	\$20.16	\$40.96	\$9.72	33.92	18,059.94
	2005	150	\$71.97	\$11.45	\$39.66	\$5.89	31.02	5,335.74
	2006	74	\$75.78	\$6.49	\$39.47	\$3.24	56.65	4,787.81
	2007	65	\$126.28	\$9.58	\$65.75	\$4.56	63.39	4,701.20
	2008	74	\$218.83	\$17.62	\$111.66	\$8.38	108.04	8,833.86
CV & CP	2009	77	\$160.70	\$14.08	\$79.49	\$6.24	97.27	7,687.66
	2010	68	\$134.37	\$10.15	\$64.28	\$4.56	88.79	6,625.45
	2011	68	\$306.02	\$21.69	\$142.01	\$9.71	104.28	7,350.30
	2012	72	\$403.63	\$29.11	\$189.51	\$13.20	164.03	11,875.33
	2013	71	\$305.86	\$23.77	\$152.61	\$10.82	119.71	9,132.92
	2014	69	\$252.20	\$18.87	\$116.88	\$8.47	97.45	7,255.43
	2015	70	\$253.66	\$19.40	\$118.63	\$8.09	117.71	8,661.63
	2016	68	\$197.35	\$15.25	\$97.72	\$6.81	71.78	5,243.28
	2017	63	\$168.75	\$12.67	\$78.49	\$5.37	41.41	2,953.51
	2018	62	\$138.63	\$10.12	\$65.40	\$4.91	34.77	2,483.14

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Table 3.17: Continued

		Year	Crew share payment			Captain share payment		CV Crew payment, crab equivalent (1000 lbs)		
			Vessels	Per vessel, median (\\$1000)	Total (\\$million)	Per vessel, median (\\$1000)	Total (\\$million)	Per vessel, median (\\$1000)	Total (\\$million)	
CP		2006	1	*	*	*	*	-	-	
		2007	1	*	*	*	*	-	-	
		2008	1	*	*	*	*	-	-	
BST	CV	2005	4	*	*	*	*	*	*	
		2006	25	\$4.06	\$0.25	\$2.54	\$0.13	2.46	135.42	
		2007	21	\$20.35	\$0.66	\$12.87	\$0.34	9.22	308.06	
		2008	26	\$15.55	\$0.57	\$8.47	\$0.33	6.73	259.61	
	CV & CP		2009	14	\$30.41	\$0.59	\$17.15	\$0.36	13.71	256.98
			2010	4	*	*	*	*	*	*
			2013	19	\$15.66	\$0.47	\$8.05	\$0.22	6.92	198.93
			2014	38	\$73.77	\$3.29	\$33.06	\$1.53	27.32	1,268.04
		2015	52	\$119.23	\$6.24	\$49.58	\$2.91	40.72	2,249.67	
		2016	45	\$83.50	\$5.68	\$40.84	\$2.32	28.19	1,811.58	
		2017	16	\$65.79	\$0.99	\$25.94	\$0.45	15.48	239.62	
	2018	31	\$37.94	\$2.07	\$18.43	\$0.60	9.81	486.97		
PIK	CV	98/01/04	42(42)	\$11.20	\$0.57	\$5.21	\$0.29	3.22	163.87	
	CP	98/01/04	2(2)	*	*	*	*	-	-	
SMB		98/01/04	92(92)	\$11.62	\$1.26	\$6.62	\$0.69	4.09	429.84	
		2009	7	\$19.42	\$0.17	\$8.38	\$0.07	5.97	49.67	
		2010	11	\$78.06	\$0.99	\$46.67	\$0.52	13.60	163.26	
	CV		2011	17	\$64.51	\$1.38	\$34.95	\$0.65	10.69	232.83
			2012	17	\$47.57	\$0.92	\$24.24	\$0.42	10.16	197.23
			2014	4	*	*	*	*	*	*
			2015	3	*	*	*	*	*	*

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Table 3.17: Continued

		Year	Crew share payment			Captain share payment		CV Crew payment, crab equivalent (1000 lbs)	
	Vessels		Per vessel, median (\\$1000)	Total (\\$million)	Per vessel, median (\\$1000)	Total (\\$million)	Per vessel, median (\\$1000)	Total (\\$million)	
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 2018-equivalent value. Information suppressed for confidentiality where indicated by “*”, and data not available where indicated by “-”.

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

	Year	Obs	Net share (median)			Gross share (median)			
		(vessels)	Labor total	Crew	Captain	Labor total	Crew	Captain	
All CR Fisheries	98/01/04	640 (250)	40%	-	-	35%	23%	12%	
	2005	163	-	-	-	31%	20%	10%	
	2006	95	-	-	-	22%	15%	7%	
	2007	82	-	-	-	22%	14%	8%	
	2008	89	-	-	-	22%	14%	7%	
	2009	83	-	-	-	21%	14%	7%	
	2010	74	-	-	-	20%	13%	7%	
	2011	73	-	-	-	20%	14%	7%	
	2012	78	-	-	-	20%	14%	6%	
	2013	78	-	-	-	20%	13%	6%	
	2014	74	-	-	-	20%	13%	7%	
	2015	79	-	-	-	20%	13%	7%	
	2016	77	-	-	-	20%	13%	7%	
	2017	70	-	-	-	20%	14%	6%	
	2018	65	-	-	-	21%	14%	7%	
	AIG	98/01/04	48 (20)	-	-	-	29%	18%	9%
		2005	10	35%	23%	14%	21%	14%	8%
2006		6	36%	25%	13%	17%	11%	6%	
2007		6	40%	25%	13%	18%	12%	6%	
2008		4	*	*	*	*	*	*	
2009		4	*	*	*	*	*	*	
2010		4	*	*	*	*	*	*	
2011		4	*	*	*	*	*	*	
2012		5	-	-	-	18%	13%	5%	
2013		6	-	-	-	18%	13%	5%	
2014		5	-	-	-	19%	13%	6%	
2015		5	-	-	-	19%	13%	7%	
2016		5	-	-	-	21%	15%	6%	
2017		5	-	-	-	24%	16%	7%	
2018		5	-	-	-	22%	15%	7%	
BBR	98/01/04	608 (244)	-	-	-	35%	23%	12%	
	2005	83	39%	25%	13%	23%	15%	8%	
	2006	78	39%	26%	13%	23%	15%	8%	
	2007	70	40%	26%	14%	21%	14%	7%	
	2008	75	39%	26%	14%	21%	13%	7%	
	2009	67	40%	26%	12%	20%	12%	6%	
	2010	62	40%	27%	13%	18%	12%	6%	
	2011	59	40%	27%	12%	19%	13%	7%	
	2012	60	-	-	-	20%	14%	6%	
	2013	60	-	-	-	18%	12%	6%	
	2014	60	-	-	-	18%	12%	6%	
	2015	62	-	-	-	17%	11%	6%	
	2016	60	-	-	-	19%	13%	6%	
	2017	59	-	-	-	18%	12%	6%	
	2018	53	-	-	-	17%	12%	5%	

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Table 3.18: Continued

	Year	Obs (vessels)	Net share (median)			Gross share (median)		
			Labor total	Crew	Captain	Labor total	Crew	Captain
BSS	98/01/04	496 (203)	-	-	-	34%	23%	11%
	2005	150	40%	26%	14%	35%	23%	12%
	2006	73	39%	26%	13%	22%	15%	7%
	2007	63	39%	26%	13%	23%	15%	8%
	2008	73	39%	26%	13%	23%	15%	8%
	2009	74	39%	26%	12%	22%	15%	7%
	2010	65	40%	27%	13%	22%	15%	7%
	2011	65	40%	27%	12%	21%	14%	7%
	2012	69	-	-	-	21%	14%	7%
	2013	68	-	-	-	20%	13%	6%
	2014	67	-	-	-	20%	13%	6%
	2015	67	-	-	-	20%	13%	6%
	2016	64	-	-	-	20%	13%	6%
	2017	61	-	-	-	20%	14%	7%
	2018	60	-	-	-	21%	14%	7%
BST	2005	4	*	*	*	*	*	*
	2006	31	40%	26%	14%	27%	17%	9%
	2007	24	40%	26%	14%	23%	15%	8%
	2008	25	40%	26%	14%	22%	15%	8%
	2009	15	40%	26%	12%	21%	15%	7%
	2010	4	*	*	*	*	*	*
	2013	18	-	-	-	24%	17%	8%
	2014	37	-	-	-	21%	15%	7%
	2015	50	-	-	-	23%	15%	8%
	2016	41	-	-	-	24%	17%	8%
2017	16	-	-	-	22%	15%	7%	
2018	28	-	-	-	22%	15%	7%	

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Table 3.18: Continued

Year	Obs (vessels)	Net share (median)			Gross share (median)		
		Labor total	Crew	Captain	Labor total	Crew	Captain
98/01/04	89 (89)	-	-	-	28%	18%	10%
2009	7	40%	26%	14%	17%	13%	6%
2010	11	40%	27%	14%	20%	14%	6%
SMB 2011	18	40%	30%	12%	22%	14%	5%
2012	17	-	-	-	18%	13%	6%
2014	4	-	-	-	*	*	*
2015	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 median value over vessel-level net share percentages reported 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, by crab fishery (for 1998/2001/2004, netshare percentage was reported in aggregate over all vessel labor (captain and crew) and all crab fisheries). Net revenue share reporting for all sectors was discontinued in the EDR beginning in 2012.

Gross revenue share percentages are estimated as median vessel-level values of 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.

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

Table 3.19: Harvesting Sector Activity Days, CR Program Fisheries

	Year	Vessels	Days active total (median) ^b		Days fishing total (median) ^c	
			EDR	CIF	EDR	CIF
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	*	*	*	*
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)
	2017	5	-	748(163)	-	469(89)
	2018	5	-	657(125)	-	405(83)
CP	98/01/04	20(9)	59(7)	-	-	-
	2005	5	162(23)	-	98(19)	-
	2006	3	*	-	*	-
	2007	3	*	*	*	*
	2008	3	*	*	*	*
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)
	2017	61	-	944(14)	-	605(9)
	2018	55	-	626(11)	-	396(7)
BBR	98/01/04	20(9)	59(7)	-	-	-
	2005	5	162(23)	-	98(19)	-
	2006	3	*	-	*	-
	2007	3	*	*	*	*
	2008	3	*	*	*	*

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Table 3.19: Continued

	Year	Vessels	Days active total (median) ^b		Days fishing total (median) ^c		
			EDR	CIF	EDR	CIF	
BSS	98/01/04	18(8)	239(39)	-	-	-	
	2005	6	189(28)	-	80(8)	-	
	CP	2006	4	*	-	*	-
	2007	4	*	*	*	*	
	2008	4	*	*	*	*	
	98/01/04	522(210)	6,331(25)	-	-	-	
	2005	150	2,710(16)	-	1,275(7)	-	
	CV	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)	
	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)	
	CVCP	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	-	2,842(39)	-	1,949(27)	
	2017	63	-	2,155(33)	-	1,475(22)	
	2018	62	-	2,094(28)	-	1,404(19)	
BST	2005	1	*	-	*	-	
	CP	2006	1	*	-	*	-
	2007	1	*	*	*	*	
	2008	1	*	*	*	*	
	2005	4	*	-	*	-	
	CV	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)	
	2009	17	467(22)	350(17)	321(15)	238(12)	
	2010	4	*	*	*	*	
	2013	18	-	279(12)	-	200(9)	
	CVCP	2014	38	-	1,245(28)	-	905(22)
	2015	52	-	2,728(38)	-	1,928(27)	
	2016	44	-	1,529(28)	-	1,130(21)	
	2017	16	-	213(11)	-	132(7)	
	2018	30	-	504(15)	-	331(10)	

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Table 3.19: Continued

	Year	Vessels	Days active total (median) ^b		Days fishing total (median) ^c		
			EDR	CIF	EDR	CIF	
SMB	CP	98/01/04	2(2)	*	-	-	-
		98/01/04	93(93)	1,630(17)	-	-	-
		2009	7	184(19)	166(16)	133(10)	112(11)
		2010	11	485(36)	429(36)	365(23)	313(27)
	CV	2011	18	663(33)	710(36)	473(26)	468(24)
		2012	17	-	542(33)	-	363(19)
		2014	4	-	*	-	*
		2015	3	-	*	-	*
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	Vessels	Total Costs (\$1,000)	Median Costs (\$1,000)
All CR Fisheries	98/01/04	647(258)	\$2,800	\$8
	2005	156	\$1,586	\$6
	2006	70	\$988	\$8
	2007	61	\$889	\$11
	2008	69	\$1,647	\$16
	2009	60	\$978	\$12
	2010	49	\$1,148	\$15
	2011	52	\$917	\$13
	2012	81	\$1,976	\$9
	2013	76	\$1,372	\$8
	2014	72	\$1,663	\$7
	2015	77	\$2,037	\$8
	2016	75	\$1,527	\$6
	2017	69	\$973	\$5
	2018	64	\$954	\$4
AIG	2012	6	\$157	\$19
	2013	6	\$154	\$21
	2014	5	\$198	\$37
	2015	5	\$250	\$41
	2016	5	\$310	\$67
	2017	5	\$256	\$34
	2018	5	\$241	\$40
BBR	2012	62	\$376	\$5
	2013	59	\$348	\$5
	2014	59	\$429	\$5
	2015	60	\$421	\$6
	2016	61	\$338	\$4
	2017	59	\$295	\$4
	2018	52	\$223	\$3
BSS	2012	70	\$1,316	\$15
	2013	68	\$802	\$11
	2014	63	\$792	\$10
	2015	65	\$850	\$12
	2016	62	\$583	\$8
	2017	60	\$384	\$6
	2018	57	\$413	\$7

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Table 3.20: Continued

	Year	Vessels	Total Costs (\$1,000)	Median Costs (\$1,000)
BST	2013	16	\$68	\$3
	2014	35	\$234	\$4
	2015	47	\$514	\$6
	2016	37	\$296	\$6
	2017	14	\$39	\$2
	2018	27	\$77	\$3
SMB	2012	16	\$128	\$6
	2014	2	*	*
	2015	1	*	*

Notes: Bering Sea Tanner crab managed as a single fishery in 2005/2006 and as Eastern and Western fisheries in subsequent seasons. Eastern area closed as an in-season management measure in 2005/2006. Count of quota holding entities in the baseline, 2005/2006 and 2006/2007 seasons represent holders of Bering Sea Tanner quota; subsequent seasons show count of distinct holders of Eastern or Western quota.

^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 after 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

		Year	Vessels	Bait costs (\$1000)		Bait usage (1000 lbs)		Price (\$/lb)
				Per vessel, median	Total	Per vessel, median	Total	Weighted average
All CR	CV+CP	98/01/04	610(246)	13.48	4,900	\$21	\$7,980	\$0.61
		2005	169	9.85	2,671	\$17	\$4,453	\$0.60
		2006	99	13.62	2,054	\$24	\$3,659	\$0.56
		2007	86	16.91	2,017	\$30	\$3,676	\$0.55
		2008	96	21.12	2,754	\$33	\$4,474	\$0.62
		2009	89	24.99	2,960	\$38	\$4,719	\$0.63
		2010	79	27.73	2,952	\$43	\$4,614	\$0.64
		2011	76	26.37	2,698	\$36	\$4,086	\$0.66
		2012	83	12.32	3,168	-	-	-
		2013	81	13.12	3,147	-	-	-
		2014	76	12.16	3,755	-	-	-
		2015	82	13.09	4,737	-	-	-
		2016	80	13.04	3,472	-	-	-
		2017	72	8.61	2,349	-	-	-
		2018	67	8.63	2,282	-	-	-
AIG	CP	98/01/04	4(2)	*	*	*	*	*
		2005	1	*	*	*	*	*
		2006	1	*	*	*	*	*
		2007	1	*	*	*	*	*
		2008	1	*	*	*	*	*
	CV	98/01/04	50(21)	35.21	1,058	\$60	\$1,825	\$0.58
		2005	9	46.09	479	\$79	\$863	\$0.55
		2006	6	79.46	417	\$142	\$778	\$0.54
		2007	6	41.82	310	\$84	\$741	\$0.42
		2008	4	*	*	*	*	*
	CV+CP	2009	7	75.90	667	\$169	\$1,137	\$0.59
		2010	6	112.93	738	\$215	\$1,259	\$0.59
		2011	5	169.47	687	\$291	\$1,172	\$0.59
		2012	6	83.78	594	-	-	-
		2013	6	117.98	724	-	-	-
2014		5	122.43	816	-	-	-	
2015		5	102.16	1,025	-	-	-	
2016		5	86.03	803	-	-	-	
2017	5	134.35	826	-	-	-		
2018	5	127.36	776	-	-	-		

Continued on next page.

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	
BBR	98/01/04	15(8)	7.84	47	\$15	\$90	\$0.52	
	2005	4	*	*	*	*	*	
	2006	3	*	*	*	*	*	
	2007	2	*	*	*	*	*	
	2008	3	*	*	*	*	*	
	CP	98/01/04	546(227)	5.19	1,109	\$8	\$1,742	\$0.64
		2005	82	6.91	883	\$13	\$1,380	\$0.64
		2006	73	7.60	665	\$13	\$1,162	\$0.57
		2007	70	11.56	887	\$19	\$1,488	\$0.60
		2008	76	12.42	1,145	\$19	\$1,683	\$0.68
	CV	2009	68	13.68	1,067	\$20	\$1,666	\$0.64
		2010	61	14.56	1,077	\$23	\$1,625	\$0.66
		2011	61	9.03	701	\$10	\$961	\$0.73
		2012	64	6.78	498	-	-	-
		2013	63	8.06	632	-	-	-
		2014	63	9.58	695	-	-	-
		2015	64	10.27	692	-	-	-
		2016	64	8.73	628	-	-	-
		2017	61	8.13	515	-	-	-
		2018	53	7.07	406	-	-	-
CV+CP	98/01/04	13(7)	15.39	82	\$28	\$147	\$0.56	
	2005	5	11.66	54	\$23	\$102	\$0.53	
	2006	4	*	*	*	*	*	
	2007	3	*	*	*	*	*	
	2008	4	*	*	*	*	*	
	CP	98/01/04	448(190)	9.25	2,159	\$14	\$3,270	\$0.66
		2005	148	6.46	1,082	\$10	\$1,758	\$0.62
		2006	74	7.94	622	\$13	\$1,041	\$0.60
		2007	64	7.33	499	\$12	\$869	\$0.57
		2008	72	9.06	785	\$16	\$1,288	\$0.61
CV	2009	75	11.58	1,020	\$18	\$1,616	\$0.63	
	2010	67	11.75	905	\$18	\$1,374	\$0.66	
	2011	67	13.79	985	\$19	\$1,504	\$0.65	
	2012	72	23.67	1,815	-	-	-	
	2013	72	19.02	1,639	-	-	-	
	2014	69	22.54	1,627	-	-	-	
	2015	69	26.89	2,023	-	-	-	
	2016	67	17.78	1,326	-	-	-	
	2017	63	12.16	932	-	-	-	
	2018	62	12.18	931	-	-	-	
CV+CP	Continued on next page.							

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	1.05	26	\$2	\$41	\$0.63	
		2007	16	4.56	91	\$8	\$191	\$0.48	
			2008	21	5.03	139	\$8	\$230	\$0.60
			2009	12	6.17	139	\$10	\$204	\$0.68
			2010	4	*	*	*	*	
			2013	17	6.36	151	-	-	-
		CV+CP	2014	37	9.24	534	-	-	-
			2015	51	9.93	970	-	-	-
			2016	44	13.94	716	-	-	-
			2017	13	4.62	76	-	-	-
			2018	27	5.24	169	-	-	-
PIK	CV	98/01/04	35(35)	4.89	174	\$7	\$249	\$0.70	
		98/01/04	72(72)	6.22	449	\$9	\$668	\$0.67	
		2009	7	5.03	67	\$8	\$96	\$0.69	
		2010	13	12.28	215	\$22	\$329	\$0.65	
SMB	CV	2011	18	13.42	325	\$17	\$448	\$0.73	
		2012	17	13.39	261	-	-	-	
		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 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

	Year	Fuel expenses (\$1,000)		Gallons purchased (1,000)		Fuel price (\$/gal)
		Total	Median	Total	Median	Average
AIG	2012	\$1,351	\$254	355	70	\$3.81
	2013	\$1,800	\$327	455	85	\$3.96
	2014	\$1,474	\$297	386	75	\$3.82
	2015	\$3,233	\$233	431	78	\$7.50
	2016	\$1,214	\$223	531	101	\$2.28
	2017	\$1,089	\$224	469	100	\$2.32
	2018	\$1,236	\$219	445	91	\$2.78
BBR	2012	\$3,298	\$36	731	8	\$4.51
	2013	\$3,610	\$40	813	9	\$4.44
	2014	\$2,718	\$32	681	8	\$3.99
	2015	\$2,096	\$26	670	8	\$3.13
	2016	\$1,423	\$20	573	8	\$2.48
	2017	\$1,620	\$20	602	8	\$2.69
	2018	\$1,291	\$20	447	7	\$2.89
BSS	2012	\$15,331	\$174	3,431	38	\$4.47
	2013	\$11,841	\$125	2,645	28	\$4.48
	2014	\$8,701	\$106	2,172	27	\$4.01
	2015	\$9,604	\$94	2,398	30	\$4.01
	2016	\$4,181	\$56	1,667	20	\$2.51
	2017	\$3,239	\$43	1,241	16	\$2.61
	2018	\$3,393	\$46	1,200	16	\$2.83
BST	2013	\$563	\$24	137	6	\$4.09
	2014	\$2,183	\$48	546	12	\$4.00
	2015	\$3,959	\$49	1,208	16	\$3.28
	2016	\$2,015	\$40	790	16	\$2.55
	2017	\$276	\$14	106	5	\$2.60
	2018	\$719	\$18	235	6	\$3.06
SMB	2012	\$1,360	\$89	296	19	\$4.59
	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	-	\$1.25	\$1.20	\$1.41	\$1.36	\$1.37	\$1.51	\$1.57	\$1.58	\$1.56	\$1.55	\$1.54
	Kodiak	-	\$1.13	\$1.12	\$1.34	\$1.43	\$1.43	\$1.53	\$1.54	\$1.56	\$1.56	\$1.58	\$1.59
	Seattle	\$0.77	\$0.84	\$0.77	\$1.22	\$0.92	\$1.11	\$1.29	\$1.12	\$1.30	\$1.24	\$1.18	\$1.22
2000	Dutch Harbor	\$1.54	\$1.68	\$2.04	\$2.04	\$1.83	-	\$1.85	\$1.87	\$1.98	\$2.18	\$2.25	\$2.25
	Kodiak	\$1.55	\$1.69	\$1.97	\$1.97	\$1.92	\$1.87	\$1.93	\$1.93	\$2.02	\$2.14	\$2.26	\$2.26
	Seattle	\$1.35	\$1.39	\$1.53	\$1.53	\$1.34	\$1.35	\$1.55	\$1.39	\$1.96	\$1.96	\$1.86	\$2.01
2001	Adak	-	-	\$2.13	\$1.99	\$1.99	\$1.92	\$1.99	\$1.82	\$1.82	\$1.92	-	\$1.76
	Dutch Harbor	\$2.20	\$2.07	\$2.07	\$1.95	\$1.93	\$1.92	\$1.93	\$1.81	\$1.89	\$1.90	\$1.81	\$1.70
	Kodiak	\$2.21	\$2.13	\$2.02	\$1.89	\$1.88	\$1.89	\$1.89	\$1.85	\$1.89	\$1.79	\$1.73	\$1.55
	Seattle	\$1.81	\$1.53	\$1.44	\$1.50	\$1.50	\$1.45	\$1.34	\$1.29	\$1.56	\$1.19	\$1.18	\$0.93
2002	Adak	\$1.73	\$1.73	\$1.73	\$1.73	\$1.85	-	-	\$1.73	\$1.84	\$1.97	-	-
	Dutch Harbor	\$1.57	\$1.35	\$1.34	\$1.48	\$1.55	\$1.55	\$1.55	\$1.55	\$1.62	\$1.68	\$1.72	\$1.75
	Kodiak	\$1.51	\$1.42	\$1.41	\$1.44	\$1.50	\$1.50	\$1.73	\$1.48	\$1.57	\$1.61	\$1.61	\$1.61
	Seattle	\$1.03	\$0.94	\$1.16	\$1.29	\$1.35	\$1.34	\$1.36	\$1.33	\$1.54	\$1.37	\$1.51	\$1.35
2003	Adak	\$1.94	\$1.94	-	\$2.23	\$2.14	\$2.14	\$2.07	\$2.07	\$2.07	\$2.07	\$2.07	\$2.07
	Dutch Harbor	\$1.72	\$1.80	\$1.95	\$2.07	\$1.96	\$1.93	\$1.93	\$1.93	\$2.00	\$2.00	\$2.00	\$2.00
	Kodiak	\$1.59	\$1.65	\$1.84	\$2.02	\$1.88	\$1.82	\$1.82	\$1.83	\$1.80	\$1.98	\$1.80	\$1.80
	Seattle	\$1.52	\$1.55	\$2.24	\$1.84	\$1.58	\$1.53	\$1.68	\$1.65	\$1.65	\$1.57	\$1.59	\$1.61
2004	Adak	\$2.08	\$2.08	\$2.08	-	\$2.28	\$2.54	\$2.54	\$2.54	-	\$2.67	\$2.73	\$2.73
	Dutch Harbor	\$1.95	\$1.95	\$2.13	\$2.08	\$2.14	\$2.31	\$2.31	\$2.40	\$2.41	\$2.53	\$2.60	\$2.60
	Kodiak	\$1.76	\$1.79	\$1.93	\$1.95	\$2.12	\$2.29	\$2.32	\$2.32	\$2.32	\$2.39	\$2.56	\$2.58
	Seattle	\$1.67	\$1.83	\$1.93	\$1.98	\$2.29	\$2.21	\$2.16	\$2.18	\$2.20	\$2.58	\$2.61	\$2.19
2005	Adak	\$2.65	\$2.65	\$2.71	\$2.79	-	\$3.35	\$2.90	\$2.97	\$3.17	\$3.35	\$3.35	\$3.35
	Dutch Harbor	\$2.52	\$2.52	\$2.63	\$2.71	\$2.78	\$2.78	\$2.78	\$2.90	\$3.17	\$3.19	\$3.27	\$3.24
	Kodiak	\$2.42	\$2.42	\$2.48	\$2.66	\$2.81	\$2.81	\$2.81	\$2.81	\$3.13	\$3.38	\$3.33	\$3.28
	Seattle	\$2.10	\$2.32	\$2.82	\$2.88	\$2.82	\$2.62	\$2.81	\$2.99	\$3.62	\$3.56	\$3.19	\$2.80

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Table 3.23: Continued

	Port	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2006	Adak	-	\$3.14	\$3.14	-	\$4.16	\$3.45	\$3.45	\$3.45	\$3.66	\$3.66	\$3.60	\$3.60
	Dutch Harbor	\$3.03	\$3.01	\$3.01	\$3.01	\$3.24	\$3.32	\$3.31	\$3.39	\$3.49	\$3.32	\$3.16	\$3.13
	Kodiak	\$3.04	\$3.06	\$3.05	\$3.08	\$3.29	\$3.29	\$3.30	\$3.36	\$3.54	\$3.36	\$3.11	\$3.18
	Seattle	\$2.84	\$2.68	\$3.09	\$2.98	\$3.45	\$3.55	\$3.40	\$3.63	\$3.70	\$3.00	\$3.03	\$3.31
2007	Adak	\$3.57	\$3.57	\$3.29	\$3.17	\$3.41	\$3.41	\$3.41	\$3.41	\$3.41	\$3.49	\$3.57	\$3.82
	Dutch Harbor	\$3.05	\$3.00	\$2.96	\$2.98	\$3.13	\$3.24	\$3.24	\$3.26	\$3.35	\$3.37	\$3.57	\$3.80
	Kodiak	\$3.03	\$3.00	\$2.97	\$2.96	\$3.09	\$3.21	\$3.21	\$3.21	\$3.39	\$3.33	\$3.51	\$3.58
	Seattle	\$3.18	\$3.10	\$2.96	\$3.23	\$3.32	\$3.32	\$3.39	\$3.45	\$3.31	\$3.55	\$4.07	\$3.85
2008	Adak	\$3.75	\$3.75	\$3.83	\$4.21	-	\$4.86	\$5.27	\$5.44	\$5.44	\$5.44	\$5.44	\$5.44
	Dutch Harbor	\$3.50	\$3.52	\$3.76	\$4.37	-	\$5.07	\$5.24	\$5.40	\$5.22	\$5.03	\$4.61	\$4.50
	Kodiak	\$3.53	\$3.58	\$3.70	\$4.44	-	\$4.97	\$5.14	\$5.43	\$5.26	\$4.96	\$4.66	\$3.85
	Seattle	\$3.90	\$3.72	\$4.13	\$4.40	-	\$5.20	\$5.17	\$5.04	\$4.76	\$3.67	\$3.44	\$2.85
2009	Adak	\$5.40	\$3.88	\$3.76	\$3.65	\$3.65	\$3.36	\$3.36	\$3.36	-	\$3.47	\$3.47	\$3.47
	Dutch Harbor	\$3.55	\$3.14	\$2.97	\$2.97	\$2.97	\$2.97	\$3.23	\$3.19	\$3.23	\$3.37	\$3.37	\$3.42
	Kodiak	\$3.36	\$3.18	\$3.01	\$2.89	\$2.89	\$3.01	\$3.12	\$3.12	\$3.16	\$3.35	\$3.21	\$3.24
	Seattle	\$2.66	\$2.51	\$2.33	\$2.43	\$2.64	\$2.78	\$2.79	\$2.83	\$3.15	\$3.00	\$3.14	\$3.13
2010	Adak	\$3.43	\$3.43	-	\$3.43	\$3.58	\$3.58	\$3.58	\$3.58	\$3.66	\$3.66	\$3.83	\$3.83
	Dutch Harbor	\$3.33	\$3.38	\$3.33	\$3.41	\$3.50	\$3.48	\$3.58	\$3.50	\$3.50	\$3.50	\$3.67	\$3.67
	Kodiak	\$3.20	\$3.38	\$3.32	\$3.43	\$3.60	\$3.55	\$3.44	\$3.43	\$3.43	\$3.46	\$3.61	\$3.60
	Seattle	\$3.24	\$3.07	\$3.16	\$3.39	\$3.61	\$3.34	\$3.18	\$3.32	\$3.44	\$3.33	\$3.58	\$3.52
2011	Adak	\$3.76	\$3.95	\$4.15	\$4.49	\$4.82	\$4.66	-	\$4.71	\$4.60	\$4.60	\$4.73	\$4.94
	Dutch Harbor	\$3.60	\$3.71	\$3.82	\$4.22	\$4.30	\$4.33	\$4.33	\$4.33	\$4.33	\$4.33	\$4.33	\$4.33
	Kodiak	\$3.53	\$3.64	\$3.69	\$4.21	\$4.30	\$4.39	\$4.35	\$4.36	\$4.30	\$4.36	\$4.34	\$4.36
	Seattle	\$3.55	\$3.74	\$4.21	\$4.45	\$4.54	\$4.43	\$4.10	\$4.22	\$4.45	\$4.12	\$4.22	\$4.14

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Table 3.23: Continued

	Port	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2012	Adak	\$4.84	-	-	-	\$4.80	\$4.80	\$4.80	\$4.80	\$4.80	\$4.80	\$4.80	\$4.80
	Dutch Harbor	\$4.25	\$4.25	\$4.47	\$4.47	\$4.57	\$4.54	\$4.36	\$4.25	\$4.36	\$4.41	\$4.41	\$4.41
	Kodiak	\$4.14	\$4.19	\$4.28	\$4.48	\$4.57	\$4.51	\$4.34	\$4.17	\$4.30	\$4.46	\$4.40	\$4.40
	Seattle	\$3.91	\$4.03	\$4.40	\$4.56	\$4.51	\$3.95	\$3.63	\$4.15	\$4.53	\$4.21	\$4.18	\$4.07
2013	Adak	-	\$4.72	\$4.72	-	\$4.76	\$4.76	-	\$4.76	\$4.76	\$4.76	\$4.76	\$4.76
	Dutch Harbor	\$4.34	\$4.28	\$4.35	\$4.33	\$4.33	\$4.33	\$4.33	\$4.35	\$4.37	\$4.34	\$4.33	\$4.26
	Kodiak	\$4.27	\$4.27	\$4.33	\$4.32	\$4.33	\$4.34	\$4.30	\$4.34	\$4.37	\$4.36	\$4.29	\$4.28
	Seattle	\$3.88	\$4.02	\$4.03	\$4.02	\$3.84	\$3.88	\$3.83	\$4.02	\$4.05	\$3.92	\$3.91	\$3.98
2014	Adak	-	\$4.67	\$4.67	\$4.67	-	\$4.67	\$4.67	\$4.67	\$4.67	-	-	-
	Dutch Harbor	\$4.18	\$4.10	\$4.12	\$4.11	\$4.10	\$4.10	\$4.22	\$4.20	\$4.23	\$4.20	\$4.06	\$3.99
	Kodiak	\$4.20	\$4.24	\$4.14	\$4.14	\$4.14	\$4.20	\$4.25	\$4.12	\$4.14	\$4.09	\$4.01	\$3.86
	Seattle	\$3.82	\$3.91	\$3.92	\$3.93	\$3.85	\$3.92	\$3.93	\$3.88	\$4.18	\$3.79	\$3.51	\$3.39
2015	Adak	\$4.62	\$4.62	\$4.62	\$4.62	\$4.62	\$4.62	\$4.62	-	\$4.17	-	\$3.95	-
	Dutch Harbor	\$3.70	\$3.58	\$3.53	\$3.44	\$3.42	\$3.42	\$3.51	\$3.42	\$3.16	\$3.16	\$3.16	\$3.16
	Kodiak	\$3.63	\$3.14	\$3.13	\$3.15	\$3.15	\$3.20	\$3.31	\$3.32	\$3.25	\$3.02	\$3.02	\$2.86
	Seattle	\$2.81	\$2.54	\$2.85	\$2.55	\$2.86	\$3.10	\$2.99	\$2.71	\$2.55	\$2.54	\$2.44	\$2.24
2016	Adak	\$3.91	\$3.39	\$3.39	-	\$3.39	\$3.39	\$3.39	\$3.18	\$3.18	\$3.18	\$3.18	\$3.18
	Dutch Harbor	\$2.71	\$2.55	\$2.62	\$2.51	\$2.40	\$2.50	\$2.54	\$2.60	\$2.60	\$2.60	\$2.60	\$2.60
	Kodiak	\$2.67	\$2.49	\$2.32	\$2.41	\$2.33	\$2.49	\$2.61	\$2.63	\$2.59	\$2.59	\$2.70	\$2.70
	Seattle	\$2.05	\$1.88	\$1.89	\$1.96	\$2.25	\$2.48	\$2.54	\$2.22	\$2.37	\$2.34	\$2.65	\$2.41
2017	Adak	\$3.12	\$3.12	\$3.12	-	-	\$3.30	\$3.30	\$3.30	\$3.27	-	\$3.30	\$3.11
	Dutch Harbor	\$2.59	\$2.71	\$2.67	\$2.67	\$2.71	\$2.66	\$2.66	\$2.51	\$2.67	\$2.86	\$2.86	\$3.01
	Kodiak	\$2.71	\$2.70	\$2.70	\$2.70	\$2.70	\$2.70	\$2.70	\$2.70	\$2.73	\$2.85	\$2.79	\$2.90
	Seattle	\$2.65	\$2.49	\$2.50	\$2.51	\$2.35	\$2.51	\$2.38	\$2.49	\$2.79	\$2.62	\$2.92	\$2.90

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Table 3.23: Continued

	Port	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2018	Adak	\$3.04	\$3.27	\$3.25	\$3.25	\$3.26	-	\$3.26	\$3.26	\$3.59	\$3.59	\$3.59	\$3.59
	Dutch Harbor	\$2.90	\$2.88	\$2.85	\$2.87	\$2.80	\$3.00	\$3.00	\$3.37	\$3.10	\$3.10	\$3.20	\$3.20
	Kodiak	\$2.79	\$2.79	\$2.85	\$2.79	\$2.77	\$2.98	\$3.14	\$3.15	\$3.24	\$3.16	\$3.21	\$3.09
	Seattle	\$2.80	\$2.87	\$2.62	\$3.01	\$3.10	\$3.26	\$3.24	\$3.11	\$3.06	\$3.22	\$3.21	\$2.94
	Seward	-	-	-	-	-	-	-	-	\$3.12	-	-	-
2019	Adak	\$3.54	\$3.54	-	\$3.54	\$3.58	\$3.58	\$3.58	\$3.57	\$3.58	\$3.58	\$3.58	\$3.58
	Dutch Harbor	\$3.26	\$2.96	\$3.21	\$2.96	\$3.06	\$3.16	\$3.16	\$3.16	\$3.11	\$3.11	\$3.09	\$3.16
	Kodiak	\$3.06	\$2.91	\$2.90	\$2.89	\$2.88	\$2.94	\$3.02	\$2.96	\$2.99	\$2.99	\$3.07	\$3.09
	Seattle	\$2.63	\$2.65	\$2.96	\$3.22	\$3.10	\$2.97	\$2.71	\$2.92	\$2.75	\$2.70	\$3.23	\$2.93

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, 2014 through 2018

variable	2014		2015		2016		2017		2018	
	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
Number of active vessels	63		64		63		61		55	
Pounds landed	156		154		138		108		76	
Quota pounds leased (% of landed)	113	(72%)	101	(66%)	90	(66%)	81	(75%)	61	(79%)
Gross ex-vessel revenue	\$1089		\$1291		\$1486		\$1016		\$792	
— Quota lease cost	(\$510)	(47%)	(\$559)	(43%)	(\$638)	(43%)	(\$486)	(48%)	(\$407)	(51%)
Gross residual after lease cost	\$579	53%	\$733	57%	\$849	57%	\$530	52%	\$386	49%
BBR — Provisions	(\$7)	(0.6%)	(\$7)	(0.5%)	(\$5)	(0.4%)	(\$5)	(0.5%)	(\$4)	(0.5%)
— Bait	(\$11)	(1.0%)	(\$11)	(0.8%)	(\$10)	(0.7%)	(\$8)	(0.8%)	(\$7)	(0.9%)
— Fuel	(\$11)	(1.0%)	(\$11)	(0.8%)	(\$10)	(0.7%)	(\$8)	(0.8%)	(\$8)	(1.0%)
— Non-labor vessel cost (Total)	(\$29)	(3%)	(\$28)	(2%)	(\$25)	(2%)	(\$22)	(2%)	(\$19)	(2%)
Gross residual (non-labor)	\$551	51%	\$705	55%	\$824	55%	\$508	50%	\$367	46%
— Labor cost	(\$193)	(18%)	(\$224)	(17%)	(\$265)	(18%)	(\$174)	(17%)	(\$132)	(17%)
— Harvesting cost (Total)	(\$732)	(67%)	(\$810)	(63%)	(\$928)	(62%)	(\$681)	(67%)	(\$557)	(70%)
Gross ex-vessel profit	\$358	33%	\$481	37%	\$558	38%	\$334	33%	\$235	30%
Number of active vessels	69		69		67		63		62	
Pounds landed	807		892		585		337		292	
Quota pounds leased (% of landed)	613	(76%)	613	(69%)	410	(70%)	261	(78%)	226	(77%)
Gross ex-vessel revenue	\$2025		\$1907		\$1658		\$1408		\$1167	
— Quota lease cost	(\$722)	(36%)	(\$638)	(33%)	(\$574)	(35%)	(\$524)	(37%)	(\$433)	(37%)
Gross residual after lease cost	\$1303	64%	\$1269	67%	\$1084	65%	\$884	63%	\$734	63%
BSS — Provisions	(\$11)	(0.6%)	(\$12)	(0.6%)	(\$9)	(0.5%)	(\$6)	(0.4%)	(\$7)	(0.6%)
— Bait	(\$23)	(1.1%)	(\$29)	(1.5%)	(\$20)	(1.2%)	(\$15)	(1.1%)	(\$15)	(1.3%)
— Fuel	(\$23)	(1.1%)	(\$29)	(1.5%)	(\$20)	(1.2%)	(\$15)	(1.1%)	(\$15)	(1.3%)
— Non-labor vessel cost (Total)	(\$58)	(3%)	(\$71)	(4%)	(\$48)	(3%)	(\$36)	(2%)	(\$37)	(3%)
Gross residual (non-labor)	\$1245	61%	\$1199	63%	\$1036	62%	\$848	60%	\$697	60%
— Labor cost	(\$399)	(20%)	(\$386)	(20%)	(\$334)	(20%)	(\$290)	(21%)	(\$246)	(21%)
— Harvesting cost (Total)	(\$1179)	(58%)	(\$1095)	(57%)	(\$956)	(58%)	(\$850)	(60%)	(\$716)	(61%)
Gross ex-vessel profit	\$846	42%	\$812	43%	\$702	42%	\$558	40%	\$451	39%

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Table 3.24: Continued

variable	2014		2015		2016		2017		2018	
	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
Number of active vessels	76		82		81		72		67	
Pounds landed	1061		1131		792		482		451	
Quota pounds leased (% of landed)	802	(76%)	801	(71%)	582	(74%)	377	(78%)	357	(79%)
Gross ex-vessel revenue	\$3390		\$3451		\$3335		\$2603		\$2393	
— Quota lease cost	(\$1259)	(37%)	(\$1204)	(35%)	(\$1222)	(37%)	(\$1083)	(42%)	(\$961)	(40%)
Gross residual after lease cost	\$2132	63%	\$2247	65%	\$2113	63%	\$1520	58%	\$1432	60%
All CRP— Provisions	(\$22)	(0.6%)	(\$25)	(0.7%)	(\$19)	(0.6%)	(\$13)	(0.5%)	(\$14)	(0.6%)
— Bait	(\$49)	(1.4%)	(\$58)	(1.7%)	(\$43)	(1.3%)	(\$33)	(1.2%)	(\$34)	(1.4%)
— Fuel	(\$49)	(1.4%)	(\$58)	(1.7%)	(\$43)	(1.3%)	(\$33)	(1.2%)	(\$34)	(1.4%)
— Non-labor vessel cost (Total)	(\$119)	(4%)	(\$140)	(4%)	(\$104)	(3%)	(\$79)	(3%)	(\$83)	(4%)
Gross residual (non-labor)	\$2012	59%	\$2107	61%	\$2008	60%	\$1441	55%	\$1350	56%
— Labor cost	(\$654)	(19%)	(\$681)	(20%)	(\$665)	(20%)	(\$515)	(20%)	(\$490)	(20%)
— Harvesting cost (Total)	(\$2032)	(60%)	(\$2025)	(59%)	(\$1992)	(60%)	(\$1677)	(64%)	(\$1533)	(64%)
Gross ex-vessel profit	\$1358	40%	\$1426	41%	\$1343	40%	\$926	36%	\$860	36%

Notes: Data shown for all CR program crab fisheries by calendar year. All dollar values are adjusted for inflation to 2018-equivalent value. Information suppressed for confidentiality where indicated by “*”, and data not available where indicated by “-”.

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 from 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, 2014 through 2018

variable	2014		2015		2016		2017		2018	
	Pounds, Value (million)	% of Gross	Pounds, Value (million)	% of Gross	Pounds, Value (million)	% of Gross	Pounds, Value (million)	% of Gross	Pounds, Value (million)	% of Gross
Number of active vessels	63	-	64	-	63	-	61	-	55	-
Pounds landed, million	9.8	-	9.8	-	8.7	-	6.6	-	4.2	-
IFQ leased (% of landed)	7.1	72%	6.5	66%	5.7	66%	5.0	75%	3.3	79%
Gross ex-vessel revenue	\$68.6	-	\$82.7	-	\$93.6	-	\$62.0	-	\$43.6	-
— Provisions	(\$0.4)	(1%)	(\$0.4)	(0%)	(\$0.3)	(0%)	(\$0.3)	(0%)	(\$0.2)	(1%)
— Bait	(\$0.7)	(1%)	(\$0.7)	(1%)	(\$0.6)	(1%)	(\$0.5)	(1%)	(\$0.4)	(1%)
— Fuel	(\$0.7)	(1%)	(\$0.7)	(1%)	(\$0.6)	(1%)	(\$0.5)	(1%)	(\$0.4)	(1%)
— Non-labor vessel cost (Total)	(\$1.8)	(3%)	(\$1.8)	(2%)	(\$1.6)	(2%)	(\$1.3)	(2%)	(\$1.0)	(2%)
Gross residual (non-labor)	\$66.8	97%	\$80.9	98%	\$92.1	98%	\$60.6	98%	\$42.5	98%
— Labor cost	(\$12.2)	(18%)	(\$14.3)	(17%)	(\$16.7)	(18%)	(\$10.6)	(17%)	(\$7.2)	(17%)
— Harvesting cost (Total)	(\$14.0)	(20%)	(\$16.1)	(20%)	(\$18.3)	(20%)	(\$11.9)	(19%)	(\$8.3)	(19%)
Gross ex-vessel profit	\$54.6	80%	\$66.5	80%	\$75.3	80%	\$50.0	81%	\$35.3	81%
— Gross returns to vessel sector ^a	\$22.5	41%	\$30.8	46%	\$35.2	47%	\$20.4	41%	\$12.9	37%
— Lease royalties (QS sector)	\$32.1	59%	\$35.7	54%	\$40.2	53%	\$29.6	59%	\$22.4	63%
Number of active vessels	69	-	69	-	67	-	63	-	62	-
Pounds landed, million	55.7	-	61.6	-	39.2	-	21.2	-	18.1	-
IFQ leased (% of landed)	42.3	76%	42.3	69%	27.5	70%	16.4	78%	14.0	77%
Gross ex-vessel revenue	\$139.7	-	\$131.6	-	\$111.1	-	\$88.7	-	\$72.4	-
— Provisions	(\$0.8)	(1%)	(\$0.8)	(1%)	(\$0.6)	(1%)	(\$0.4)	(0%)	(\$0.4)	(1%)
— Bait	(\$1.6)	(1%)	(\$2.0)	(2%)	(\$1.3)	(1%)	(\$0.9)	(1%)	(\$0.9)	(1%)
— Fuel	(\$1.6)	(1%)	(\$2.0)	(2%)	(\$1.3)	(1%)	(\$0.9)	(1%)	(\$0.9)	(1%)
— Non-labor vessel cost (Total)	(\$4.0)	(3%)	(\$4.9)	(4%)	(\$3.2)	(3%)	(\$2.2)	(3%)	(\$2.3)	(3%)
Gross residual (non-labor)	\$135.7	97%	\$126.7	96%	\$107.9	97%	\$86.5	97%	\$70.1	97%
— Labor cost	(\$27.5)	(20%)	(\$26.6)	(20%)	(\$22.4)	(20%)	(\$18.3)	(21%)	(\$15.3)	(21%)
— Harvesting cost (Total)	(\$31.5)	(23%)	(\$31.5)	(24%)	(\$25.6)	(23%)	(\$20.5)	(23%)	(\$17.5)	(24%)
Gross ex-vessel profit	\$108.2	77%	\$100.1	76%	\$85.5	77%	\$68.2	77%	\$54.8	76%
— Gross returns to vessel sector ^a	\$58.4	54%	\$56.1	56%	\$47.0	55%	\$35.1	52%	\$28.0	51%
— Lease royalties (QS sector)	\$49.8	46%	\$44.0	44%	\$38.4	45%	\$33.0	48%	\$26.9	49%

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Table 3.25: Continued

variable	2014		2015		2016		2017		2018	
	Pounds, Value (million)	% of Gross	Pounds, Value (million)	% of Gross	Pounds, Value (million)	% of Gross	Pounds, Value (million)	% of Gross	Pounds, Value (million)	% of Gross
Number of active vessels	76	-	82	-	81	-	72	-	67	-
Pounds landed, million	80.6	-	92.7	-	64.1	-	34.7	-	30.2	-
IFQ leased (% of landed)	61.0	76%	65.6	71%	47.1	74%	27.1	78%	23.9	79%
Gross ex-vessel revenue	\$257.7	-	\$283.0	-	\$270.1	-	\$187.4	-	\$160.3	-
— Provisions	(\$1.6)	(1%)	(\$2.0)	(1%)	(\$1.5)	(1%)	(\$1.0)	(1%)	(\$1.0)	(1%)
— Bait	(\$3.7)	(1%)	(\$4.7)	(2%)	(\$3.5)	(1%)	(\$2.3)	(1%)	(\$2.3)	(1%)
All CRP — Fuel	(\$3.7)	(1%)	(\$4.7)	(2%)	(\$3.5)	(1%)	(\$2.3)	(1%)	(\$2.3)	(1%)
— Non-labor vessel cost (Total)	(\$9.1)	(4%)	(\$11.5)	(4%)	(\$8.4)	(3%)	(\$5.7)	(3%)	(\$5.5)	(3%)
Gross residual (non-labor)	\$248.6	96%	\$271.5	96%	\$261.7	97%	\$181.8	97%	\$154.8	97%
— Labor cost	(\$49.7)	(19%)	(\$55.9)	(20%)	(\$53.9)	(20%)	(\$37.1)	(20%)	(\$32.8)	(20%)
— Harvesting cost (Total)	(\$58.8)	(23%)	(\$67.3)	(24%)	(\$62.3)	(23%)	(\$42.8)	(23%)	(\$38.3)	(24%)
Gross ex-vessel profit	\$198.9	77%	\$215.6	76%	\$207.8	77%	\$144.7	77%	\$122.0	76%
— Gross returns to vessel sector ^a	\$103.2	52%	\$116.9	54%	\$108.8	52%	\$66.7	46%	\$57.6	47%
— Lease royalties (QS sector)	\$95.7	48%	\$98.7	46%	\$99.0	48%	\$78.0	54%	\$64.4	53%

Notes: Data shown for all CR program crab fisheries by calendar year. All dollar values are adjusted for inflation to 2018-equivalent value. Information suppressed for confidentiality where indicated by “*”, and data not available where indicated by “-”.

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 from 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.

^a Residual percentages are vessel and QS sector share of gross ex-vessel profit; all other percentages are cost shares or residuals with respect to gross revenue.

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

	Year	Vessels ^a	Lease rate (percent of ex-vessel price) ^b		Pounds Leased (1000lbs)			Cost (\$1000)			Lease pounds as % of pounds landed) ^c	Lease cost as % of ex-vessel gross) ^d
			Median	Wtd mean	Total	Median	Mean	Total	Median	Mean	Wtd mean	Wtd mean
All Quota	2012	5	*	*	*	*	*	*	*	*	*	*
	2013	6	*	*	*	*	*	*	*	*	*	*
	2014	4	*	*	*	*	*	*	*	*	*	*
	2015	5	*	*	*	*	*	*	*	*	*	*
	2016	4	*	*	*	*	*	*	*	*	*	*
	2017	5	*	*	*	*	*	*	*	*	*	*
	2018	4	*	*	*	*	*	*	*	*	*	*
CVO A	2012	4	*	*	*	*	*	*	*	*	*	*
	2013	5	36%	43%	2,026	328	405	\$3,888	\$621.30	\$777.70	86%	40%
	2014	4	*	*	*	*	*	*	*	*	*	*
	2015	5	49%	49%	2,252	351	450	\$5,483	\$973.56	\$1,096.68	65%	34%
	2016	3	*	*	*	*	*	*	*	*	*	*
	2017	5	52%	53%	2,368	367	395	\$7,242	\$1,197.57	\$1,207.06	76%	40%
	2018	4	*	*	*	*	*	*	*	*	*	*
AIG CVO B + CPO	2012	4	*	*	*	*	*	*	*	*	*	*
	2013	6	36%	37%	1,285	83	143	\$1,986	\$249.82	\$220.65	102%	39%
	2014	4	*	*	*	*	*	*	*	*	*	*
	2015	5	37%	36%	1,375	24	196	\$2,129	\$76.65	\$304.21	95%	34%
	2016	4	*	*	*	*	*	*	*	*	*	*
	2017	5	53%	40%	1,285	73	161	\$3,023	\$197.29	\$377.88	91%	37%
	2018	4	*	*	*	*	*	*	*	*	*	*
CVC + CPC	2012	4	*	*	*	*	*	*	*	*	*	*
	2013	5	41%	49%	151	27	25	\$332	\$48.48	\$55.37	100%	50%
	2014	4	*	*	*	*	*	*	*	*	*	*
	2015	4	*	*	*	*	*	*	*	*	*	*
	2016	3	*	*	*	*	*	*	*	*	*	*
	2017	5	51%	74%	204	23	29	\$899	\$74.76	\$128.47	100%	78%
	2018	3	*	*	*	*	*	*	*	*	*	*
CDQ + ACA	2012	4	*	*	*	*	*	*	*	*	*	*
	2013	2	*	*	*	*	*	*	*	*	*	*
	2014	3	*	*	*	*	*	*	*	*	*	*
	2015	3	*	*	*	*	*	*	*	*	*	*
	2016	3	*	*	*	*	*	*	*	*	*	*
	2017	4	*	*	*	*	*	*	*	*	*	*
	2018	2	*	*	*	*	*	*	*	*	*	*

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Table 3.26: Continued

	Year	Vessels ^a	Lease rate (percent of ex-vessel price) ^b		Pounds Leased (1000lbs)			Cost (\$1000)			Lease pounds as % of pounds landed) ^c	Lease cost as % of ex-vessel gross) ^d
			Median	Wtd mean	Total	Median	Mean	Total	Median	Mean	Wtd mean	Wtd mean
All Quota	2012	53	65%	62%	4,698	80	89	\$26,243	\$454.88	\$495.15	77%	48%
	2013	55	65%	65%	6,116	88	111	\$30,785	\$435.63	\$559.73	80%	52%
	2014	52	63%	64%	7,122	108	137	\$32,584	\$509.52	\$626.62	83%	53%
	2015	52	63%	66%	6,515	106	125	\$36,013	\$554.37	\$692.55	80%	53%
	2016	53	62%	63%	5,786	89	109	\$41,050	\$643.79	\$774.53	81%	51%
	2017	52	62%	64%	4,959	70	95	\$29,675	\$410.75	\$570.67	84%	53%
	2018	45	63%	65%	3,328	48	74	\$22,362	\$335.54	\$496.94	90%	58%
CVO A	2012	50	65%	62%	3,619	65	72	\$19,649	\$336.90	\$392.97	74%	46%
	2013	51	64%	65%	4,425	79	87	\$21,967	\$372.26	\$430.73	77%	50%
	2014	50	62%	64%	5,229	88	105	\$23,689	\$397.50	\$473.78	82%	52%
	2015	49	63%	65%	5,129	90	105	\$27,975	\$466.94	\$570.91	78%	51%
	2016	50	62%	62%	4,433	75	89	\$30,855	\$514.31	\$617.10	77%	47%
	2017	50	62%	63%	3,709	56	74	\$22,094	\$328.22	\$441.89	81%	51%
	2018	42	62%	64%	2,503	41	60	\$16,553	\$274.85	\$394.12	87%	56%
BBR CVO B + CPO	2012	42	65%	67%	539	8	12	\$3,213	\$45.90	\$71.41	68%	43%
	2013	45	65%	64%	778	10	16	\$4,011	\$51.21	\$80.23	73%	47%
	2014	43	64%	63%	854	12	17	\$3,970	\$58.06	\$81.03	72%	45%
	2015	42	63%	66%	697	11	15	\$4,021	\$62.50	\$85.55	72%	48%
	2016	43	64%	65%	610	10	13	\$4,631	\$72.95	\$96.48	77%	51%
	2017	43	63%	63%	546	9	11	\$3,292	\$54.09	\$68.58	85%	54%
	2018	39	64%	65%	358	6	8	\$2,505	\$38.59	\$56.94	83%	54%
CVC + CPC	2012	36	63%	64%	172	4	5	\$989	\$23.39	\$26.04	76%	50%
	2013	37	66%	66%	199	5	5	\$1,055	\$23.43	\$25.74	76%	50%
	2014	34	65%	66%	213	6	6	\$987	\$25.23	\$27.42	78%	51%
	2015	40	63%	65%	222	5	5	\$1,273	\$30.40	\$30.32	73%	48%
	2016	35	66%	75%	193	5	5	\$1,391	\$35.92	\$37.60	46%	30%
	2017	39	62%	64%	153	3	4	\$944	\$22.36	\$23.59	85%	55%
	2018	35	63%	67%	109	3	3	\$765	\$19.25	\$19.62	81%	54%
CDQ + ACA	2012	5	64%	72%	369	71	74	\$2,406	\$477.26	\$481.15	100%	65%
	2013	8	67%	66%	713	77	89	\$3,751	\$405.70	\$468.93	100%	66%
	2014	7	63%	66%	826	118	118	\$3,937	\$535.71	\$562.47	100%	65%
	2015	5	67%	68%	468	100	94	\$2,744	\$572.15	\$548.71	100%	68%
	2016	5	63%	67%	550	121	110	\$4,173	\$881.56	\$834.60	101%	67%
	2017	6	63%	64%	551	94	92	\$3,345	\$560.35	\$557.48	100%	65%
	2018	6	66%	67%	357	71	60	\$2,539	\$491.34	\$423.13	100%	67%

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Table 3.26: Continued

	Year	Vessels ^a	Lease rate (percent of ex-vessel price) ^b		Pounds Leased (1000lbs)			Cost (\$1000)			Lease pounds as % of pounds landed) ^c	Lease cost as % of ex-vessel gross) ^d	
			Median	Wtd mean	Total	Median	Mean	Total	Median	Mean	Wtd mean	Wtd mean	
All Quota	2012	60	46%	47%	58,129	830	969	\$65,798	\$965.96	\$1,096.64	81%	38%	
	2013	61	47%	48%	50,270	671	824	\$61,242	\$742.77	\$1,003.96	83%	40%	
	2014	59	46%	47%	42,296	556	717	\$50,386	\$662.02	\$854.00	84%	39%	
	2015	57	46%	48%	42,317	641	742	\$44,190	\$670.23	\$775.27	81%	39%	
	2016	56	46%	49%	27,475	412	491	\$38,578	\$531.64	\$688.88	82%	41%	
	2017	54	46%	48%	16,448	218	305	\$33,086	\$438.11	\$612.70	86%	41%	
	2018	52	47%	48%	14,030	187	270	\$26,877	\$341.91	\$516.86	88%	42%	
CVO A	2012	55	46%	46%	42,796	640	778	\$46,937	\$723.93	\$853.40	79%	36%	
	2013	56	46%	47%	34,353	487	613	\$39,991	\$557.35	\$714.12	80%	37%	
	2014	57	46%	46%	29,683	442	521	\$34,436	\$520.49	\$604.14	82%	38%	
	2015	55	46%	48%	30,362	523	552	\$31,100	\$511.02	\$565.45	76%	37%	
	2016	54	46%	49%	19,640	337	364	\$27,040	\$419.43	\$500.75	79%	39%	
	2017	52	46%	47%	11,518	176	222	\$22,561	\$330.36	\$433.86	82%	38%	
	2018	48	46%	47%	10,046	153	209	\$18,723	\$281.95	\$390.06	83%	39%	
BSS	CVO B + CPO	2012	47	46%	47%	6,990	84	132	\$8,611	\$110.60	\$162.46	80%	38%
		2013	50	47%	50%	7,741	78	133	\$10,339	\$102.54	\$178.25	87%	43%
		2014	48	47%	56%	5,988	69	107	\$7,648	\$99.83	\$136.57	78%	38%
		2015	47	46%	48%	6,289	70	119	\$6,815	\$78.98	\$128.58	86%	41%
		2016	45	46%	50%	3,868	44	77	\$5,691	\$68.12	\$113.82	83%	41%
		2017	48	48%	50%	2,469	28	46	\$5,241	\$62.27	\$97.06	85%	43%
		2018	42	48%	48%	2,091	29	44	\$4,235	\$60.98	\$88.23	95%	45%
CVC + CPC	2012	39	46%	46%	1,880	48	46	\$2,212	\$55.51	\$55.30	75%	34%	
	2013	41	46%	48%	1,767	35	40	\$2,255	\$43.25	\$51.25	85%	41%	
	2014	37	46%	46%	1,258	29	31	\$1,558	\$36.66	\$39.96	93%	43%	
	2015	37	46%	49%	1,516	33	37	\$1,640	\$38.93	\$40.99	99%	49%	
	2016	36	46%	47%	925	22	25	\$1,325	\$32.35	\$35.80	99%	45%	
	2017	37	48%	54%	479	12	12	\$1,065	\$22.73	\$27.30	77%	42%	
	2018	36	46%	50%	500	12	13	\$1,039	\$24.96	\$27.35	98%	49%	
CDQ + ACA	2012	11	48%	50%	6,464	563	588	\$8,039	\$730.28	\$730.81	100%	50%	
	2013	11	54%	53%	6,409	564	583	\$8,657	\$810.52	\$787.02	100%	53%	
	2014	10	49%	58%	5,367	423	537	\$6,744	\$543.13	\$674.41	101%	50%	
	2015	7	51%	52%	4,150	509	593	\$4,636	\$569.52	\$662.31	101%	51%	
	2016	7	50%	52%	3,042	335	435	\$4,521	\$476.47	\$645.89	101%	52%	
	2017	8	50%	51%	1,982	222	248	\$4,219	\$479.84	\$527.40	101%	51%	
	2018	6	51%	51%	1,393	228	232	\$2,880	\$478.58	\$479.92	100%	51%	

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Table 3.26: Continued

	Year	Vessels ^a	Lease rate (percent of ex-vessel price) ^b		Pounds Leased (1000lbs)			Cost (\$1000)			Lease pounds as % of pounds landed) ^c	Lease cost as % of ex-vessel gross) ^d
			Median	Wtd mean	Total	Median	Mean	Total	Median	Mean	Wtd mean	Wtd mean
All Quota	2013	19	30%	31%	1,022	32	54	\$824	\$30.15	\$43.35	89%	27%
	2014	36	28%	27%	7,231	191	201	\$5,111	\$126.22	\$141.98	99%	27%
	2015	45	28%	31%	12,737	215	283	\$10,317	\$172.75	\$229.27	96%	28%
	2016	38	28%	30%	9,862	158	260	\$9,075	\$146.45	\$238.83	106%	32%
	2017	15	28%	29%	1,188	70	79	\$1,436	\$79.75	\$95.71	88%	26%
	2018	30	31%	31%	1,891	54	63	\$2,479	\$71.50	\$82.65	90%	29%
CVO A	2013	16	28%	28%	777	53	49	\$590	\$27.35	\$36.85	89%	26%
	2014	32	28%	27%	5,256	95	128	\$3,653	\$69.60	\$89.11	94%	26%
	2015	43	28%	30%	9,487	131	164	\$7,535	\$94.14	\$129.91	93%	27%
	2016	37	28%	29%	7,470	127	170	\$6,545	\$113.05	\$148.76	108%	31%
	2017	15	28%	29%	829	60	55	\$975	\$54.08	\$65.01	82%	24%
	2018	28	29%	30%	1,394	44	50	\$1,761	\$53.01	\$62.88	93%	28%
BST CVO B + CPO	2013	13	28%	47%	130	6	8	\$129	\$4.88	\$8.08	84%	34%
	2014	25	28%	34%	820	12	21	\$642	\$9.84	\$16.47	98%	27%
	2015	27	28%	33%	1,527	26	33	\$1,264	\$20.30	\$27.47	86%	26%
	2016	31	28%	33%	1,125	19	26	\$1,183	\$18.04	\$27.52	87%	29%
	2017	15	28%	29%	172	7	9	\$218	\$7.58	\$11.47	89%	26%
	2018	26	31%	35%	244	6	9	\$372	\$7.18	\$13.27	79%	30%
CVC + CPC	2013	9	28%	33%	27	1	2	\$24	\$1.10	\$2.01	87%	27%
	2014	24	28%	17%	428	3	11	\$194	\$2.14	\$5.10	99%	27%
	2015	24	28%	26%	382	6	9	\$275	\$4.18	\$6.39	60%	17%
	2016	23	28%	29%	438	7	13	\$549	\$6.92	\$15.69	66%	19%
	2017	14	28%	28%	31	2	2	\$38	\$2.06	\$2.74	93%	27%
	2018	22	29%	30%	54	1	2	\$67	\$1.90	\$2.81	59%	19%
CDQ + ACA	2013	5	34%	34%	88	25	18	\$81	\$16.95	\$16.10	100%	31%
	2014	6	34%	39%	729	30	81	\$622	\$33.24	\$69.07	77%	25%
	2015	8	29%	35%	1,342	125	149	\$1,244	\$97.03	\$138.18	100%	31%
	2016	7	31%	32%	830	81	104	\$797	\$76.90	\$99.68	100%	32%
	2017	4	*	*	*	*	*	*	*	*	*	*
	2018	5	29%	31%	199	44	40	\$280	\$59.48	\$55.97	100%	32%

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Table 3.26: Continued

	Year	Vessels ^a	Lease rate (percent of ex-vessel price) ^b		Pounds Leased (1000lbs)			Cost (\$1000)			Lease pounds as % of pounds landed) ^c	Lease cost as % of ex-vessel gross) ^d	
			Median	Wtd mean	Total	Median	Mean	Total	Median	Mean	Wtd mean	Wtd mean	
SMB	All Quota	2012	17	33%	32%	1,488	68	88	\$2,255	\$121.34	\$132.62	105%	34%
		2014	4	*	*	*	*	*	*	*	*	*	*
		2015	3	*	*	*	*	*	*	*	*	*	*
	CVO A	2012	17	32%	34%	1,149	49	68	\$1,796	\$72.93	\$105.63	99%	33%
		2014	3	*	*	*	*	*	*	*	*	*	*
		2015	3	*	*	*	*	*	*	*	*	*	*
	CVO B + CPO	2012	10	33%	35%	144	12	11	\$229	\$19.78	\$17.61	111%	39%
		2014	2	*	*	*	*	*	*	*	*	*	*
		2015	3	*	*	*	*	*	*	*	*	*	*
	CVC + CPC	2012	9	34%	11%	95	2	11	\$50	\$5.91	\$5.51	340%	39%
		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 “market-rate and/or negotiated price” lease transactions as reported for active crab fishing vessels in the 2012 through 2018 Crab EDR, which includes both true arm’s length transactions as well as transfers between related parties at market-rate value. 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 by year and quota type of vessels reporting pounds of the quota type leased; the count for “All Quota” shows the number of vessels reporting pounds leased for one or more quota types, and excludes vessels active for the year that did not report lease data for any quota type.

^b Lease rate statistics for each quota type are calculated with respect to ex-vessel value of crab sold using the same quota type, calculated as 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. Median lease rates are calculated over observation-level lease/ex-vessel ratios by quota type, and weighted mean values are weighted by observation-level pounds. “All Quota” lease rates are calculated over observations where by-quota type quantities are summed over all quota types at the vessel level, such that the weighted average is weighted by total pounds leased at the vessel-level.

^c Weighted mean statistics reported for “Lease pounds as % of pounds landed”, and “Lease cost as % of ex-vessel gross” are calculated over all observations where both ex-vessel and lease pounds, and ex-vessel revenue and lease cost were reported as non-zero values. By-quota type values are reported with respect to the percentage of aggregated ex-vessel pounds and revenue landed by vessels reporting non-zero lease values for that quota type, not the total ex-vessel volume and value of all landings of that quota type across the fleet.

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

Year	Harvest		Processing		
	Coop lease	Non-coop 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
2017/18	215	-	243	5	31
2018/19	252	-	128	3	50

Notes: Counts of Cooperative and Non-cooperative 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 of 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. IFQ leasing (or other transfer arrangements) 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: Crab Harvest Quota (QS) Sale Transfers, Estimated Price Per QS Unit, Catcher Vessel Owner and Crew QS

	Year	CVC QS				CVO QS			
		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)	*	*	*	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)	*	*	*	-	-	-	-
	2017/18	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	56	\$1.05	14(6,10)	7,140	115	\$0.66
	2006/07	24(20,17)	1,130	40	\$0.76	27(17,11)	24,420	404	\$1.10
	2007/08	10(8,5)	525	56	\$0.84	21(11,13)	7,145	289	\$1.39
	2008/09	9(7,7)	482	54	\$0.91	25(16,19)	13,988	274	\$1.39
	2009/10	9(6,7)	428	38	\$0.85	12(10,11)	4,526	375	\$1.16
	2010/11	5(5,5)	293	46	\$0.75	33(15,22)	14,596	195	\$1.00
	2011/12	3(3,2)	*	*	*	3(3,3)	*	*	*
	2012/13	4(3,3)	*	*	*	21(9,16)	7,044	141	\$0.87
	2013/14	9(8,7)	283	34	\$0.87	7(6,4)	5,424	1,051	\$1.03
	2014/15	10(8,6)	484	48	\$0.95	18(8,11)	8,903	86	\$1.31
	2015/16	3(2,2)	*	*	*	6(5,5)	2,866	364	\$1.41
	2016/17	11(7,10)	603	51	\$0.96	9(7,7)	3,138	71	\$1.35
2017/18	17(17,14)	1,020	58	\$0.59	10(7,8)	2,207	223	\$1.00	
2018/19	4(4,3)	*	*	*	4(3,4)	*	*	*	

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Table 3.28: Continued

	Year	CVC QS				CVO QS			
		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	110	\$0.27	22(9,12)	24,619	442	\$0.43
	2006/07	35(17,15)	2,864	65	\$0.24	36(17,8)	48,984	604	\$0.33
	2007/08	12(5,5)	822	51	\$0.35	26(10,13)	24,752	1,000	\$0.64
	2008/09	10(5,6)	758	48	\$0.49	15(9,11)	12,649	382	\$0.58
	2009/10	15(6,8)	1,121	49	\$0.32	14(8,10)	6,452	366	\$0.46
	2010/11	11(6,6)	852	81	\$0.41	56(17,24)	34,572	248	\$0.56
	2011/12	2(1,1)	*	*	*	21(10,12)	12,598	289	\$0.65
	2012/13	9(4,5)	921	85	\$1.02	40(9,18)	16,223	179	\$1.00
	2013/14	12(6,6)	674	34	\$0.78	50(15,18)	20,656	121	\$1.16
	2014/15	9(5,3)	418	28	\$0.91	23(13,14)	22,281	396	\$1.13
	2015/16	3(2,1)	*	*	*	16(9,10)	7,089	119	\$0.83
	2016/17	13(7,8)	1,433	138	\$0.31	7(4,5)	1,844	36	\$0.72
	2017/18	26(14,13)	2,305	76	\$0.29	4(2,3)	*	*	*
2018/19	6(3,3)	496	76	\$0.37	16(4,10)	3,611	104	\$0.51	
EBT	2006/07	17(14,14)	394	22	\$0.05	17(13,8)	6,578	417	\$0.10
	2007/08	5(4,3)	178	35	\$0.10	9(7,8)	3,031	388	\$0.18
	2008/09	4(4,4)	*	*	*	14(8,9)	6,246	373	\$0.18
	2009/10	3(2,3)	*	*	*	5(4,5)	832	172	\$0.05
	2010/11	3(3,3)	*	*	*	6(6,2)	*	*	*
	2011/12	-	-	-	-	2(2,2)	*	*	*
	2012/13	2(2,2)	*	*	*	12(5,10)	2,825	44	\$0.11
	2013/14	6(5,6)	127	27	\$0.06	10(5,6)	1,412	121	\$0.05
	2014/15	8(8,7)	185	25	\$0.20	15(7,11)	4,355	153	\$0.46
	2015/16	5(2,3)	*	*	*	7(6,7)	4,481	314	\$0.36
2016/17	8(7,7)	288	28	\$0.19	8(5,7)	2,766	304	\$0.47	
2017/18	19(19,14)	584	30	\$0.06	9(6,7)	1,657	122	\$0.31	
2018/19	3(3,3)	*	*	*	2(2,2)	*	*	*	

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Table 3.28: Continued

Year	CVC QS				CVO QS			
	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	22	\$0.05	22(18,9)	8,512	359	\$0.06
2007/08	5(4,3)	178	35	\$0.06	8(6,7)	2,948	388	\$0.12
2008/09	4(4,4)	*	*	*	14(8,9)	6,246	373	\$0.12
2009/10	2(2,2)	*	*	*	5(4,5)	832	172	\$0.02
2010/11	3(3,3)	*	*	*	5(5,2)	*	*	*
2011/12	-	-	-	-	1(1,1)	*	*	*
WBT 2012/13	2(2,2)	*	*	*	11(5,9)	885	36	\$0.09
2013/14	6(5,6)	127	27	\$0.05	10(5,6)	1,412	121	\$0.05
2014/15	6(6,5)	136	25	\$0.24	16(8,12)	4,677	172	\$0.36
2015/16	5(2,3)	*	*	*	7(6,7)	4,481	314	\$0.36
2016/17	9(8,8)	408	34	\$0.18	7(4,6)	1,894	192	\$0.44
2017/18	19(19,15)	616	30	\$0.09	9(6,7)	1,637	122	\$0.31
2018/19	3(3,3)	*	*	*	1(1,1)	*	*	*
2007/08	-	-	-	-	8(2,3)	*	*	*
2008/09	4(2,1)	*	*	*	-	-	-	-
2010/11	1(1,1)	*	*	*	6(3,1)	*	*	*
PIK 2012/13	2(1,1)	*	*	*	4(1,2)	*	*	*
2016/17	4(2,2)	*	*	*	-	-	-	-
2017/18	3(2,2)	*	*	*	-	-	-	-
2018/19	-	-	-	-	2(1,1)	*	*	*

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Table 3.28: Continued

Year	CVC QS				CVO QS			
	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
2005/06	1(1,1)	*	*	*	2(1,2)	*	*	*
2006/07	4(3,3)	*	*	*	6(1,3)	*	*	*
2007/08	4(2,1)	*	*	*	10(3,4)	877	91	\$0.41
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)	*	*	*
SMB 2012/13	2(1,1)	*	*	*	23(8,12)	1,003	21	\$0.95
2013/14	6(3,3)	36	6	\$0.64	2(1,1)	*	*	*
2014/15	2(1,1)	*	*	*	2(2,2)	*	*	*
2015/16	1(1,1)	*	*	*	-	-	-	-
2016/17	2(1,1)	*	*	*	-	-	-	-
2017/18	12(8,9)	115	8	\$0.06	2(1,1)	*	*	*
2018/19	3(2,2)	*	*	*	-	-	-	-
WAI 2013/14	-	-	-	-	2(2,1)	*	*	*

Notes: Data shown for all CR program crab fisheries by calendar year. All dollar values are adjusted for inflation to 2018-equivalent value. Information suppressed for confidentiality where indicated by “*”, and data not available where indicated by “-”. 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 transferors represents the number of distinct QS holders submitting applications to sell QS shares, and transferees identifies the number of distinct entities receiving transfers.

Source: NMFS AKRO RAM division Quota share transfer data.

Table 3.29: Crab Processor Quota (PQS) Sale Transfers, Estimated Price Per PQS Unit

		Processor QS			
	Year	Transfers (transferors, transferees)	Total units transferred (1,000)	Median units per transfer (1,000)	Median price per QS unit
EAG	2005/06	1(1,1)	*	*	*
	2008/09	3(2,2)	*	*	*
	2014/15	1(1,1)	*	*	*
	2017/18	1(1,1)	*	*	*
WAG	2008/09	8(4,3)	18,921.69	979.27	\$0.07
BBR	2008/09	4(4,3)	31,159.18	4,680.19	\$0.10
	2009/10	1(1,1)	*	*	*
	2014/15	3(1,1)	*	*	*
BSS	2008/09	2(2,2)	*	*	*
	2009/10	2(1,1)	*	*	*
	2013/14	1(1,1)	*	*	*
	2014/15	3(1,1)	*	*	*
	2017/18	1(1,1)	*	*	*
EBT	2008/09	5(5,4)	12,152.78	1,645.50	\$0.05
	2014/15	1(1,1)	*	*	*
	2017/18	1(1,1)	*	*	*
	2018/19	1(1,1)	*	*	*
WBT	2008/09	5(5,4)	12,152.78	1,645.50	\$0.00
	2014/15	1(1,1)	*	*	*
	2018/19	1(1,1)	*	*	*
SMB	2012/13	3(2,1)	*	*	*
	2014/15	2(1,1)	*	*	*

Notes: Data shown for all CR program crab fisheries by calendar year. All dollar values are adjusted for inflation to 2018-equivalent value. Information suppressed for confidentiality where indicated by “*”, and data not available where indicated by “-”.

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	2017/18	9,700,156	299,989	10,000,145	3.3569
	2018/19	9,700,156	299,989	10,000,145	2.8816
	2019/20	9,700,156	299,989	10,000,145	2.5780
WAG	2017/18	38,800,000	1,200,058	40,000,058	19.8857
	2018/19	38,800,000	1,200,058	40,000,058	17.7778
	2019/20	38,800,000	1,200,058	40,000,058	15.4859
BBR	2017/18	387,828,995	12,000,335	399,829,330	67.3011
	2018/19	387,828,995	12,000,335	399,829,330	103.1232
	2019/20	387,828,995	12,000,335	399,829,330	117.0015
BSS	2017/18	970,675,714	30,200,191	1,000,875,905	58.6511
	2018/19	970,675,714	30,017,240	1,000,692,954	40.3133
	2019/20	970,675,714	30,207,732	1,000,883,446	32.6903
WBT	2017/18	194,308,390	5,960,299	200,268,689	89.0012
	2018/19	194,308,390	5,884,368	200,192,758	91.1998

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

Table 3.31: Comparison of Crab QS Sale Price to IFQ Lease Price

Season	CVC QS					CVO QS					
	Average price/QS unit	Ratio QS units:IFQ pounds	QS Price/IFQ Pound	Average IFQ Lease Price	IFQ/QS Price Ratio	Average price/QS unit	Ratio QS units:IFQ pounds	QS Price/IFQ Pound	Average IFQ Lease Price	IFQ/QS Price Ratio	
BBR	2005/06	\$1.05	24.27	\$25.56	-	-	\$0.66	24.27	\$15.93	-	-
	2006/07	\$0.76	28.75	\$21.83	-	-	\$1.10	28.75	\$31.55	-	-
	2007/08	\$0.84	21.91	\$18.38	-	-	\$1.39	21.91	\$30.52	-	-
	2008/09	\$0.91	21.92	\$20.01	-	-	\$1.39	21.92	\$30.53	-	-
	2009/10	\$0.85	27.88	\$23.64	-	-	\$1.16	27.88	\$32.38	-	-
	2010/11	\$0.75	30.08	\$22.45	-	-	\$1.00	30.08	\$30.04	-	-
	2011/12	-	-	-	-	-	*	*	*	*	*
	2012/13	*	*	*	*	*	\$0.87	56.57	\$49.06	\$6.03	0.12
	2013/14	\$0.87	51.66	\$44.80	\$5.32	0.12	\$1.03	51.66	\$53.20	\$4.99	0.09
	2014/15	\$0.95	44.49	\$42.44	\$4.69	0.11	\$1.31	44.49	\$58.10	\$4.56	0.08
	2015/16	-	-	-	-	-	\$1.41	44.54	\$62.88	\$5.56	0.09
	2016/17	\$0.96	52.46	\$50.28	\$7.38	0.15	\$1.35	52.46	\$70.78	\$7.16	0.10
	2017/18	\$0.59	67.30	\$39.71	\$6.09	0.15	\$1.00	67.30	\$66.96	\$5.99	0.09
	2018/19	*	*	*	*	*	*	*	*	*	*
BSS	2005/06	\$0.27	29.88	\$7.92	-	-	\$0.43	29.88	\$12.81	-	-
	2006/07	\$0.24	30.60	\$7.50	-	-	\$0.33	30.60	\$10.12	-	-
	2007/08	\$0.35	17.75	\$6.28	-	-	\$0.64	17.75	\$11.33	-	-
	2008/09	\$0.49	19.11	\$9.40	-	-	\$0.58	19.11	\$11.10	-	-
	2009/10	\$0.32	23.31	\$7.49	-	-	\$0.46	23.31	\$10.70	-	-
	2010/11	\$0.41	20.62	\$8.52	-	-	\$0.56	20.62	\$11.60	-	-
	2011/12	-	-	-	-	-	\$0.65	12.51	\$8.16	\$1.18	0.14
	2012/13	\$1.02	16.76	\$17.01	\$1.32	0.08	\$1.00	16.76	\$16.72	\$1.21	0.07
	2013/14	\$0.78	20.60	\$16.00	\$1.30	0.08	\$1.16	20.60	\$23.90	\$1.24	0.05
	2014/15	\$0.91	16.37	\$14.82	\$1.14	0.08	\$1.13	16.37	\$18.44	\$1.04	0.06
	2015/16	-	-	-	-	-	\$0.83	27.38	\$22.82	\$1.43	0.06
	2016/17	\$0.31	51.56	\$15.81	\$2.17	0.14	\$0.72	51.56	\$37.06	\$2.13	0.06
	2017/18	\$0.29	58.65	\$17.01	\$2.10	0.12	-	-	-	-	-
	2018/19	\$0.37	40.31	\$14.71	-	-	\$0.51	40.31	\$20.56	-	-
2019/20	\$0.54	32.69	\$17.74	-	-	\$0.59	32.69	\$19.35	-	-	

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Table 3.31: Continued

Season	CVC QS					CVO QS				
	Average price/QS unit	Ratio QS units:IFQ pounds	QS Price/IFQ Pound	Average IFQ Lease Price	IFQ/QS Price Ratio	Average price/QS unit	Ratio QS units:IFQ pounds	QS Price/IFQ Pound	Average IFQ Lease Price	IFQ/QS Price Ratio
2006/07	\$0.05	118.90	\$5.83	-	-	\$0.10	118.90	\$11.35	-	-
2007/08	\$0.10	64.72	\$6.18	-	-	\$0.18	64.72	\$11.36	-	-
2008/09	*	*	*	*	*	\$0.18	80.69	\$14.17	-	-
EBT 2009/10	-	-	-	-	-	\$0.05	165.14	\$7.67	-	-
2013/14	\$0.06	152.13	\$9.07	\$0.86	0.10	\$0.05	152.13	\$8.25	\$0.80	0.10
2014/15	\$0.20	26.23	\$5.17	\$0.81	0.16	\$0.46	26.23	\$12.15	\$0.80	0.07
2015/16	-	-	-	-	-	\$0.36	19.74	\$7.20	\$0.87	0.12
2006/07	\$0.05	203.77	\$9.98	-	-	\$0.06	203.77	\$12.15	-	-
2007/08	\$0.06	102.46	\$6.11	-	-	\$0.12	102.46	\$11.99	-	-
2008/09	*	*	*	*	*	\$0.12	145.05	\$16.98	-	-
WBT 2013/14	\$0.05	135.26	\$7.33	-	-	\$0.05	135.26	\$7.33	-	-
2014/15	\$0.24	33.56	\$7.95	\$0.90	0.11	\$0.36	33.56	\$12.02	\$0.80	0.07
2015/16	-	-	-	-	-	\$0.36	26.50	\$9.66	\$0.77	0.08
2017/18	\$0.09	89.00	\$8.01	\$1.34	0.17	\$0.31	89.00	\$27.29	\$1.20	0.04
2018/19	*	*	*	*	*	-	-	-	-	-
SMB 2012/13	-	-	-	-	-	\$0.95	20.47	\$19.53	\$1.71	0.09

Notes: Data shown for all CR program crab fisheries by calendar year. All dollar values are adjusted for inflation to 2018-equivalent value. Information suppressed for confidentiality where indicated by “*”, and data not available where indicated by “-”. 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

	Season	Crew QS			Owner QS		
		QS holders	Median holding	Max holding	QS holders	Median holding	Max holding
EAG	Initial allocation	13	8.20%	12.79%	15	5.90%	20.11%
	2017/18	9	10.83%	20.14%	24	1.85%	20.00%
	2018/19	9	10.83%	20.14%	24	1.85%	20.00%
WAG	Initial allocation	9	6.17%	41.74%	15	1.78%	45.73%
	2017/18	9	6.30%	41.74%	13	1.81%	45.73%
	2018/19	9	6.30%	41.74%	13	1.81%	45.73%
BBR	Initial allocation	181	0.52%	1.23%	252	0.36%	2.24%
	2017/18	111	0.65%	2.00%	248	0.30%	5.00%
	2018/19	109	0.70%	2.00%	243	0.31%	5.00%
BSS	Initial allocation	155	0.64%	1.59%	241	0.39%	2.35%
	2017/18	109	0.79%	1.99%	264	0.25%	5.00%
	2018/19	108	0.79%	1.99%	263	0.25%	5.00%
EBT	Initial allocation	166	0.56%	1.99%	256	0.30%	3.87%
	2017/18	125	0.62%	1.99%	238	0.26%	4.97%
	2018/19	122	0.63%	1.99%	231	0.27%	4.97%
WBT	Initial allocation	166	0.56%	1.99%	256	0.30%	3.87%
	2017/18	125	0.62%	1.99%	238	0.26%	4.97%
	2018/19	122	0.63%	1.99%	232	0.27%	4.97%
PIK	Initial allocation	40	2.47%	4.81%	112	0.53%	3.41%
	2017/18	39	2.60%	4.81%	118	0.51%	6.96%
	2018/19	39	2.60%	4.81%	117	0.55%	6.96%
SMB	Initial allocation	73	1.35%	3.10%	137	0.62%	4.43%
	2017/18	63	1.41%	3.95%	133	0.55%	5.00%
	2018/19	63	1.41%	3.95%	135	0.55%	5.00%
WAI	Initial allocation	4	20.84%	49.46%	30	0.65%	45.16%
	2017/18	4	20.84%	49.46%	38	0.63%	45.16%
	2018/19	4	20.84%	49.46%	38	0.63%	45.16%

Notes: Statistics shown for Crew QS and Owner QS report combined crab catcher vessel and catcher/processor crew (CVC and CPC) QS, and combined (CVO and CPO) quota share pools, 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. Includes QS held by wholly owned direct subsidiaries of CDQ groups. Initial allocation reports the status of the quota pool as of the beginning of the 2005//06 crab season; statistics shown for the two most recent crab seasons reports the status of the QS pool as of the end of the respective season.

Initial issues received QS for the first crab season under the CR program, 2005/06. In the Tanner crab fishery, BST quota was initially issued, and the pool was subsequently split into Eastern and Western BST quota (EBT, WBT); statistics shown for Initial allocation for EBT and WBT are identical and represent the same pool, while statistics for subsequent periods are calculated separately for the distinct Eastern and Western fisheries.

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

Table 3.33: IFQ Fisheries Owner and Crew Quota Share Holdings by Fishery and Sector

	Season	Crew QS				Owner QS			
		QS holders	Mean(sd) holding	Median holding	Max holding	QS holders	Mean(sd) holding	Median holding	Max holding
EAG	Initial allocation	-	-	-	-	2	50(48.92)%	50.00%	84.59%
	2017/18	-	-	-	-	5	20(18.99)%	7.24%	49.66%
	2018/19	-	-	-	-	5	20(18.99)%	7.24%	49.66%
CV	Initial allocation	13	7.69(3.28)%	8.20%	12.79%	13	7.69(5.49)%	6.90%	21.12%
	2017/18	9	11.11(8.03)%	10.83%	20.14%	20	5(5.39)%	3.59%	21.02%
	2018/19	9	11.11(8.03)%	10.83%	20.14%	20	5(5.39)%	3.59%	21.02%
WAG	Initial allocation	2	50(68.14)%	50.00%	98.19%	2	50(69.21)%	50.00%	98.94%
	2017/18	2	50(68.14)%	50.00%	98.19%	3	33.33(56.81)%	1.06%	98.93%
	2018/19	2	50(68.14)%	50.00%	98.19%	3	33.33(56.81)%	1.06%	98.93%
CV	Initial allocation	8	12.5(10.75)%	9.67%	37.75%	13	7.69(11.98)%	3.31%	45.51%
	2017/18	8	12.5(11.85)%	8.93%	37.75%	11	9.09(13.72)%	3.31%	45.51%
	2018/19	8	12.5(11.85)%	8.93%	37.75%	11	9.09(13.72)%	3.31%	45.51%
BBR	Initial allocation	8	12.5(12.15)%	11.16%	35.13%	13	7.69(5.52)%	8.40%	21.62%
	2017/18	9	11.11(11.89)%	10.01%	35.13%	9	11.11(7.63)%	10.64%	21.62%
	2018/19	9	11.11(11.89)%	10.01%	35.13%	9	11.11(7.63)%	10.64%	21.62%
CV	Initial allocation	178	0.56(0.22)%	0.52%	1.17%	242	0.41(0.3)%	0.37%	2.17%
	2017/18	110	0.91(0.59)%	0.66%	2.07%	244	0.41(0.5)%	0.32%	4.90%
	2018/19	108	0.93(0.59)%	0.67%	2.07%	239	0.42(0.51)%	0.32%	4.90%

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Table 3.33: Continued

		Crew QS				Owner QS				
	Season	QS holders	Mean(sd) holding	Median holding	Max holding	QS holders	Mean(sd) holding	Median holding	Max holding	
BSS	CP	Initial allocation	8	12.5(7.31)%	11.79%	27.11%	14	7.14(3.66)%	7.78%	13.53%
		2017/18	7	14.29(9.52)%	11.33%	33.82%	21	4.76(6.56)%	1.06%	24.29%
		2018/19	7	14.29(9.52)%	11.33%	33.82%	21	4.76(6.56)%	1.06%	24.29%
	CV	Initial allocation	152	0.66(0.24)%	0.66%	1.39%	231	0.43(0.32)%	0.41%	2.58%
		2017/18	107	0.93(0.58)%	0.77%	2.11%	255	0.39(0.5)%	0.29%	4.44%
		2018/19	106	0.94(0.58)%	0.78%	2.11%	254	0.39(0.51)%	0.29%	4.44%
EBT	CP	Initial allocation	15	6.67(4.74)%	5.37%	18.32%	13	7.69(5.11)%	6.97%	16.79%
		2017/18	16	6.25(4.76)%	5.14%	18.32%	9	11.11(11.18)%	10.49%	37.53%
		2018/19	16	6.25(4.76)%	5.14%	18.32%	9	11.11(11.18)%	10.49%	37.53%
	CV	Initial allocation	160	0.63(0.38)%	0.58%	2.08%	246	0.41(0.38)%	0.32%	2.94%
		2017/18	121	0.83(0.6)%	0.65%	2.17%	236	0.42(0.5)%	0.28%	4.56%
		2018/19	118	0.85(0.61)%	0.68%	2.17%	229	0.44(0.51)%	0.28%	4.56%
WBT	CP	Initial allocation	15	6.67(4.74)%	5.37%	18.32%	13	7.69(5.11)%	6.97%	16.79%
		2017/18	16	6.25(4.76)%	5.14%	18.32%	9	11.11(11.18)%	10.49%	37.53%
		2018/19	16	6.25(4.76)%	5.14%	18.32%	9	11.11(11.18)%	10.49%	37.53%
	CV	Initial allocation	160	0.63(0.38)%	0.58%	2.08%	246	0.41(0.38)%	0.32%	2.94%
		2017/18	121	0.83(0.6)%	0.65%	2.17%	236	0.42(0.5)%	0.28%	4.56%
		2018/19	118	0.85(0.61)%	0.68%	2.17%	230	0.43(0.51)%	0.28%	4.56%

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Table 3.33: Continued

	Season	Crew QS				Owner QS			
		QS holders	Mean(sd) holding	Median holding	Max holding	QS holders	Mean(sd) holding	Median holding	Max holding
PIK	Initial allocation	-	-	-	-	1	100%	100.00%	100.00%
	2017/18	-	-	-	-	1	100%	100.00%	100.00%
	2018/19	-	-	-	-	1	100%	100.00%	100.00%
CV	Initial allocation	40	2.5(1.05)%	2.47%	4.81%	111	0.9(0.86)%	0.55%	3.42%
	2017/18	39	2.56(1.17)%	2.60%	4.81%	117	0.85(0.93)%	0.50%	6.99%
	2018/19	39	2.56(1.17)%	2.60%	4.81%	116	0.86(0.93)%	0.55%	6.99%
SMB	Initial allocation	-	-	-	-	5	20(13.24)%	15.46%	43.40%
	2017/18	-	-	-	-	2	50(9.34)%	50.00%	56.60%
	2018/19	-	-	-	-	2	50(9.34)%	50.00%	56.60%
CV	Initial allocation	73	1.37(0.44)%	1.35%	3.10%	133	0.75(0.62)%	0.65%	4.52%
	2017/18	63	1.59(0.78)%	1.41%	3.95%	132	0.76(0.77)%	0.55%	5.10%
	2018/19	63	1.59(0.78)%	1.41%	3.95%	134	0.75(0.78)%	0.56%	5.10%
WAI	Initial allocation	1	100%	100.00%	100.00%	2	50(66.26)%	50.00%	96.86%
	2017/18	1	100%	100.00%	100.00%	2	50(66.26)%	50.00%	96.86%
	2018/19	1	100%	100.00%	100.00%	2	50(66.26)%	50.00%	96.86%
CV	Initial allocation	4	25(22.34)%	16.53%	57.26%	29	3.45(5.32)%	1.01%	22.09%
	2017/18	4	25(22.34)%	16.53%	57.26%	37	2.7(4.52)%	1.01%	18.78%
	2018/19	4	25(22.34)%	16.53%	57.26%	37	2.7(4.52)%	1.01%	18.78%

Notes: Statistics shown by CP and CV sector-class for Crew QS (CPC and CVC) and Owner QS (CPO and CVO) report 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. Includes QS held by wholly owned direct subsidiaries of CDQ groups. Initial allocation reports the status of the quota pool as of the beginning of the 2005//06 crab season; statistics shown for the two most recent crab seasons reports the status of the QS pool as of the end of the respective season.

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
Combined	2005/06	224	95	42	54
	2006/07	214	82	38	52
	2007/08	211	84	40	51
	2008/09	206	82	40	50
	2009/10	207	72	35	49
	2010/11	204	71	35	48
	2011/12	203	72	35	46
	2012/13	202	65	32	43
	2013/14	203	64	32	42
	2014/15	204	66	32	41
	2015/16	203	71	35	43
	2016/17	201	61	30	40
	2017/18	175	64	37	45
	2018/19	172	58	34	41
CVC	2005/06	218	94	43	53
	2006/07	208	81	39	51
	2007/08	205	83	40	51
	2008/09	200	80	40	49
	2009/10	201	72	36	49
	2010/11	198	70	35	47
	2011/12	197	71	36	45
	2012/13	196	64	33	43
	2013/14	197	63	32	42
	2014/15	198	65	33	42
	2015/16	197	70	36	44
	2016/17	196	60	31	40
	2017/18	172	62	36	46
	2018/19	169	57	34	42

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Table 3.34: Continued

	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
	2005/06	24	13	54	69
	2006/07	24	10	42	69
	2007/08	24	12	50	60
	2008/09	24	13	54	60
	2009/10	25	9	36	43
	2010/11	27	12	44	51
CPC	2011/12	28	12	43	51
	2012/13	28	11	39	49
	2013/14	29	11	38	49
	2014/15	28	8	29	27
	2015/16	28	12	43	33
	2016/17	28	10	36	44
	2017/18	28	10	36	32
	2018/19	27	9	33	25

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%
	2017/18	5	30%	18	70%	1	0%
	2018/19	5	30%	18	70%	1	0%
WAG	Initial allocation	1	2%	14	98%	0	0%
	2017/18	5	63%	8	37%	0	0%
	2018/19	5	63%	8	37%	0	0%
BBR	Initial allocation	41	16%	203	82%	8	2%
	2017/18	53	29%	183	68%	12	2%
	2018/19	50	28%	180	68%	13	3%
BSS	Initial allocation	40	16%	195	82%	6	2%
	2017/18	53	32%	200	66%	11	3%
	2018/19	53	31%	197	65%	13	4%
EBT	Initial allocation	40	16%	209	82%	7	2%
	2017/18	50	32%	174	64%	14	4%
	2018/19	48	31%	169	65%	14	4%
WBT	Initial allocation	40	16%	209	82%	7	2%
	2017/18	51	32%	173	64%	14	4%
	2018/19	49	32%	169	64%	14	4%
PIK	Initial allocation	22	25%	86	72%	4	3%
	2017/18	34	38%	79	57%	5	5%
	2018/19	32	35%	78	57%	7	8%
SMB	Initial allocation	20	19%	113	80%	4	1%
	2017/18	30	34%	98	63%	5	3%
	2018/19	30	33%	98	63%	7	4%
WAI	Initial allocation	6	3%	24	97%	0	0%
	2017/18	13	52%	24	48%	1	0%
	2018/19	13	52%	24	48%	1	0%

Notes: Statistics shown for Owner QS report combined crab catcher vessel and catcher/processor owner (CVO and CPO) quota share pools, report the number of distinct QS holders and percentage of QS pool shares held by individuals by state of residence or entities by state of registration . Includes QS held by wholly owned direct subsidiaries of CDQ groups. Initial allocation reports the status of the quota pool as of the beginning of the 2005//06 crab season; statistics shown for the two most recent crab seasons reports the status of the QS pool as of the end of the respective season.

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

Season	Crew QS, Alaska		Crew QS, WA-OR-ID		Crew QS, Other Location		
	QS holders	Percent of pool	QS holders	Percent of pool	QS holders	Percent of pool	
EAG	Initial allocation	1	2%	11	94%	1	4%
	2017/18	0	0%	9	100%	0	0%
	2018/19	0	0%	9	100%	0	0%
WAG	Initial allocation	0	0%	8	94%	1	6%
	2017/18	0	0%	9	100%	0	0%
	2018/19	0	0%	9	100%	0	0%
BBR	Initial allocation	44	19%	128	75%	9	6%
	2017/18	27	23%	76	72%	8	5%
	2018/19	27	23%	74	72%	8	5%
BSS	Initial allocation	35	19%	111	76%	9	5%
	2017/18	25	21%	76	76%	8	3%
	2018/19	26	22%	75	76%	7	3%
EBT	Initial allocation	40	20%	117	75%	9	5%
	2017/18	30	25%	86	69%	9	6%
	2018/19	30	25%	83	68%	9	6%
WBT	Initial allocation	40	20%	117	75%	9	5%
	2017/18	30	25%	86	69%	9	6%
	2018/19	30	25%	83	68%	9	6%
PIK	Initial allocation	16	34%	19	55%	5	11%
	2017/18	14	30%	20	57%	5	12%
	2018/19	14	30%	20	57%	5	12%
SMB	Initial allocation	17	24%	53	72%	3	4%
	2017/18	17	27%	42	68%	4	5%
	2018/19	17	27%	41	66%	5	6%
WAI	Initial allocation	0	0%	4	100%	0	0%
	2017/18	0	0%	4	100%	0	0%
	2018/19	0	0%	4	100%	0	0%

Notes: Statistics shown for Crew QS report combined crab catcher vessel and catcher/processor crew (CVC and CPC) quota share pools, report the number of distinct QS holders and percentage of QS pool shares held by individuals by state of residence. Initial allocation reports the status of the quota pool as of the beginning of the 2005//06 crab season; statistics shown for the two most recent crab seasons reports the status of the QS pool as of the end of the respective season.

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)%
	2017/18	10	5.68%	45.36%	10(13.61)%
	2018/19	10	5.68%	45.36%	10(13.61)%
WAG	Initial allocation	9	1.03%	62.98%	11.11(21.23)%
	2017/18	10	3.41%	29.98%	10(12.04)%
	2018/19	10	3.41%	29.98%	10(12.04)%
BBR	Initial allocation	17	1.64%	22.98%	5.88(7.07)%
	2017/18	14	6.12%	23.20%	7.14(6.79)%
	2018/19	14	6.12%	23.20%	7.14(6.79)%
BSS	Initial allocation	20	2.08%	25.18%	5(6.73)%
	2017/18	17	3.42%	25.18%	5.88(7.52)%
	2018/19	17	3.42%	25.18%	5.88(7.52)%
EBT	Initial allocation	23	0.83%	24.26%	4.35(6.51)%
	2017/18	19	1.85%	24.37%	5.26(7.04)%
	2018/19	18	1.87%	24.37%	5.56(7.13)%
WBT	Initial allocation	23	0.83%	24.26%	4.35(6.51)%
	2017/18	19	1.85%	24.37%	5.26(7.04)%
	2018/19	18	1.87%	24.37%	5.56(7.13)%
PIK	Initial allocation	14	3.17%	24.49%	7.14(8.09)%
	2017/18	12	4.99%	25.46%	8.33(8.47)%
	2018/19	12	4.99%	25.46%	8.33(8.47)%
SMB	Initial allocation	12	5.06%	32.67%	8.33(10.56)%
	2017/18	10	4.18%	32.67%	10(11.3)%
	2018/19	10	4.18%	32.67%	10(11.3)%
WAI	Initial allocation	9	1.03%	62.98%	11.11(21.23)%
	2017/18	8	4.03%	32.99%	12.5(14.67)%
	2018/19	8	4.03%	32.99%	12.5(14.67)%

Notes: Reports the number of distinct PQS holders (entities or individuals), and the median and maximum percentage of PQS pool shares held amongst distinct entities in the pool. Includes QS held by wholly owned direct subsidiaries of CDQ groups. Initial allocation reports the status of the quota pool as of the beginning of the 2005//06 crab season; statistics shown for the two most recent crab seasons reports the status of the QS pool as of the end of the respective season.

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

	Season	CP QS		CV QS		ALL QS		PQS	
		CDQ Groups	Share of QS held	CDQ Groups	Share of QS held	CDQ Groups	Share of QS held	CDQ Groups	Share of QS held
EAG	2017/18	-	-	3	28.27%	3	26.94%	2	11.72%
	2018/19	-	-	3	28.27%	3	26.94%	2	11.72%
WAG	2017/18	1	96.19%	3	27.83%	4	59.35%	1	29.98%
	2018/19	1	96.19%	3	27.83%	4	59.35%	1	29.98%
BBR	Initial allocation	1	4.29%	3	1.23%	4	1.37%	-	-
	2017/18	4	40.98%	5	14.33%	5	15.54%	2	13.84%
	2018/19	4	40.98%	5	14.40%	5	15.60%	2	13.84%
BSS	Initial allocation	1	3.86%	3	1.42%	4	1.64%	-	-
	2017/18	4	44.53%	6	15.16%	6	17.82%	3	22.90%
	2018/19	4	44.53%	6	15.16%	6	17.82%	3	22.90%
EBT	Initial allocation	1	3.39%	3	1.42%	4	1.55%	-	-
	2017/18	4	62.68%	6	13.25%	6	16.60%	2	18.56%
	2018/19	4	62.68%	6	13.28%	6	16.63%	2	18.56%
WBT	Initial allocation	1	3.39%	3	1.42%	4	1.55%	-	-
	2017/18	4	62.68%	6	13.25%	6	16.60%	2	18.56%
	2018/19	4	62.68%	6	13.28%	6	16.63%	2	18.56%
PIK	Initial allocation	-	-	1	2.34%	1	2.33%	-	-
	2017/18	-	-	6	14.42%	6	14.35%	2	15.77%
	2018/19	-	-	6	14.42%	6	14.35%	2	15.77%
SMB	Initial allocation	-	-	2	1.14%	2	1.11%	-	-
	2017/18	2	100.00%	4	13.60%	5	15.26%	2	23.74%
	2018/19	2	100.00%	4	13.60%	5	15.26%	2	23.74%
WAI	Initial allocation	-	-	1	0.16%	1	0.10%	-	-
	2017/18	1	95.82%	5	16.95%	5	47.13%	-	-
	2018/19	1	95.82%	5	16.95%	5	47.13%	-	-

Notes: Share of QS held reports the proportion of CVO and CPO QS pools held by CDQ groups, including QS held through wholly owned direct subsidiaries; does not include QS held indirectly through partial interest in other QS entities. Initial allocation reports the status of the quota pool as of the beginning of the 2005//06 crab season; statistics shown for the two most recent crab seasons reports the status of the QS pool as of the end of the respective season.

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

Table 3.39: Crab QS/PQS Initial Recipients Currently Remaining in QS Pools, by Share Type and IFQ Fishery

	Quota	Initial issuance	2017/18	2018/19	Net change from initial issuance	Net change from previous year
All	All Harvest QS	532	347	335	-197	-12
EAG	CPO	2	0	0	-2	0
	CVC	13	3	3	-10	0
	CVO	13	8	8	-5	0
	All Harvest QS	28	11	11	-17	0
	Processor QS	9	5	4	-5	-1
WAG	CPC	2	1	1	-1	0
	CPO	2	1	1	-1	0
	CVC	8	5	5	-3	0
	CVO	13	8	8	-5	0
	All Harvest QS	24	15	15	-9	0
	Processor QS	9	6	6	-3	0
BBR	CPC	8	5	5	-3	0
	CPO	13	5	5	-8	0
	CVC	178	73	72	-106	-1
	CVO	242	169	165	-77	-4
	All Harvest QS	426	248	242	-184	-6
	Processor QS	17	8	8	-9	0
BSS	CPC	8	5	5	-3	0
	CPO	14	5	5	-9	0
	CVC	152	65	64	-88	-1
	CVO	231	161	157	-74	-4
	All Harvest QS	389	229	224	-165	-5
	Processor QS	20	10	10	-10	0

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Table 3.39: Continued

	Quota	Initial issuance	2017/18	2018/19	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	9	9	-6	0
	CPO	13	5	5	-8	0
	CVC	160	84	79	-81	-5
	CVO	246	171	166	-80	-5
	All Harvest QS	413	262	251	-162	-11
	Processor QS	23	13	12	-11	-1
BTW	CPC	15	9	9	-6	0
	CPO	13	5	5	-8	0
	CVC	160	84	79	-81	-5
	CVO	246	170	166	-80	-4
	All Harvest QS	413	261	251	-162	-10
	Processor QS	23	13	12	-11	-1

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Table 3.39: Continued

	Quota	Initial issuance	2017/18	2018/19	Net change from initial issuance	Net change from previous year
PIK	CPO	1	1	1	0	0
	CVC	40	27	27	-13	0
	CVO	111	81	77	-34	-4
	All Harvest QS	148	106	102	-46	-4
	Processor QS	14	9	9	-5	0
SMB	CPO	5	1	1	-4	0
	CVC	73	35	34	-39	-1
	CVO	133	91	91	-42	0
	All Harvest QS	210	128	127	-83	-1
	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 initial Crab QS/PQS recipients in each of the respective quota pools as of the beginning of the 2005/06 crab season; counts for the most recent seasons show the current number and net change (exit) in the number of initial issuees in the respective pool remaining as of the end of the two most recent crab seasons.

Quota initially issued for the Bering Sea Tanner crab (BST) was reissued for the 2006/07 season corresponding to division of the fishery into eastern and Western management units (EBT, WBT). The table reports initial BST quota holders as of 2005, and initial EBT and WBT holders as of 2006; net change from initial issuees remaining reported for EBT and WBT is relative to 2006.

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

Table 3.40: New Holders of Crab QS and PQS in 2017, Relative to Initial Allocation and Prior Season End

	Season	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	
		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	2017 season end	-	-	-	-	-	-	-	-	1	1%	1	1%
	Initial allocation	16	49%	12	44%	6	49%	3	42%	6	25%	5	24%
WAG	Initial allocation	4	16%	3	4%	3	27%	2	20%	4	53%	3	53%
BBR	2017 season end	2	1%	2	1%	1	1%	-	-	-	-	-	-
	Initial allocation	74	26%	68	23%	35	39%	31	35%	6	33%	5	32%
BSS	2017 season end	6	1%	4	1%	1	1%	1	1%	-	-	-	-
	Initial allocation	102	25%	92	23%	42	41%	38	38%	7	32%	6	31%
EBT	2017 season end	3	1%	3	1%	4	3%	2	2%	-	-	-	-
	Initial allocation	61	20%	61	20%	39	34%	35	33%	6	22%	5	22%
WBT	2017 season end	3	1%	3	1%	4	3%	2	2%	-	-	-	-
	Initial allocation	62	20%	62	20%	39	34%	35	33%	6	22%	5	22%
PIK	2017 season end	3	4%	1	2%	-	-	-	-	-	-	-	-
	Initial allocation	39	38%	27	27%	12	31%	8	18%	3	30%	2	16%
SMB	2017 season end	5	1%	2	0%	2	4%	-	-	-	-	-	-
	Initial allocation	43	22%	33	16%	29	48%	22	39%	5	35%	4	27%
WAI	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 2018/19 crab season.

Source: NMFS AKRO RAM division, Quota shareholder files.

Table 3.41: CR Program Fisheries - Catch, Landings, and Deadloss, 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	2005/06	6	5	32	2.6	2.5	0.1	23.8
	2006/07	4	6	32	2.7	2.7	0.0	31.3
	2007/08	4	4	36	2.7	2.7	0.0	21.0
	2008/09	3	5	29	2.8	2.8	0.0	24.1
	2009/10	2	6	32	*	*	*	*
	2010/11	2	7	30	*	*	*	*
	2011/12	2	9	45	*	*	*	*
	2012/13	2	10	46	*	*	*	*
	2013/14	2	9	39	*	*	*	*
	2014/15	2	7	37	*	*	*	*
	2015/16	2	6	37	*	*	*	*
	2016/17	2	7	41	*	*	*	*
	2017/18	2	7	41	*	*	*	*
2018/19	3	8	49	3.5	3.4	0.0	47.5	
WAG	2005/06	3	5	42	2.4	2.4	3.5	26.3
	2006/07	3	5	31	2.0	2.0	0.0	19.8
	2007/08	3	4	34	2.2	2.2	0.0	23.2
	2008/09	3	7	37	2.3	2.2	0.2	22.8
	2009/10	2	5	38	*	*	*	*
	2010/11	2	7	37	*	*	*	*
	2011/12	2	7	43	*	*	*	*
	2012/13	2	8	46	*	*	*	*
	2013/14	2	6	42	*	*	*	*
	2014/15	1	8	44	*	*	*	*
	2015/16	1	8	48	*	*	*	*
	2016/17	2	8	41	*	*	*	*
	2017/18	3	7	45	2.0	2.0	0.6	55.8
2018/19	3	6	44	2.3	2.2	0.0	48.5	
BBR	2005/06	83	13	255	16.5	16.4	18.4	77.5
	2006/07	36	13	183	13.9	13.8	10.3	98.7
	2007/08	27	17	246	18.3	18.2	33.8	132.0
	2008/09	25	16	252	18.3	18.1	21.0	160.8
	2009/10	13	14	212	14.4	14.2	20.8	111.5
	2010/11	10	14	223	13.3	13.2	25.9	99.5
	2011/12	10	15	254	7.1	7.0	15.1	30.2
	2012/13	9	15	219	7.1	7.0	15.2	28.8
	2013/14	10	15	250	7.7	7.7	18.7	60.6
	2014/15	10	14	241	9.0	8.9	14.4	94.5
	2015/16	9	12	243	9.0	8.8	12.8	178.0
	2016/17	8	14	249	7.6	7.6	19.3	35.4
	2017/18	8	14	237	5.9	5.9	15.8	23.0
2018/19	8	12	208	3.9	3.8	15.9	26.7	

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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	2005/06	70	13	301	33.3	32.9	0.7	322.6
	2006/07	30	16	272	32.7	32.3	0.3	378.8
	2007/08	25	17	459	56.7	56.2	6.5	500.1
	2008/09	24	15	428	52.7	52.3	0.6	403.3
	2009/10	12	11	321	43.2	42.7	1.8	500.0
	2010/11	10	14	466	48.8	48.5	3.3	314.0
	2011/12	11	14	798	79.9	79.4	5.4	582.4
	2012/13	9	14	585	59.6	59.2	2.1	427.3
	2013/14	10	13	573	48.6	48.2	1.5	354.5
	2014/15	10	13	640	61.1	60.6	1.3	546.0
	2015/16	9	11	492	36.6	36.2	2.0	352.7
	2016/17	8	13	360	19.4	19.2	0.7	234.7
	2017/18	8	11	356	17.1	16.9	1.3	153.5
2018/19	8	12	413	24.8	24.6	0.3	237.6	
BST	2005/06	34	9	73	0.8	0.8	2.9	14.6
EBT	2006/07	21	10	57	1.3	1.3	0.7	8.4
	2007/08	10	8	58	1.4	1.4	0.1	15.6
	2008/09	10	10	60	1.6	1.5	0.8	11.9
	2009/10	8	12	45	1.2	1.2	3.5	7.1
	2013/14	5	13	107	1.3	1.3	2.1	6.2
	2014/15	7	13	194	7.6	7.6	1.2	48.2
	2015/16	8	12	244	10.1	10.0	1.1	115.0
	2018/19	1	4	8	*	*	*	*
WBT	2006/07	14	10	60	0.6	0.6	0.0	18.5
	2007/08	8	8	44	0.5	0.5	1.1	4.1
	2008/09	10	7	50	0.1	0.1	0.1	2.6
	2009/10	4	1	22	*	*	*	*
	2013/14	8	13	186	1.2	1.2	0.0	15.0
	2014/15	8	13	234	4.6	4.5	1.7	92.4
	2015/16	7	11	268	7.5	7.5	0.6	49.6
	2017/18	8	14	133	2.2	2.2	2.9	15.8
	2018/19	8	13	149	2.2	2.2	1.9	39.1
SMB	2009/10	1	6	30	*	*	*	*
	2010/11	2	8	63	*	*	*	*
	2011/12	6	10	107	1.7	1.7	2.9	25.6
	2012/13	3	10	125	1.5	1.4	0.9	19.8
	2014/15	1	6	28	*	*	*	*
	2015/16	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: CR Program Fisheries - Distribution of Vessel Catch and Landings Volume, 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
	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
AIG	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	1,179.83	20.34%	0.17
	2016	5	5.60	1,150.76	20.54%	0.13
	2017	5	5.56	1,155.61	20.77%	0.17
	2018	5	6.51	1,110.91	17.07%	0.21
	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
BBR	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	134.73	1.38%	0.26
	2016	63	8.41	112.63	1.34%	0.29
	2017	61	6.55	86.43	1.32%	0.32
	2018	55	4.23	64.23	1.52%	0.34

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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
2017	63	21.32	294.17	1.38%	0.32	
2018	63	18.84	232.46	1.23%	0.34	
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
	2017	16	1.41	92.38	6.57%	0.30
2018	30	2.29	65.40	2.86%	0.34	
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: CR Program Fisheries - Distribution of Crab Processor Purchasing Volume, by Calendar Year

	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
2017	13	5.56	0.25	4.5%	0.55	
2018	11	6.51	0.24	3.7%	0.56	
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
2017	17	6.55	0.15	2.3%	0.62	
2018	15	4.23	0.17	4.0%	0.56	

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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	
2017	14	21.32	0.86	4.0%	0.51	
2018	13	18.84	0.77	4.1%	0.47	
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
2017	11	1.41	0.07	5.1%	0.46	
2018	14	2.29	0.07	3.2%	0.59	
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 purchased crab landings from CDQ and IFQ fisheries and pre-rationalization general access fisheries. Landings/harvest made by and self-processed by catcher/processers are treated as purchases, with catcher/processers counted as buyers. Buyers include catcher/processers landing and processing their own crab.

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

Table 3.44: CR Program Fisheries - Delivery and Trip Statistics, by Season

Season	Vessels	Deliveries total	Deliveries per vessel mean(sd)	Trips per vessel means(sd)	Landings per delivery, mean(sd) (thousand lbs)	Trips total	Landings per trip, mean(sd) (thousand lbs)
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)	-	-
2005/06	7	34	4.9(2.1)	-	83.5(47.3)	-	-
2006/07	6	28	4.7(4.2)	4.0(2.7)	105.6(59.5)	24	124.7(57.9)
EAG 2007/08	4	35	8.8	7.0	84.8(57.7)	28	106.8(62.3)
2008/09	3	*	*	*	*	*	*
2009/10	3	*	*	*	*	*	*
2010/11	3	*	*	*	*	*	*
2011/12	3	*	*	*	*	*	*
2012/13	3	*	*	*	*	*	*
2013/14	3	*	*	*	*	*	*
2014/15	3	*	*	*	*	*	*
2015/16	3	*	*	*	*	*	*
2016/17	4	27	6.8	6.3	120.1(54.9)	25	132.3(52.6)
2017/18	4	26	6.5	6.0	125.2(65.5)	24	137.8(65.0)

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Table 3.44: Continued

Season	Vessels	Deliveries total	Deliveries per vessel mean(sd)	Trips per vessel means(sd)	Landings per delivery, mean(sd) (thousand lbs)	Trips total	Landings per trip, mean(sd) (thousand lbs)
1998/99	3	*	*	-	*	-	-
1999/00	15	113	7.5(10.4)	-	23.2(15.3)	-	-
2000/01	12	97	8.1(9.4)	-	28.0(17.5)	-	-
2001/02	9	90	10.0(8.2)	-	29.9(16.2)	-	-
2002/03	6	72	12.0(9.2)	-	36.2(20.7)	-	-
2003/04	6	60	10.0(6.8)	-	44.0(29.5)	-	-
2004/05	6	51	8.5(5.9)	-	51.8(36.2)	-	-
2005/06	3	*	*	-	*	-	-
2006/07	4	33	8.3	7.3	67.6(29.6)	29	77.7(32.0)
WAG 2007/08	3	*	*	*	*	*	*
2008/09	3	*	*	*	*	*	*
2009/10	3	*	*	*	*	*	*
2010/11	3	*	*	*	*	*	*
2011/12	3	*	*	*	*	*	*
2012/13	4	32	8.0	6.8	90.5(40.1)	27	109.4(40.2)
2013/14	3	*	*	*	*	*	*
2014/15	2	*	*	*	*	*	*
2015/16	2	*	*	*	*	*	*
2016/17	3	*	*	*	*	*	*
2017/18	3	*	*	*	*	*	*

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Table 3.44: Continued

Season	Vessels	Deliveries total	Deliveries per vessel mean(sd)	Trips per vessel means(sd)	Landings per delivery, mean(sd) (thousand lbs)	Trips total	Landings per trip, mean(sd) (thousand lbs)
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)	-	-
2005/06	89	261	2.9(1.7)	-	69.8(47.8)	-	-
2006/07	81	187	2.3(1.1)	2.2(1.0)	82.8(61.6)	176	88.7(67.0)
BBR 2007/08	74	247	3.3(1.6)	2.8(1.4)	81.7(53.7)	207	98.4(55.7)
2008/09	78	263	3.4(1.8)	3.0(1.5)	76.5(48.1)	237	85.8(51.3)
2009/10	70	211	3.0(1.2)	2.8(1.1)	74.8(48.4)	198	80.5(50.3)
2010/11	65	213	3.3(1.3)	3.1(1.1)	69.0(42.7)	201	73.8(45.7)
2011/12	62	124	2.0(0.9)	1.8(0.9)	62.8(49.8)	114	68.1(51.9)
2012/13	64	118	1.8(0.9)	1.6(0.7)	66.1(45.2)	101	77.7(57.1)
2013/14	63	119	1.9(1.0)	1.7(0.7)	71.6(47.7)	105	81.9(52.7)
2014/15	63	117	1.9(0.6)	1.8(0.6)	84.4(51.6)	113	87.6(56.1)
2015/16	64	116	1.8(0.7)	1.8(0.7)	84.3(51.9)	114	87.5(53.5)
2016/17	63	117	1.9(0.8)	1.8(0.8)	71.8(41.6)	115	73.0(42.4)
2017/18	61	112	1.8(0.8)	1.8(0.8)	58.6(36.9)	112	58.9(37.0)

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Table 3.44: Continued

Season	Vessels	Deliveries total	Deliveries per vessel mean(sd)	Trips per vessel means(sd)	Landings per delivery, mean(sd) (thousand lbs)	Trips total	Landings per trip, mean(sd) (thousand lbs)
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)	-	-
2005/06	78	316	4.1(2.9)	-	115.9(75.7)	-	-
2006/07	69	273	4.0(2.5)	3.1(2.0)	131.5(83.1)	215	169.1(104.1)
BSS 2007/08	78	466	6.0(2.9)	5.4(2.6)	134.1(81.2)	420	149.4(84.6)
2008/09	77	437	5.7(2.7)	4.9(2.3)	132.9(78.0)	381	153.7(84.4)
2009/10	68	308	4.5(1.9)	4.3(1.7)	154.1(85.4)	289	165.0(88.7)
2010/11	68	343	5.0(2.2)	4.8(2.1)	157.2(83.9)	323	168.0(84.6)
2011/12	72	658	9.1(3.7)	8.8(3.7)	134.0(85.4)	636	139.7(87.8)
2012/13	70	435	6.2(2.5)	6.0(2.4)	151.2(81.9)	422	157.0(82.7)
2013/14	70	379	5.4(2.3)	5.3(2.3)	141.4(76.7)	370	145.1(78.5)
2014/15	70	471	6.7(2.9)	6.5(2.8)	143.0(79.3)	458	146.7(84.4)
2015/16	70	295	4.2(1.7)	4.1(1.6)	136.4(83.1)	289	124.9(92.8)
2016/17	63	201	3.2(1.1)	3.0(1.0)	106.1(76.4)	192	111.8(79.3)
2017/18	63	190	3.0(1.4)	3.0(1.4)	98.9(76.5)	187	99.3(80.3)

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Table 3.44: Continued

Season	Vessels	Deliveries total	Deliveries per vessel mean(sd)	Trips per vessel means(sd)	Landings per delivery, mean(sd) (thousand lbs)	Trips total	Landings per trip, mean(sd) (thousand lbs)
2005/06	33	64	1.9(1.1)	-	14.6(22.8)	-	-
2006/07	39	88	2.3(1.3)	2.1(1.2)	23.8(28.2)	82	18.1(28.1)
2007/08	27	95	3.5(2.4)	3.4(2.4)	21.9(25.3)	93	17.7(25.2)
2008/09	20	67	3.4(3.0)	3.0(2.3)	28.7(35.8)	59	14.7(33.8)
BST 2009/10	13	32	2.5(1.6)	2.2(1.2)	41.0(43.0)	28	14.9(35.7)
2013/14	25	74	3.0(2.0)	2.8(2.0)	37.2(35.2)	71	10.9(26.0)
2014/15	45	191	4.2(2.6)	4.1(2.5)	70.9(51.4)	184	44.8(54.8)
2015/16	56	282	5.0(2.6)	5.0(2.5)	69.0(44.3)	280	52.1(49.5)
2017/18	32	55	1.7(1.1)	1.7(1.1)	45.1(36.6)	53	34.2(40.0)
PIK 1998	58	91	1.6(0.7)	-	11.3(8.7)	-	-
1998	131	259	2.0(0.5)	-	11.4(7.1)	-	-
2009/10	7	16	2.3(1.5)	2.1(1.5)	28.1(16.5)	15	30.7(22.3)
2010/11	11	40	3.6(1.5)	3.5(1.4)	31.3(17.8)	38	33.3(17.7)
SMB 2011/12	18	58	3.2(1.4)	3.2(1.4)	31.9(17.0)	57	33.0(21.0)
2012/13	17	45	2.6(1.4)	2.6(1.4)	35.4(17.7)	45	35.9(18.1)
2014/15	4	14	3.5	3.5	21.6(15.5)	14	22.0(15.9)
2015/16	3	*	*	*	*	*	*
1998/99	1	*	*	-	*	-	-
WAI 2002/03	33	35	1.1(0.2)	-	14.4(8.3)	-	-
2003/04	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 dates	Season length, days	Earliest landing	Latest landing	Days fished	Percent of season fished
	1998	01-Sep - 07-Nov	68	-	-	-	-
	1999	01-Sep - 25-Oct	55	-	-	-	-
	2000	15-Aug - 24-Sep	41	-	-	-	-
	2001	15-Aug - 10-Sep	27	-	-	-	-
	2002	15-Aug - 07-Sep	24	-	-	-	-
	2003	15-Aug - 08-Sep	25	-	-	-	-
	2004	15-Aug - 29-Aug	15	-	-	-	-
	2005/06	15-Aug - 15-May	274	30-Aug	28-Mar	211	77%
	2006/07	15-Aug - 15-May	274	31-Aug	13-Jan	136	50%
EAG	2007/08	15-Aug - 15-May	275	30-Aug	09-Feb	164	60%
	2008/09	15-Aug - 15-May	274	07-Sep	22-Dec	107	39%
	2009/10	15-Aug - 15-May	274	31-Aug	10-Jan	133	49%
	2010/11	15-Aug - 15-May	274	22-Aug	16-Dec	117	43%
	2011/12	15-Aug - 15-May	275	26-Aug	24-Nov	91	33%
	2012/13	15-Aug - 15-May	274	25-Aug	03-Dec	101	37%
	2013/14	15-Aug - 15-May	274	30-Aug	26-Nov	89	32%
	2014/15	15-Aug - 15-May	274	30-Aug	13-Nov	76	28%
	2015/16	01-Aug - 30-Apr	274	23-Aug	13-Nov	83	30%
	2016/17	01-Aug - 30-Apr	273	19-Aug	02-Apr	227	83%
	2017/18	01-Aug - 30-Apr	273	14-Aug	25-Mar	224	82%
	2018/19	01-Aug - 30-Apr	273	13-Aug	09-Feb	181	66%
	1998/99	01-Sep - 31-Aug	365	-	-	-	-
	1999/00	01-Sep - 14-Aug	349	-	-	-	-
	2000/01	01-Sep - 28-May	270	-	-	-	-
	2001/02	15-Aug - 30-Mar	228	-	-	-	-
	2002/03	15-Aug - 08-Mar	206	-	-	-	-
	2003/04	15-Aug - 06-Feb	176	-	-	-	-
	2005/06	15-Aug - 15-May	274	06-Sep	25-Mar	201	73%
	2006/07	15-Aug - 15-May	274	10-Sep	06-May	239	87%
	2007/08	15-Aug - 15-May	275	14-Sep	21-May	251	91%
WAG	2008/09	15-Aug - 15-May	274	13-Sep	12-May	242	88%
	2009/10	15-Aug - 15-May	274	05-Sep	18-May	256	93%
	2010/11	15-Aug - 15-May	274	11-Sep	18-Mar	189	69%
	2011/12	15-Aug - 15-May	275	06-Sep	10-Apr	218	79%
	2012/13	15-Aug - 15-May	274	10-Sep	05-May	238	87%
	2013/14	15-Aug - 15-May	274	09-Sep	08-May	242	88%
	2014/15	15-Aug - 15-May	274	06-Sep	17-May	254	93%
	2015/16	01-Aug - 30-Apr	274	14-Aug	02-May	263	96%
	2016/17	01-Aug - 30-Apr	273	02-Sep	17-Mar	197	72%
	2017/18	01-Aug - 30-Apr	273	13-Aug	06-Mar	206	75%
	2018/19	01-Aug - 30-Apr	273	14-Aug	14-Mar	213	78%

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Table 3.45: Continued

	Year	Season dates	Season length, days	Earliest landing	Latest landing	Days fished	Percent of season fished
	1998	01-Nov - 06-Nov	6	-	-	-	-
	1999	15-Oct - 20-Oct	6	-	-	-	-
	2000	16-Oct - 20-Oct	5	-	-	-	-
	2001	15-Oct - 18-Oct	4	-	-	-	-
	2002	15-Oct - 18-Oct	4	-	-	-	-
	2003	15-Oct - 20-Oct	6	-	-	-	-
	2004	15-Oct - 18-Oct	4	-	-	-	-
	2005/06	15-Oct - 15-Jan	93	20-Oct	16-Jan	89	96%
	2006/07	15-Oct - 15-Jan	93	19-Oct	28-Nov	41	44%
	2007/08	15-Oct - 15-Jan	93	18-Oct	15-Jan	90	97%
BBR	2008/09	15-Oct - 15-Jan	93	18-Oct	17-Jan	92	99%
	2009/10	15-Oct - 15-Jan	93	17-Oct	16-Jan	92	99%
	2010/11	15-Oct - 15-Jan	93	16-Oct	10-Dec	56	60%
	2011/12	15-Oct - 15-Jan	93	18-Oct	18-Nov	32	34%
	2012/13	15-Oct - 15-Jan	93	18-Oct	16-Dec	60	65%
	2013/14	15-Oct - 15-Jan	93	21-Oct	15-Nov	26	28%
	2014/15	15-Oct - 15-Jan	93	19-Oct	17-Nov	30	32%
	2015/16	15-Oct - 15-Jan	93	17-Oct	17-Nov	32	34%
	2016/17	15-Oct - 15-Jan	93	18-Oct	18-Nov	32	34%
	2017/18	15-Oct - 15-Jan	93	19-Oct	06-Jan	80	86%
	2018/19	15-Oct - 15-Jan	93	19-Oct	08-Jan	82	88%
	1998	15-Jan - 20-Mar	65	-	-	-	-
	1999	15-Jan - 22-Mar	67	-	-	-	-
	2000	01-Apr - 08-Apr	8	-	-	-	-
	2001	15-Jan - 14-Feb	31	-	-	-	-
	2002	15-Jan - 08-Feb	25	-	-	-	-
	2003	15-Jan - 25-Jan	11	-	-	-	-
	2004	15-Jan - 23-Jan	9	-	-	-	-
	2005	15-Jan - 20-Jan	6	-	-	-	-
	2005/06	15-Oct - 31-May	229	27-Oct	27-May	213	93%
	2006/07	15-Oct - 31-May	229	07-Nov	05-May	180	79%
	2007/08	15-Oct - 31-May	230	18-Nov	10-May	175	76%
BSS	2008/09	15-Oct - 31-May	229	30-Nov	16-May	168	73%
	2009/10	15-Oct - 31-May	229	11-Jan	06-May	116	51%
	2010/11	15-Oct - 31-May	229	18-Nov	09-Apr	143	62%
	2011/12	15-Oct - 15-Jun	245	02-Nov	19-Jun	231	94%
	2012/13	15-Oct - 31-May	229	24-Nov	05-Jun	194	85%
	2013/14	15-Oct - 31-May	229	20-Oct	29-Apr	192	84%
	2014/15	15-Oct - 31-May	229	03-Nov	30-May	209	91%
	2015/16	15-Oct - 31-May	230	05-Nov	14-May	192	83%
	2016/17	15-Oct - 31-May	229	07-Jan	25-Apr	109	48%
	2017/18	15-Oct - 31-May	229	12-Jan	16-Apr	95	41%
	2018/19	15-Oct - 31-May	229	05-Nov	26-Apr	173	76%

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Table 3.45: Continued

	Year	Season dates	Season length, days	Earliest landing	Latest landing	Days fished	Percent of season fished
BST	2005/06	15-Oct - 31-Mar	168	27-Oct	02-Apr	158	94%
	2006/07	15-Oct - 31-Mar	168	23-Oct	27-Mar	156	93%
	2007/08	15-Oct - 31-Mar	169	20-Oct	02-Apr	166	98%
	2008/09	15-Oct - 31-Mar	168	19-Oct	11-Mar	144	86%
	2009/10	15-Oct - 31-Mar	168	17-Oct	01-Mar	136	81%
	2013/14	15-Oct - 31-Mar	168	29-Oct	29-Mar	152	90%
	2014/15	15-Oct - 31-Mar	168	21-Oct	01-Apr	163	97%
	2015/16	15-Oct - 31-Mar	169	23-Oct	27-Mar	157	93%
BTE	2006/07	15-Oct - 31-Mar	168	04-Nov	26-Mar	143	86%
	2007/08	15-Oct - 31-Mar	169	16-Nov	31-Mar	137	81%
	2008/09	15-Oct - 31-Mar	168	13-Jan	25-Mar	72	43%
	2013/14	15-Oct - 31-May	229	07-Nov	08-Apr	153	67%
	2014/15	15-Oct - 31-Mar	168	03-Nov	18-Apr	167	99%
	2015/16	15-Oct - 31-Mar	169	31-Oct	03-Apr	156	92%
	2017/18	15-Oct - 31-Mar	168	18-Oct	29-Mar	163	97%
	2018/19	15-Oct - 31-Mar	168	24-Oct	01-Apr	160	95%
BTW	1998	15-Sep - 28-Sep	14	-	-	-	-
	1998	15-Sep - 26-Sep	12	-	-	-	-
	2009/10	15-Oct - 01-Feb	110	23-Oct	07-Dec	46	42%
	2010/11	15-Oct - 01-Feb	110	23-Oct	11-Dec	50	45%
	2011/12	15-Oct - 01-Feb	110	21-Oct	15-Dec	56	51%
	2012/13	15-Oct - 01-Feb	110	23-Oct	08-Dec	47	43%
	2014/15	15-Oct - 01-Feb	110	28-Oct	05-Dec	39	35%
	2015/16	15-Oct - 01-Feb	110	30-Oct	28-Nov	30	27%
PIK	1998/99	01-Nov - 31-Jul	273	-	-	-	-
	2002/03	25-Oct - 27-Oct	3	-	-	-	-
	2003/04	24-Oct - 29-Oct	372	-	-	-	-
SMB	1998/99	01-Nov - 31-Jul	273	-	-	-	-
	2002/03	25-Oct - 27-Oct	3	-	-	-	-
	2003/04	24-Oct - 29-Oct	372	-	-	-	-
WAI	1998/99	01-Nov - 31-Jul	273	-	-	-	-
	2002/03	25-Oct - 27-Oct	3	-	-	-	-
	2003/04	24-Oct - 29-Oct	372	-	-	-	-

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	Average days between first and last delivery, mean(sd)	Median days	Minimum days	Maximum days
EAG	2005/06	0	7	72(66)	47	23	182
	2006/07	0	6	41(25)	37	17	86
	2007/08	1	4	77(27)	77	47	105
	2008/09	0	3	70(37)	75	31	105
	2009/10	0	3	85(50)	91	33	132
	2010/11	0	3	77(39)	76	38	116
	2011/12	0	3	63(30)	69	31	90
	2012/13	0	3	70(35)	89	30	92
	2013/14	0	3	68(19)	79	46	80
	2014/15	0	3	59(19)	67	37	72
	2015/16	0	3	59(17)	68	39	70
	2016/17	1	3	84(29)	95	51	105
	2017/18	1	3	100(50)	98	52	151
	2018/19	0	3	86(20)	84	67	107
WAG	2005/06	0	3	177(3)	176	175	181
	2006/07	1	4	122(94)	113	22	241
	2007/08	0	3	143(112)	153	26	250
	2008/09	2	2	196(60)	196	153	238
	2009/10	0	3	129(107)	136	18	232
	2010/11	0	3	121(72)	134	44	186
	2011/12	0	3	118(61)	140	49	164
	2012/13	0	4	87(57)	67	46	168
	2013/14	0	3	135(63)	113	87	206
	2014/15	0	2	239(13)	239	230	248
	2015/16	0	2	252(15)	252	241	262
	2016/17	0	3	180(61)	188	116	237
	2017/18	0	3	143(56)	141	88	200
	2018/19	0	3	135(62)	101	97	206
BBR	2005/06	21	69	19(15)	17	1	70
	2006/07	23	59	10(6)	9	1	26
	2007/08	7	68	18(12)	15	1	51
	2008/09	10	69	22(14)	16	4	57
	2009/10	8	63	18(12)	18	2	67
	2010/11	5	61	21(10)	19	5	51
	2011/12	23	40	7(5)	6	1	21
	2012/13	29	35	6(4)	5	1	21
	2013/14	28	35	7(4)	7	1	16
	2014/15	19	45	8(5)	7	1	21
	2015/16	24	40	8(4)	6	2	20
	2016/17	24	39	7(5)	6	1	23
	2017/18	23	38	10(12)	8	2	78
	2018/19	32	23	7(4)	6	1	16

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Table 3.46: Continued

	Season	Vessels with one delivery	Vessels with multiple deliveries	Average days between first and last delivery, mean(sd)	Median days	Minimum days	Maximum days
BSS	2005/06	3	75	32(30)	20	1	148
	2006/07	9	60	33(26)	26	5	156
	2007/08	0	78	41(25)	36	7	116
	2008/09	0	77	38(22)	38	5	117
	2009/10	2	67	31(20)	27	9	107
	2010/11	2	67	34(19)	29	7	102
	2011/12	0	72	105(45)	116	12	201
	2012/13	0	70	56(34)	47	7	151
	2013/14	2	68	52(29)	49	7	134
	2014/15	1	70	65(35)	59	11	168
	2015/16	3	68	35(22)	33	5	116
	2016/17	3	60	24(13)	23	3	69
	2017/18	6	57	24(15)	21	2	55
2018/19	2	59	39(30)	29	5	132	
BST	2005/06	15	17	31(35)	22	1	148
	2006/07	14	25	49(48)	30	1	145
	2007/08	4	23	73(56)	86	4	161
	2008/09	6	14	56(50)	40	3	146
	2009/10	5	8	24(34)	15	2	105
	2013/14	6	19	104(49)	127	6	152
	2014/15	7	38	87(50)	86	6	156
	2015/16	3	53	87(41)	91	9	147
	2017/18	20	12	20(20)	9	3	63
	2018/19	19	14	54(55)	22	3	144
SMB	2009/10	3	4	24(16)	24	5	45
	2010/11	0	11	25(17)	24	6	47
	2011/12	1	17	27(15)	23	6	50
	2012/13	5	12	23(13)	20	6	44
	2014/15	0	4	25(8)	25	18	32
	2015/16	1	2	15(2)	15	13	16

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 3.47: BBR Fishery Harvest by Week of Season

Week	2013/14		2014/15		2015/16		2016/17		2017/18	
	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	1	1(1,0)	8	6(7,3)	11	8(9,12)	28	28(26,27)	16	13(17,16)
2: 22-Oct	29	36(33,26)	47	57(61,35)	52	67(70,46)	47	80(82,72)	46	61(66,48)
3: 29-Oct	43	83(84,75)	31	85(87,76)	31	95(97,96)	18	93(95,95)	30	89(89,92)
4: 05-Nov	22	98(97,97)	16	98(98,95)	6	98(99,100)	4	98(100,98)	8	99(100,96)
5: 12-Nov	4	100(100,100)	3	100(100,100)	3	100(100,100)	3	100(100,100)	2	100(100,100)
6: 19-Nov	0	100(100,100)	0	100(100,100)	0	100(100,100)	0	100(100,100)	0	100(100,100)
7: 26-Nov	0	100(100,100)	0	100(100,100)	0	100(100,100)	0	100(100,100)	0	100(100,100)
8: 03-Dec	0	100(100,100)	0	100(100,100)	0	100(100,100)	0	100(100,100)	0	100(100,100)
9: 10-Dec	0	100(100,100)	0	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)	1	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

Week	2013/14		2014/15		2015/16		2016/17		2017/18	
	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	1	0(0,0)	0	0(0,0)	0	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	2	0(1,0)	1	0(0,0)	0	0(0,0)	0	0(0,0)	0	0(0,0)
4: 05-Nov	0	0(1,0)	2	0(0,0)	2	0(0,0)	0	0(0,0)	0	0(0,0)
5: 12-Nov	0	0(1,0)	1	0(0,0)	1	1(1,0)	0	0(0,0)	0	0(0,0)
6: 19-Nov	0	0(1,0)	1	0(1,0)	2	1(2,0)	0	0(0,0)	0	0(0,0)
7: 26-Nov	0	0(1,0)	1	1(1,0)	0	1(2,0)	0	0(0,0)	0	0(0,0)
8: 03-Dec	2	1(2,0)	4	2(2,0)	1	2(2,0)	0	0(0,0)	0	0(0,0)
9: 10-Dec	8	4(5,0)	12	5(6,0)	1	2(2,0)	0	0(0,0)	0	0(0,0)
10: 17-Dec	9	7(7,0)	12	8(9,1)	1	2(2,0)	0	0(0,0)	0	0(0,0)
11: 24-Dec	6	10(10,5)	8	10(11,1)	0	2(2,0)	0	0(0,0)	0	0(0,0)
12: 31-Dec	10	13(13,6)	12	13(14,3)	3	3(3,0)	0	0(0,0)	0	0(0,0)
13: 07-Jan	26	20(22,9)	21	18(20,3)	9	5(5,0)	9	3(5,0)	2	1(1,0)
14: 14-Jan	23	27(31,11)	30	25(28,3)	19	14(15,2)	16	16(17,3)	12	11(10,3)
15: 21-Jan	25	34(39,16)	25	31(36,4)	24	24(27,3)	18	27(29,4)	19	28(33,6)
16: 28-Jan	28	42(47,21)	33	40(46,7)	23	32(37,11)	21	39(40,32)	21	37(42,15)
17: 04-Feb	35	52(58,28)	33	47(54,9)	21	42(48,15)	24	50(50,39)	27	53(59,26)
18: 11-Feb	32	62(69,32)	28	53(61,12)	27	51(59,23)	32	65(66,46)	22	64(69,44)
19: 18-Feb	31	70(78,34)	30	61(67,26)	26	60(67,28)	19	74(74,60)	24	75(79,53)
20: 25-Feb	28	78(84,53)	32	69(73,38)	23	68(76,36)	13	82(84,65)	16	82(85,65)
21: 04-Mar	24	84(88,67)	27	75(79,46)	19	76(81,41)	15	91(93,78)	15	90(93,73)
22: 11-Mar	16	90(94,73)	23	80(83,51)	15	81(84,54)	10	95(95,86)	7	95(96,79)
23: 18-Mar	14	94(97,77)	13	83(86,55)	15	87(90,62)	4	97(97,90)	8	97(98,88)
24: 25-Mar	11	96(98,90)	17	86(90,56)	9	91(94,69)	2	98(98,96)	6	99(100,92)
25: 01-Apr	7	98(99,93)	13	88(91,59)	8	93(96,71)	2	100(99,99)	3	100(100,98)
26: 08-Apr	1	98(99,93)	9	90(93,62)	4	94(97,77)	0	100(99,99)	0	100(100,98)
27: 15-Apr	3	99(100,96)	11	92(94,70)	6	96(98,82)	1	100(100,100)	1	100(100,100)
28: 22-Apr	4	100(100,100)	9	93(95,78)	4	97(100,87)	1	100(100,100)	0	100(100,100)
29: 29-Apr	2	100(100,100)	9	95(96,84)	5	99(100,93)	0	100(100,100)	0	100(100,100)
30: 06-May	0	100(100,100)	10	98(98,95)	4	100(100,99)	0	100(100,100)	0	100(100,100)
31: 13-May	0	100(100,100)	7	99(99,97)	2	100(100,100)	0	100(100,100)	0	100(100,100)
32: 20-May	0	100(100,100)	3	100(100,97)	0	100(100,100)	0	100(100,100)	0	100(100,100)
33: 27-May	0	100(100,100)	3	100(100,100)	0	100(100,100)	0	100(100,100)	0	100(100,100)
Postseason: 01-Jun	0	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

Season	Vessels	CPUE (lb legal crab)		Pot lifts		RPUE (\$)	
		Mean(sd) CPUE per vessel, 1,000	Weighted mean	Mean(sd) per vessel, 1,000	Total	Mean(sd) RPUE per vessel, 1,000	Weighted mean
1998	14	8.0(4.4)	9.0	5.6(2.6)	78.1	\$97(50)	\$107
1999	15	9.0(4.7)	9.0	5.0(2.0)	74.3	\$171(90)	\$170
2000	15	9.7(4.3)	9.7	4.6(1.6)	68.4	\$206(98)	\$208
2001	19	11.2(5.6)	11.5	3.3(1.1)	62.6	\$216(102)	\$219
2002	19	12.2(4.9)	12.1	2.7(0.7)	52.0	\$247(97)	\$247
2003	18	10.6(2.9)	10.6	3.3(0.7)	58.9	\$228(63)	\$232
2004	19	18.6(7.1)	18.0	1.8(0.4)	34.8	\$344(122)	\$334
2005/06	7	25.3(7.9)	25.2	3.5(1.9)	24.6	\$369(137)	\$387
2006/07	6	23.7(5.4)	24.5	4.4(3.5)	26.2	\$236(61)	\$262
EAG 2007/08	4	29.1	27.8	5.7	22.7	\$321	\$347
2008/09	3	*	*	*	*	*	*
2009/10	3	*	*	*	*	*	*
2010/11	3	*	*	*	*	*	*
2011/12	3	*	*	*	*	*	*
2012/13	3	*	*	*	*	*	*
2013/14	3	*	*	*	*	*	*
2014/15	3	*	*	*	*	*	*
2015/16	3	*	*	*	*	*	*
2016/17	4	42.3	31.6	5.8	23.4	\$1,087	\$795
2017/18	4	30.0	30.7	6.2	24.6	\$740	\$743
1998/99	3	*	*	*	*	*	*
1999/00	15	4.2(2.7)	6.1	7.0(7.7)	104.3	\$78(49)	\$113
2000/01	12	4.7(3.3)	6.8	8.2(6.7)	97.9	\$88(57)	\$123
2001/02	9	5.8(1.7)	6.4	11.7(9.4)	105.5	\$104(27)	\$113
2002/03	6	6.4(3.4)	8.3	13.2(10.5)	79.0	\$117(58)	\$152
2003/04	6	8.5(3.3)	10.0	11.0(7.8)	66.2	\$155(59)	\$181
2004/05	6	9.3(4.4)	11.9	9.5(7.1)	56.8	\$149(68)	\$188
2005/06	3	*	*	*	*	*	*
2006/07	4	18.6	20.0	6.5	25.9	\$155	\$159
WAG 2007/08	3	*	*	*	*	*	*
2008/09	3	*	*	*	*	*	*
2009/10	3	*	*	*	*	*	*
2010/11	3	*	*	*	*	*	*
2011/12	3	*	*	*	*	*	*
2012/13	4	20.8	20.2	8.2	32.7	\$371	\$352
2013/14	3	*	*	*	*	*	*
2014/15	2	*	*	*	*	*	*
2015/16	2	*	*	*	*	*	*
2016/17	3	*	*	*	*	*	*
2017/18	3	*	*	*	*	*	*

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Table 3.49: Continued

Season	Vessels	CPUE (lb legal crab)		Pot lifts		RPUE (\$)	
		Mean(sd) CPUE per vessel, 1,000	Weighted mean	Mean(sd) per vessel, 1,000	Total	Mean(sd) RPUE per vessel, 1,000	Weighted mean
1998	274	15.3(6.7)	15.2	0.5(0.2)	144.9	\$388(170)	\$384
1999	257	12.6(6.1)	12.5	0.6(0.2)	150.0	\$685(339)	\$683
2000	244	11.9(5.2)	12.0	0.4(0.1)	103.4	\$506(222)	\$513
2001	230	19.1(10.0)	19.2	0.3(0.1)	66.2	\$806(428)	\$808
2002	242	20.6(7.1)	20.4	0.3(0.1)	72.2	\$1,100(374)	\$1,089
2003	250	18.2(9.5)	18.4	0.5(0.2)	134.1	\$756(393)	\$770
2004	251	22.9(9.0)	22.9	0.4(0.1)	96.3	\$938(359)	\$941
2005/06	89	28.0(10.5)	23.7	1.3(1.0)	114.6	\$1,027(388)	\$874
2006/07	81	33.3(9.9)	34.0	0.9(0.5)	71.7	\$936(286)	\$955
BBR 2007/08	74	27.9(7.2)	27.5	1.5(0.9)	113.1	\$930(244)	\$917
2008/09	78	23.7(7.1)	21.7	1.8(1.1)	139.7	\$906(281)	\$830
2009/10	70	22.3(5.9)	21.2	1.7(0.8)	118.4	\$737(195)	\$703
2010/11	65	18.6(5.1)	18.1	2.0(1.0)	131.4	\$960(269)	\$933
2011/12	62	27.6(7.3)	28.2	0.7(0.3)	45.1	\$2,022(534)	\$2,060
2012/13	64	30.7(9.0)	30.2	0.6(0.3)	38.0	\$1,812(545)	\$1,790
2013/14	63	27.0(8.9)	26.9	0.7(0.3)	45.8	\$1,368(464)	\$1,358
2014/15	63	29.0(28.7)	25.3	0.9(0.5)	58.5	\$1,392(1,426)	\$1,210
2015/16	64	31.7(9.7)	30.6	0.7(0.4)	48.0	\$1,773(555)	\$1,714
2016/17	63	39.2(9.1)	37.8	0.5(0.3)	33.0	\$2,680(592)	\$2,591
2017/18	61	20.5(7.8)	19.9	0.8(0.4)	48.2	\$1,205(447)	\$1,166
1999	241	155.4(42.0)	158.3	3.9(1.5)	945.4	\$279(71)	\$284
2000	231	138.5(59.9)	136.2	0.8(0.3)	181.5	\$474(211)	\$463
2001	207	91.6(48.0)	95.6	0.9(0.5)	191.0	\$261(125)	\$273
2002	191	76.2(35.2)	75.6	1.7(0.8)	325.6	\$183(84)	\$181
2003	190	151.6(63.0)	146.9	0.8(0.4)	153.7	\$447(177)	\$432
2004	189	156.0(60.3)	149.6	0.7(0.4)	123.4	\$527(198)	\$505
2005	168	246.2(87.9)	242.8	0.4(0.1)	72.9	\$770(289)	\$758
2005/06	78	211.4(71.9)	202.6	1.5(1.1)	120.0	\$445(143)	\$429
2006/07	69	349.1(74.7)	343.0	1.2(0.8)	85.3	\$813(188)	\$788
BSS 2007/08	78	354.7(74.1)	352.7	1.8(1.0)	141.4	\$869(178)	\$864
2008/09	77	284.6(70.5)	279.1	2.1(1.3)	163.3	\$582(148)	\$571
2009/10	69	255.8(55.6)	255.0	2.0(1.1)	136.8	\$515(106)	\$513
2010/11	68	255.3(51.4)	254.9	2.2(1.1)	147.2	\$1,026(204)	\$1,023
2011/12	72	224.7(63.4)	222.7	3.7(1.8)	270.0	\$767(215)	\$764
2012/13	70	218.9(64.0)	209.8	3.2(1.6)	224.6	\$748(210)	\$719
2013/14	70	181.8(49.9)	179.8	3.3(1.7)	231.4	\$584(163)	\$574
2014/15	71	192.4(57.0)	190.6	4.0(1.9)	286.1	\$516(160)	\$510
2015/16	74	143.0(53.7)	137.5	2.9(1.6)	213.4	\$543(194)	\$521
2016/17	63	135.7(48.8)	137.3	1.9(0.8)	118.1	\$590(212)	\$597
2017/18	63	140.4(61.6)	132.8	1.9(1.0)	117.1	\$573(284)	\$545

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Table 3.49: Continued

Season	Vessels	CPUE (lb legal crab)		Pot lifts		RPUE (\$)		
		Mean(sd) CPUE per vessel, 1,000	Weighted mean	Mean(sd) per vessel, 1,000	Total	Mean(sd) RPUE per vessel, 1,000	Weighted mean	
	2005/06	43	19.1(16.7)	15.0	0.7(0.6)	29.0	\$73(67)	\$58
	2006/07	52	16.8(15.4)	17.2	1.0(0.8)	52.9	\$74(67)	\$75
	2007/08	41	18.6(10.1)	17.6	1.3(1.3)	52.0	\$81(45)	\$78
	2008/09	49	14.7(15.7)	12.9	1.3(1.3)	63.9	\$63(68)	\$55
	2009/10	41	38.8(30.9)	11.8	1.0(0.7)	40.6	\$200(161)	\$62
	2010/11	49	0.0(0.0)	0.0	0.8(0.5)	38.6	\$0	\$0
BST	2011/12	56	0.0(0.0)	0.0	1.2(0.7)	64.2	\$0	\$0
	2012/13	59	0.0(0.0)	0.0	1.4(0.9)	81.1	\$0	\$0
	2013/14	66	15.2(12.0)	9.7	2.3(1.5)	147.6	\$82(65)	\$51
	2014/15	64	34.9(15.2)	33.5	3.5(2.6)	221.7	\$167(74)	\$157
	2015/16	70	41.8(19.4)	38.4	4.0(3.2)	280.4	\$185(87)	\$169
	2016/17	47	0.0(0.0)	0.0	1.0(0.7)	49.2	\$0	\$0
	2017/18	39	52.3(28.9)	41.2	0.8(0.6)	32.3	\$366(218)	\$283
PIK	1998	58	3.0(1.7)	3.0	0.8(0.3)	46.0	\$75(42)	\$74
	1998	132	7.1(2.0)	6.9	0.7(0.3)	91.7	\$91(25)	\$89
	2009/10	7	9.3(1.4)	9.6	1.5(1.0)	10.6	\$103(16)	\$107
	2010/11	11	9.7(2.0)	10.1	2.7(1.2)	29.3	\$230(46)	\$240
SMB	2011/12	18	8.5(2.1)	8.9	2.7(1.1)	48.6	\$190(47)	\$198
	2012/13	17	9.8(2.6)	10.1	2.2(1.0)	37.0	\$199(54)	\$204
	2014/15	4	6.2	6.7	2.5	10.1	\$98	\$106
	2015/16	3	*	*	*	*	*	*
	1998/99	1	*	*	*	*	*	*
WAI	2002/03	33	18.7(12.7)	17.9	0.1(0.0)	3.8	\$1,150(781)	\$1,098
	2003/04	30	10.2(5.4)	10.3	0.2(0.1)	5.8	\$547(293)	\$554

Notes: Effort statistics for the most recent crab year shown in the table represent fishing activity occurring during the early part of the season, before December 31. CPUE = number of legal crab per potlift; RPUE = ex-vessel value of commercially sold crab per potlift. Dollars are inflation-adjusted to 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

Year	King crab						Snow crab					
	Export (1,000t)	Export value (\$mil- lion)	Import (1,000t)	Import value (\$mil- lion)	Net export (1,000t)	Net export value (\$mil- lion)	Export (1,000t)	Export value (\$mil- lion)	Import (1,000t)	Import value (\$mil- lion)	Net export (1,000t)	Net export value (\$mil- lion)
1991	3.85	\$89.96	0.30	\$6.69	3.55	\$83.27	32.20	\$257.28	0.74	\$8.91	31.46	\$248.37
1992	3.70	\$97.83	2.19	\$36.39	1.51	\$61.44	61.61	\$495.15	0.88	\$7.70	60.73	\$487.45
1993	5.96	\$137.99	1.12	\$20.63	4.84	\$117.36	45.56	\$430.25	1.33	\$13.69	44.23	\$416.56
1994	3.62	\$75.04	2.60	\$53.48	1.02	\$21.56	31.12	\$400.55	2.86	\$33.65	28.26	\$366.90
1995	2.85	\$53.50	4.01	\$69.35	-1.16	\$-15.85	12.26	\$189.92	2.26	\$28.47	10.00	\$161.45
1996	4.46	\$85.34	6.27	\$96.76	-1.81	\$-11.42	9.53	\$105.45	3.38	\$33.34	6.15	\$72.11
1997	2.80	\$41.85	9.77	\$163.43	-6.97	\$-121.58	10.17	\$79.57	6.90	\$53.49	3.27	\$26.08
1998	3.10	\$33.38	11.82	\$178.45	-8.72	\$-145.07	11.99	\$78.59	12.26	\$91.54	-0.27	\$-12.95
1999	2.73	\$36.95	11.49	\$196.49	-8.76	\$-159.54	15.62	\$133.70	24.68	\$240.33	-9.06	\$-106.63
2000	3.05	\$64.12	10.05	\$204.83	-7.00	\$-140.71	4.75	\$58.38	28.61	\$339.15	-23.86	\$-280.77
2001	1.83	\$45.66	9.29	\$190.82	-7.46	\$-145.16	3.09	\$34.49	42.18	\$402.73	-39.09	\$-368.24
2002	2.28	\$45.46	10.42	\$252.42	-8.14	\$-206.96	3.36	\$35.92	44.41	\$424.78	-41.05	\$-388.86
2003	3.94	\$66.97	9.96	\$215.83	-6.02	\$-148.86	3.92	\$50.39	51.60	\$581.16	-47.68	\$-530.77
2004	3.25	\$50.44	10.55	\$193.98	-7.30	\$-143.54	4.09	\$51.33	49.10	\$545.52	-45.01	\$-494.19
2005	3.90	\$67.63	18.39	\$313.93	-14.49	\$-246.30	3.42	\$37.61	45.97	\$408.01	-42.55	\$-370.40
2006	4.32	\$70.29	28.07	\$407.57	-23.75	\$-337.28	4.79	\$49.43	46.28	\$369.45	-41.49	\$-320.02
2007	3.31	\$57.96	30.35	\$433.23	-27.04	\$-375.27	2.12	\$18.01	47.98	\$479.14	-45.86	\$-461.13
2008	4.33	\$80.57	15.92	\$308.21	-11.59	\$-227.64	5.55	\$51.88	42.00	\$430.09	-36.45	\$-378.21
2009	3.36	\$76.67	15.83	\$282.82	-12.47	\$-206.15	5.48	\$52.08	51.65	\$441.76	-46.17	\$-389.68
2010	3.62	\$93.17	10.06	\$204.47	-6.44	\$-111.30	4.96	\$47.46	43.57	\$428.92	-38.61	\$-381.46
2011	2.66	\$71.26	8.50	\$192.01	-5.84	\$-120.75	8.48	\$101.86	41.04	\$564.72	-32.56	\$-462.86
2012	1.98	\$55.73	9.41	\$181.24	-7.43	\$-125.51	12.72	\$141.72	41.68	\$478.47	-28.96	\$-336.75
2013	1.78	\$47.20	10.69	\$209.62	-8.91	\$-162.42	8.22	\$98.36	52.05	\$597.16	-43.83	\$-498.80
2014	2.19	\$54.22	12.34	\$259.39	-10.15	\$-205.17	7.24	\$92.02	45.49	\$536.70	-38.25	\$-444.68
2015	0.75	\$17.81	9.35	\$198.66	-8.60	\$-180.85	7.72	\$82.47	45.79	\$519.68	-38.07	\$-437.21
2016	1.17	\$34.02	10.39	\$290.92	-9.22	\$-256.90	6.12	\$77.37	49.70	\$652.03	-43.58	\$-574.66
2017	1.46	\$40.18	10.01	\$312.17	-8.55	\$-271.99	3.01	\$46.36	46.10	\$727.16	-43.09	\$-680.80
2018	1.33	\$38.08	11.02	\$356.44	-9.69	\$-318.36	2.48	\$41.59	40.94	\$710.22	-38.46	\$-668.63

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	2019 GDP Adjustment Factor	PCE Index	2019 PCE Adjustment Factor
1991	65.819	1.68	65.473	1.65
1992	67.321	1.64	67.218	1.61
1993	68.917	1.6	68.892	1.57
1994	70.386	1.57	70.33	1.54
1995	71.864	1.54	71.811	1.51
1996	73.178	1.51	73.346	1.48
1997	74.445	1.48	74.623	1.45
1998	75.266	1.47	75.216	1.44
1999	76.346	1.45	76.338	1.42
2000	78.069	1.41	78.235	1.38
2001	79.822	1.38	79.738	1.36
2002	81.039	1.36	80.789	1.34
2003	82.567	1.34	82.358	1.31
2004	84.778	1.3	84.411	1.28
2005	87.407	1.26	86.813	1.25
2006	90.074	1.22	89.174	1.21
2007	92.498	1.19	91.438	1.18
2008	94.263	1.17	94.18	1.15
2009	94.999	1.16	94.094	1.15
2010	96.109	1.15	95.705	1.13
2011	98.112	1.12	98.13	1.1
2012	100	1.1	100	1.08
2013	101.772	1.08	101.347	1.07
2014	103.688	1.06	102.868	1.05
2015	104.757	1.05	103.126	1.05
2016	105.898	1.04	104.235	1.04
2017	107.932	1.02	106.073	1.02
2018	110.331	1	108.231	1
2019	111.839	0.99	-	-

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 2019.