## 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, 2022

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

31 March, 2023

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).

#### This report will be available at:

www.fisheries.noaa.gov/alaska/ecosystems/economic-status-reports-gulf-alaska-and-bering-sea-aleutian-islands

## Time series of data for the tables presented in this report (in CSV format) are available at:

https://reports.psmfc.org/akfin/f?p=501:2002

For access to data, data visualizations, and other tools for understanding the economic and sociocultural dimensions of Alaska fisheries, visit the Alaska Fisheries Human Dimension Data Explorer:

https://reports.psmfc.org/akfin/f?p=501:2000.

#### 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

# Contents

C	onter	nts	3
Li	st of	Figures	4
$\mathbf{Li}$	st of	Tables	6
A	bbre	viations	7
1	Eco Cra 1.1 1.2 1.3 1.4	momic Status Report Executive Summary: Bering Sea and Aleutian Islands   b Fisheries, 2022   Fishery Overview   Report Card Metrics for the BSAI Crab Fisheries, 1991-2022   Summary Overview of Economic Status and Trends, BSAI Crab Fisheries   Analysis of Crab Quota Share Pools	<b>9</b> 10 11 18 32
2	Intr 2.1 2.2 2.3	coduction   Fishery Overview   Data Sources   Data Conventions	<b>56</b> 57 61 62
3	Eco 3.1 3.2 3.3 3.4 3.5 3.6	momic Status and Trends in BSAI Crab Fisheries   Economic Output   Income and Employment   Harvest Sector Operating and Production Costs and Net Earnings Indices   Quota Holdings, Leasing Activity, and Quota Share Transfers   Fishing Capacity, Effort, and Efficiency   International Trade in Crab Commodities	65 66 76 80 84 93 99
R	efere	nces 1	.01

<b>4</b>	Tables Reporting Economic Data for the King and Tanner Crab Fisheries of the	ne
	Bering Sea and Aleutian Islands Regions	103

# List of Figures

1.1	Report card metrics for BSAI crab rationalization fisheries 1991-2021.	15
1.2	Report card metrics for BSAI crab rationalization fisheries 1991-2021	16
1.3	Report card metrics for BSAI crab rationalization fisheries 1991-2021	17
1.4	TACs/GHLs and management program allocations, BSAI crab fisheries	19
1.5	BSAI crab ex-vessel and first wholesale production, 2017-2021	22
1.6	BSAI crab ex-vessel and first wholesale price, 2017-2021	23
1.7	Harvest and processing employment and compensation, selected crab fisheries,	05
1.8	CR fisheries program - estimated crew employment and income, by community/region	25
	of residence.	28
1.9	CR fisheries program - estimated processing labor employment and income, by	00
1 10	community/region of residence	29
1.10	CVO/CPO QS ownership decomposition - QS entity and owner counts by owner	31
	type and crab fishery.	38
1.12	CVO/CPO QS ownership decomposition - QS equity distribution by owner type and	
	crab fishery. $\ldots$	39
1.13	CVO/CPO QS ownership decomposition - QS owner-equity distribution by owner	
	type: BBR, BSS, EAG, and WAG QS Pools	40
1.14	Count of active and inactive QS owners	41
1.15	Estimated share of owner QS pool held by active and inactive QS owners	42
3.1	TACs/GHLs and management program allocations, BSAI crab fisheries	68
3.2	Ex-vessel and first wholesale gross revenue and production volume, by calendar year,	
22	FMP crab fisheries	70
0.0	and fishery	71
34	Ex-vessel and first wholesale prices selected fisheries	75
3.5	Harvest and processing employment and compensation selected rab fisheries	77
3.6	Aggregate crab vessel operating costs by cost item and fishery	81
3.7	Crab harvest quota lease market indicators selected crab fisheries	86
3.8	OS and POS sales	88
3.9	CR program harvest and processing quota share holdings, initial allocation	00
5.0	2020/2021 and $2021/2022$ seasons	91
3.10	BSAI crab fishery fleet composition	94
3.11	Harvest vessel activity days, selected fisheries	96
_		

3.12	Crab vessel landing activity and cumulative catch, by quota share class and week of	
	season: Bristol Bay Red King and Bering Sea Snow Crab	97
3.13	Balance of trade (imports and exports) in king and snow crab by calendar year	100

# List of Tables

1.1	BSAI crab harvesting and processing sector output – production volume, gross revenue, and average price
1.2	CR Program fisheries crew and processing sector employment and earnings 45
1.3	Crab harvest quota lease activity, volume, cost, and average lease prices and rates.
	CR Program fisheries
1.4	CR Program fisheries estimated crew employment and income, by community of
	residence 49
1.5	CR Program fisheries estimated shoreside and floating processor processing crew
1.0	employment and income, by community of residence
1.6	Estimated active and inactive QS owners and share of QS pool held
17	CVO/CPO entity decomposition by entity type BBB and BSS OS pools 55
1.11	
4.1	TACs/GHLs, BSAI crab fishery management program allocations and usage 104
4.2	BSAI crab fishery participation by calendar year
4.3	Fleet composition by season, CR Program fisheries
4.4	Ex-vessel volume, gross revenue value, and average price: harvesting sector total,
	BSAI crab fisheries
4.5	Ex-vessel price and share of fishery-year landings by owner or leaseholder state of
	residence, catcher vessels - CR Program fisheries
4.6	Ex-vessel price and share of fishery-year landings by quota type, catcher vessels, CR
	Program fisheries
4.7	Estimated finished production, first wholesale value, and price, CR Program fisheries.127
4.8	Statewide crab production, first wholesale value and pricing for selected species 130
4.9	Statewide crab production by product for selected species
4.10	Processing labor hours and pay, CR Program fisheries
4.11	Processing sector employment and wages for non-processing employees, CR Program
	fisheries
4.12	Shore-based crab processing employee counts by state/region of employee residence,
	CR Program fisheries
4.13	Harvesting sector employment, CR Program fisheries
4.14	Alaska residency of participating licensed crew members and gear operators, CR
	Program fisheries
4.15	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
4.16	Captain and crew share payments, and crab-equivalent crew pay, CR Program fisheries150

4.17	Harvest labor net and gross revenue share percentages, vessel-level median, CR	
	Program fisheries	153
4.18	Harvesting sector activity days, CR Program fisheries	155
4.19	Fishery expenditures - food and provisions costs, CR Program fisheries	157
4.20	Fishery expenditures - bait usage and costs, CR Program fisheries	159
4.21	Fishery expenditures - vessel fuel costs, CR Program fisheries	162
4.22	Average monthly fuel prices for selected ports	163
4.23	Vessel-level mean operating costs and revenue residuals, BBR, BSS, and all CR	
	Program fisheries in aggregate, 2017 to 2021.	167
4.24	Fleet-level aggregate operating costs and revenue residuals, BBR, BSS, and all CR	
	Program fisheries in aggregate, 2017 to 2021.	169
4.25	Crab harvest quota lease activity, volume, cost, and average lease prices and rates,	
	CR Program fisheries	171
4.26	Counts of QS/PQS sales and IFQ/IPQ lease transfers, all CR Program fisheries	177
4.27	Crab harvest quota (QS) sale transfers, estimated price per QS unit, catcher vessel	
	owner and crew QS	178
4.28	Crab processor quota (PQS) sale transfers, estimated price per PQS unit	182
4.29	CR Program computation quota share (QS) and IFQ ratio	183
4.30	Comparison of crab QS sale price to IFQ lease price	184
4.31	CR Program Crew (CVC/CPC) and Vessel Owner (CVO/CPO) - summary of QS	
	account registry	186
4.32	CR Program Processor QS - summary of PQS account registry	188
4.33	CR Program Vessel Owner (CVO/CPO) QS holdings by holder location	189
4.34	CR Program Crew (CVC/CPC) QS holdings by holder location	190
4.35	CR Program Crew (CVC/CPC) QS allocation held by active CFEC-licensed gear	
	operators	191
4.36	CDQ group direct holdings of CR Program QS and PQS allocation	192
4.37	CR Program QS/PQS initial recipients currently remaining in QS Pools	194
4.38	New holders of Crab QS and PQS in 2021/22 relative to initial allocation and prior	
	season end	196
4.39	CVO/CPO total entity decomposition, BBR and BSS QS pools	197
4.40	CVO/CPO entity decomposition by entity type, BBR and BSS QS pools	198
4.41	Estimated active and inactive QS owners and share of QS pool held	200
4.42	CR Program fisheries - catch, landings, and deadloss, by season	205
4.43	CR Program fisheries - distribution of vessel catch and landings volume, by calendar	
	year	207
4.44	CR Program fisheries - distribution of crab processor purchasing volume, by calendar	
	year	209
4.45	CR Program fisheries - delivery and trip statistics, by season	211
4.46	Opening and closing dates, season length, and days fished by season, CR Program	
	fisheries	214
4.47	Days between first and last delivery by season, CR Program fisheries	217
4.48	BBR fishery harvest by week of season	219
4.49	BSS fishery harvest by week of season	220
4.50	Fishing effort (pot lifts, CPUE, and RPUE) by season, CR Program fisheries	221
4.51	Snow and king crab exports and imports	224
4.52	Inflation-adjustment indices	226

# 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

## Chapter 1

# Economic Status Report Executive Summary: Bering Sea and Aleutian Islands Crab Fisheries, 2022

The Economic Status Report for BSAI Crab Fisheries, 2022 (Crab Economic SAFE) provides information about economic aspects of crab fisheries managed under the North Pacific Fishery Management Council's Fishery Management Plan for the Bering Sea/Aleutian Islands King and Tanner Crabs (FMP), and in particular, with more detailed and comprehensive economic data availability, for those FMP crab fisheries included in the BSAI Crab Rationalization (CR) Program.<sup>1</sup> Statistical indices are reported, in tabular and graphical form, for individual crab fisheries and for the CR Program or FMP crab fishery as a whole, regarding annual production, sales, revenue, and price indices in the crab harvesting and processing sectors; employment, income, and demographics of labor in both sectors; operating expenditures and indices of gross profitability in the harvest sector; crab harvesting and processing quota share leasing and sale market activity, and changes over time in crab quota holdings, quota entity ownership, and distributional aspects thereof; BSAI crab fleet composition, capacity, effort and efficiency; and volume and value of U.S. imports and exports of king and Tanner crab product. Generally, annual economic statistics are reported for calendar years up to 2021, the most recent year for which primary data sources are complete (encompassing the spring portion of the 2020/21 crab season and fall portion of the 2021/22 crab season). Where available, more current statistics and information are reported for calendar year 2022, crab season 2021/22, and crab season 2022/23.

As in previous years, this executive summary highlights recent results for three sets of primary economic performance indicators for the respective BSAI crab fisheries: gross volume and value of production, labor earnings and employment in the crab processing and harvesting sectors, and crab harvest quota leasing activity. In addition, new for the 2022 edition of the report, the geographic distribution of harvest and processing sector employment in the CR Program fishery as a whole is reported, at the level of specific communities of residence where possible; and a series of

<sup>&</sup>lt;sup>1</sup>The Crab Economic SAFE is the primary channel for publication of aggregate data from the Crab Economic Data Report (EDR) program, a mandatory annual census involving reporting of detailed operational and economic information by owners and leaseholders of vessels and processing plants participating in CR program fisheries. In addition to EDR data, the SAFE report sources data from ADF&G fish tickets/eLandings, NMFS Alaska Region, Restricted Access Management (RAM) catch accounting, and ADF&G Commercial Operator's Annual Report (COAR).

figures summarizing distributional aspects of quota share (QS) entity ownership within the Crab Rationalization harvesting QS pools. Status and trends in these indicators and metrics are reported for the most recent five years of available data in the executive summary, with references to longer time series and additional levels of detail reported in the body of the document. Also new for the 2022 edition of the report, the executive summary includes a new section, *Report Card Metrics for the BSAI Crab Fisheries, 1991-2022*, similar to the corresponding *Report Card Metrics* section included annually in the Groundfish Economic SAFE Report.<sup>2</sup>

### 1.1 Fishery Overview

As an indicator of the relative economic importance of Alaska crab fisheries to the state and U.S. economies, the 23.1 million tons (mt) of commercial catch of BSAI king and tanner crab in 2021 represented 0.60% of the 3.87 million metric tons (mt) total volume of U.S. commercial seafood landings, but a much greater proportion of value: at \$297 million ex-vessel value in 2021, BSAI crab accounted for 4.63% of \$4.62 billion total ex-vessel value of U.S. landings (NMFS, 2021). With respect to Alaska alone, BSAI crab fisheries accounted for 0.97% of total commercial landings volume of 2.38 million mt and 14.7% of \$2.92 billion total ex-vessel value produced in commercial fisheries off Alaska (Groundfish Economic SAFE, 2022).

As of publication of the 2022 edition of this report, the BSAI crab fishery as a whole faces an unprecedented resource and economic crisis. The two largest and most valuable BSAI crab fisheries historically, Bering Sea snow crab (BSS) and Bristol Bay red king crab (BBR), have been simultaneously closed for the 2022/23 season, the first time in the management history of commercial crab fishing in the BSAI. This follows a consistent declining trend and historically low Total Allowable Catch (TAC) levels in the BBR fishery over several years, with closure of the fishery as of the 2021/22 season, coupled with the record low Total Allowable Catch (TAC) issuance for the 2021/22 BSS fishery, followed by closure for the 2022/23 season (see Figure 3.1 for a summary of TAC issuance and fishery closures for recent crab seasons, through 2022/23). The BSAI crab industry, dependent communities, and other stakeholders currently face the prospect of a prolonged period of income and employment loss as a result of trends and closures in these and other crab fisheries. The scope and scale of structural changes within the crab industry and extended community that may ultimately be precipitated by the immediate crisis are unknown and difficult to anticipate with any clarity. As noted above, most data sources used to compile this report are lagged by a vear or more; as such, the economic status of the BSAI crab fisheries, as represented by the array of metrics and indices contained in the 2022 edition of this report represent an economic benchmark of sorts, from which future changes may be anticipated, assessed, and ultimately measured.

Of the 10 crab stocks and 11 fisheries managed under the FMP,<sup>3</sup> four fisheries were open to targeted

<sup>&</sup>lt;sup>2</sup>Link to Groundfish Economic SAFE Report

<sup>&</sup>lt;sup>3</sup>There are currently 11 distinctly managed fisheries on the 10 crab stocks managed under the FMP; catch allocations and other management elements are administered separately for the Eastern and Western components of the Bering Sea Tanner crab stock, and for the Eastern and Western components of the Aleutian Islands golden king crab stock, and the Pribilof Island blue and red king crab stocks are managed collectively as a single fishery. For fisheries characterized by a small number of participating entities, individual statistics where indicated in Tables 1.1 - **1.1**, 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,

fishing and were actively prosecuted during 2021, including the BSS fishery, both Eastern and Western Aleutian Islands golden king crab (EAG/WAG) fisheries, and the Western Bering Sea Tanner crab (WBT) and Pribilof Islands golden king crab (PIG) fisheries. The Bristol Bay red king crab (BBR) fishery has not been declared by the Council to be overfished, however, the Alaska Department of Fish and Game (ADFG) closed the fishery for the 2021/22 and 2022/23 seasons. Both the Eastern Bering Sea Tanner (EBT) and Saint Matthew blue king crab (SMB) fisheries were closed to targeted fishing by ADFG for the 2016/17 and subsequent crab seasons; in October, 2018, the Council declared the SMB fishery to be overfished and adopted a rebuilding plan in June, 2020.<sup>4</sup> The Norton Sound red king crab (NSR) fishery was declared open by ADFG for the 2021 season, however, the principal buyer of commercial NSR landings continued its suspension of purchasing from the fishery that began in 2020, and the fishery did not operate during 2021 (ADFG, 2022). The Western Aleutian red king crab fishery (WAI) 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.

Subsequent to the 2021 calendar year and 2020/21 crab season, Council and ADFG management has largely maintained the status determinations and fishery closures in place during that period, including closure of the BBR fishery for the 2022/23 season. In addition, as a result of the 2021/22 stock assessment, the Council declared the Eastern Bering Sea snow crab stock overfished on October 19, 2021, and the BSS fishery opened for the 2021/22 season with a sharply reduced TAC issued by ADFG; the fishery was subsequently closed by ADFG for the 2022/23 season, and the Council took final action on a preferred alternative rebuilding plan at its February, 2023 meeting. The EAG, WAG, WBT, and PIG fisheries have remained open to targeted fishing for the 2021/22 and 2022/23 seasons; in addition, the EBT fishery was reopened to targeted fishing for the 2022/23 season. Further information on TAC/GHL issuance for all FMP crab fisheries from 2005 to 2022 is provided in the body of the report (see Figure 3.1 and Table 4.1).

### 1.2 Report Card Metrics for the BSAI Crab Fisheries, 1991-2022

The following economic report card, shown in Figures 1.1 through 1.3, provides a broad, FMP-level overview across Crab Rationalization fisheries as a whole, employing a selection of economic metrics, covering the years 1991 to 2022 (or the longest time-series and most recent year for which data are available). The report card is intended to provide synthesis and historical context regarding the current economic status of the BSAI crab fishery by illustrating the scale and direction of change over time across a representative set of metrics. The metrics selected to comprise the following report card are intended to represent, collectively, four general dimensions of dynamic social and economic conditions of concern to FMP crab fishery managers and stakeholders: the scale of the fishery, in terms of volume and value produced, and effort and participation in the fishery in terms of output and value relative to production inputs; the economic, distributional and demographic structure of the fishery; and the relative dependence of key stakeholders on the fishery. No single, succinct set of metrics can fully capture these dimensions, among others that could be emphasized,

respectively. Values that are indicated as suppressed for a specific fishery are also excluded from values reported in aggregate over multiple crab fisheries. Except where noted, the suppressed values are sufficiently small that they have minimal effect on the accuracy of aggregate information at the level of precision reported here.

 $<sup>^4\</sup>mathrm{Issued}$  as Amendment 50 to the FMP by NMFS in October, 2020 (85 FR 71272)

and the set of metrics selected for inclusion is expected to change somewhat between editions of the Economic SAFE report. The following fifteen metrics are included in this report card:<sup>5</sup>

- 1) Active crab vessels, measured as the number of distinct vessels that participated in one or more BSAI crab fisheries during the calendar year, which represents the level of fishing effort assigned to the fishery and the scale of participation in the harvest sector.
- 2) Ex-vessel pounds landed, which measures the scale of physical production in the harvest sector.
- 3) Total potlifts, which measures the scale of the fishery in terms of number of incremental units of fishing effort expended.
- 4) Pounds landed per potlift (weighted average over all potlifts), which represents the technical efficiency of fishing effort, in terms of volume of physical production (retained, landed catch) per unit of fishing effort.
- 5) Ex-vessel value, which provides a gross measure of the scale of aggregate economic value of production from the fishery and of gross economic returns accruing to the harvest sector.
- 6) Price index, calculated as the weighted average ex-vessel value per pound over all ex-vessel sales, which measures changes in the average market value per unit of production.
- 7) Crew labor payment, which measures total cost of fishing labor on crab vessels (including captain pay), and represents the scale of lay-share earnings paid to labor in the harvest sector.
- 8) Deck crew pay per day, calculated as total deck crew (excluding captains) lay-share settlement earnings, divided by total individual crew days-at-sea aggregated across the fleet in all crab fisheries, measures average daily earnings per crew member, and a comparable index of daily wage for crab crew comparable to wage rates in other occupations.
- 9) Crew labor payment as share of ex-vessel gross revenue, measured as the percentage (%) of aggregate gross ex-vessel revenue of crab landings paid to crab fishing labor, providing an index of the distribution of economic benefits from crab fisheries to labor.
- 10) Quota lease royalty cost as share of ex-vessel gross revenue, measured as the percentage (%) of aggregate gross ex-vessel revenue paid as lease royalties for crab quota (IFQ and CDQ pounds), providing an index of the relative distribution of economic benefits to crab quota share holders and an approximate index of economic rents in the fishery.
- 11) Crab ex-vessel revenue share, measured as aggregate ex-vessel revenue value of crab landings, divided by total annual ex-vessel revenues across all fisheries (including non-crab fisheries) received by vessels participating in the crab fleet during the year, providing an index of dependence of participating vessels on crab fisheries. Note that this metric excludes other sources of vessel income, including tendering and vessel charters.
- 12) Count of active crab processing plants, which represents changes in the scale and structure of the crab processing sector.
- 13) First-wholesale revenue, measured as total gross revenue from sales of all finished crab product, providing a gross measure of the scale of aggregate economic value of crab processing sector output.
- 14) Processing labor hours, which represents the scale of the fishery in terms of number of incremental units of crab processing labor input.
- 15) Crab first wholesale revenue share, measured as aggregate gross first-wholesale value of finished crab product output, divided by total annual first-wholesale value of production

<sup>&</sup>lt;sup>5</sup>All monetary values in the report card (metrics 5 though 8, 13), as elsewhere in the Economic SAFE Report (unless otherwise noted), are inflation-adjusted to 2021-equivalent dollars using the GDP-chaintype price index https://research.stlouisfed.org/fred2/series/GDPCTPI.

across all fisheries generated by processors that purchased crab landings, providing an index of dependence of participating processors on crab fisheries.

To provide more discernible visual detail on the range of variation over the period following implementation of the CR Program, for each metric, the figure pairs a plot of the full time series shown on the left, depicting the metrics' value and range of variation over the longer term (with 2006, the first full calendar year of the CR program marked by the vertical green line), and a plot of the 2006-to-current period for each metric shown on the right (note that the units for the vertical axes in Figures 1.1 through 1.3 are defined in the label shown above each respective metric). Green horizontal lines in both sets of figures show the mean (dashed) and range of one standard deviation above and below the mean (solid) of the metrics' value calculated over the post-CR reference period, and the color of plotted points indicates values within- (black), above- (red), and below- (blue) one standard deviation of the reference-period mean.

With 51 vessels participating in BSAI crab fisheries, and 11 million pounds landed, both metrics (metric series 1 and 2) reached historical lows during 2022, declining from 2021 levels that were below-average for the post-CR reference period, but within the one standard deviation rang. The count of active vessels has shown a long-term, structural decline over the reference period, particularly since 2016, generally following the direction of inter-annual variation exhibited by the relatively more volatile ex-vessel pounds landed metric. Total potlifts (metric 3) declined in 2021 despite a concurrent increase in pounds landed, but remained within the one standard deviation range, consistent with the increase in pounds landed per potlift that year (metric 4), both indicating increased production efficiency in the 2021 crab fleet.

Ex-vessel value of BSAI crab landings (metric 5) exhibited an increasing trend from a marked low in 2018, approaching the upper bound of the post-CR standard range during 2021, reflecting the historically high value of the ex-vessel price index (metric 6) during 2021, which reached \$5.85 per pound, averaging over all landings in BSAI crab fisheries. Crew labor payment (metric 7) corresponds closely to variation in the ex-vessel value metric, showing the same increasing trend since 2018, and exceeding the post-CR average for the first time since 2016. In a more dramatic increase, reflecting both the increase in production efficiency and ex-vessel value metrics noted above, crew pay per day (metric 8) in 2021 increased to nearly \$1,600, substantially exceeding the previous high of \$1,350 per day in 2011. In contrast, however, crew labor pay as a share of ex-vessel value (metric 9) declined sharply in 2021, reaching 19%, the lowest value to date in the available time series, and quota lease royalty costs, as a percent of ex-vessel value (metric 10), exhibited a similar, though more modest decline in 2021.

The concurrent decline in both of these gross revenue share metrics equates directly to an increase in relative share of gross revenue accruing to vessel owners, averaged across all vessels and crab fisheries that were actively fished in 2021. This may to some degree reflect redistributional changes in labor and quota leasing markets associated with the (structural) shift to a more concentrated active crab fleet. However, with closure of the Bristol Bay red king crab fishery for 2021, given the history of substantially higher quota lease rates (cost per pound leased as a percentage of ex-vessel price per pound), and somewhat lower non-labor harvesting costs than in other CR fisheries, exclusion of the BBR fishery from the basis for calculating the average value of crew- and QS holder revenue share metrics for 2021 is likely a significant driver of the measured decline of both metrics. Crab ex-vessel revenue share (metric 11), which has an average of 89% over the post-CR period, increased to a historic peak of 96% in 2021, reflecting both the consolidation to a smaller active fleet that derived relatively greater share of annual ex-vessel revenue from crab fisheries, as well as the marked increase in ex-vessel prices during 2021.

The number of active plants processing crab landings (metric 12) declined from 7 in 2019 and 2020, to 6 in 2021, the lowest number in the history of the crab fishery, marking a long-term trend, and a potentially long-lasting structural change in the crab processing sector, particularly in light of the more recent closure of the Eastern Bering Sea snow crab fishery (effective 2023, not shown in the reportcard). First-wholesale revenue (metric 13) increased for a fourth consecutive year in 2021, surpassing the post-CR average reach \$372 million. Processing labor hours (metric 14) in 2021 also continued a moderate increasing trend that began in 2018, reaching 1.07 million hours, below the mean for the post-CR period, but the highest value of the period with the exception of a period of exceptionally high levels of processing labor input spanning 2012 to 2016. Finally, crab first wholesale revenue share (metric 15), which has an average of 25% over the post-CR period, increased to 36% in 2021, reflecting both the consolidation of crab processing to a smaller number of active plants that, as a group, correspondingly derived a relatively greater share of sales income from crab fisheries, as well as the marked increase in crab product market prices during 2021, particularly relative to other seafood products.



Note: See Figure 1.3 for footnotes.

Figure 1.1: Report card metrics for BSAI crab rationalization fisheries 1991-2021.

#### 6. Price index - wtd average, all ex-vessel sales (\$2021)







8. Deck crew pay per day - average per crew member, per day (\$2021K)



### 9. Crew labor payment as share of ex-vessel gross revenue (%)



10. Quota lease royalty cost as share of ex-vessel gross revenue (%)













Note: See Figure 1.3 for footnotes.

Figure 1.2: Report card metrics for BSAI crab rationalization fisheries 1991-2021.

11. Crab ex-vessel revenue share







13. First-wholesale revenue, total (\$2021 million)



14. Processing labor hours, total (million)





2000

2005

2010



2015

2020

2010







Note: Green vertical line indicates the first full calendar year of implementation of the CR program. Green horizontal lines show the mean (dashed) and 1 standard deviation (solid) for the 2005-present reference period. Color of plotted values indicates values within (black), above (red), and below (blue) one standard deviation of the mean.

Post-Rationalization

2006

Post-Rationalization

Figure 1.3: Report card metrics for BSAI crab rationalization fisheries 1991-2021.

0.35

0.30

0.25

0.20

1991

1995

### 1.3 Summary Overview of Economic Status and Trends, BSAI Crab Fisheries

The following provides a summary overview of recent status and trends reported in detail within the main body of the Crab Economic SAFE Report, with figures and tabular summaries highlighting several key indicators of economic performance in the respective crab fisheries over the five year period ending with calendar year 2021, the most recent year for which primary economic data sources are available: gross volume and value of production; labor earnings and employment in CR program fisheries processing and harvesting sectors, including geographic distribution of harvest and processing sector employment in the CR Program as a whole; indices representing volume and value of lease transfers within the crab harvest quota lease market; and visualizations of distributional aspects of quota share (QS) entity ownership within the Crab Rationalization harvesting QS pools.

As noted in the introduction above, the economic metrics presented below for calendar year 2021 reflect the closure of the BBR fishery for the 2021/22 season, but available data predate the effects of the 90% TAC reduction in the BSS fishery for the same season, for which fishing activity began in January, 2022, and of the subsequent closures of both the BBR and BSS fisheries for the 2022/23 season (see Figure 3.1 for a summary of TAC issuance and fishery closures for recent crab seasons, through 2022/23). As such, the results described below represent a five-year economic baseline of the Council's Crab FMP fisheries prior to the most extreme, currently ongoing economic and resource management crisis in the history of BSAI crab.



Figure 1.4: TACs/GHLs and management program allocations, BSAI crab fisheries

 $\label{eq:source_ADF&G.} {\small \mbox{Tabular data available in Table 4.1 Numeric values indicate total TAC/GHL allocations (in millions or thousands of pounds) to directed fishing. All dollar values are adjusted for inflation to 2021-equivalent value.}$ 

#### Fishery Production and Economic Value

The Bering Sea/Aleutian Islands (BSAI) crab fisheries managed under the FMP are currently (as of calendar year 2012) prosecuted by an active fleet of 65 catcher vessels and two catcher processors, and landed and processed at 8 processing facilities throughout the region. Across all fisheries managed under the BSAI Crab FMP during 2021, the total volume of ex-vessel landings was 51 million pounds (23.1 thousand metric tons (mt)), a 20% increase from the previous year. Processing sector finished production volume during 2021 was 33 million pounds (15.1 thousand mt) aggregated over all BSAI crab species and product forms, also increasing 20% from the previous year. The effect of a net increase in production volume across crab fisheries, combined with changes in market prices, produced an aggregate 36% increase in ex-vessel revenue over all fisheries in 2021, totaling \$297 million for the year, and with aggregate first wholesale revenues increasing by 31% to \$372 million.

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 1.1 for calendar years 2017 through 2021 and summarized in Figure 1.5, with ex-vessel and first wholesale prices shown in Figure 1.6.

As of 2021, allowable catch quantities in all BSAI crab fisheries open to targeted fishing were fully exploited (> 98% of total allocation landed), and recent inter-annual variation in commercial landings 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 increase in aggregate production during 2021 was driven mainly by the 32% increase in total catch landed in the BSS fishery, to 44 million pounds (20 thousand mt) in 2021. Increased catch in the AIG and BST fisheries during 2021, to nearly 6 million pounds and one million pounds, respectively, also contributed to the net increase in aggregate harvest volume at the FMP level, despite the closure of the BBR fishery.

Similar to ex-vessel production, the 22% increase in 2021 processing sector output volume at the FMP-level was driven in the largest part by increased production in the BSS fishery during 2021, with finished volume of nearly 29 million pounds (13 thousand mt), increasing 31% over the previous year, as well as a 3% increase in finished volume in the AIG fishery, to 3.8 million pounds (2.0 thousand mt), and 53% increase in production volume in the BST fishery, to 650 thousand pounds (294 mt).

As a result of unusual market dynamics arising from the global Covid-19 pandemic and evolving public health measures undertaken by various levels of government within the U.S. and internationally, global market values for premium seafood products, particularly shellfish, including Alaskan king and snow crab, surged beginning in late 2020. In broad terms, pandemic restrictions in most U.S. states beginning in mid-2020 reduced consumer access to restaurants and other food service outlets, while federal income support payments increased disposable incomes for many households, stimulating consumer demand for retail sales of premium seafood products that could be prepared and consumed at home. In contrast to most commodity seafood products oriented toward various food service sectors, units of frozen king and snow crab clusters packaged for food service could be more readily redirected toward retail warehouse outlets (e.g., Costco), facilitating conversion to retail market distribution throughout much of the first two years of the pandemic, during which consumer demand drove prices to unprecedented levels beginning in late 2020 through early 2022.

As a result, ex-vessel and first-wholesale price records were set across all BSAI crab fisheries that were open to commercial harvest during 2021. This notably excluded Bristol Bay red king

crab, which closed for the 2021/22 season, after a historically low TAC in 2019/20. The largest proportional crab price increases for 2021 were reported for Aleutian Islands golden king crab, which increased by 61% at ex-vessel from the previous record high of \$7.60 per pound in 2020, to \$12.20 per pound. Average first wholesale price for sales of finished production from the AIG crab fishery in 2021 increased by 36% from the record high of \$15.04 per pound the previous year, to \$20.42 per pound. In the BSS fishery, average ex-vessel and first-wholesale prices showed somewhat more modest gains from the previous year, but similarly reached record levels during 2021. Following a slight decline in ex-vessel price reported for the 2020 BSS fishery (noting that landings in the 2020 BSS fishery predated the emergence of Covid-related seafood market dynamics), ex-vessel price in 2021 increased by 21% to \$4.96 per pound landed, and first-wholesale prices for BSS production showed successive 12% year-on-year gains in both years, reaching \$9.94 per pound in 2021. Possibly as a result of cooling demand late in 2021, average first wholesale price in the BST fishery exhibited the smallest gain for the year, increasing by 3% to \$11.91 per pound for the year, compared to the 22% gain reported for the previous year; in contrast, following a 9% year-on-year decline in 2020, ex-vessel price in the BST fishery gained by 30% for 2021, reaching an average of \$5.55 per pound for the year.

The combination of production and price increases in the harvest and processing sectors across crab fisheries open to targeted fishing during 2021 produced a net increase at the FMP-level of 36% in aggregate ex-vessel value, to \$296 million, and a 31% increase in first-wholesale value, to \$372 million. As usual given the relative scale of the BSS fishery, production and price increases in both sectors accounted for the largest share of net change in aggregate value of BSAI crab in 2021, with ex-vessel value increasing by 59% to \$219 million and first-wholesale value gaining by 57% to \$287 million for the year. Ex-vessel revenues in the AIG fisheries increased 66%% from 2020, to \$72 million, and by 40%% in the processing sector, to \$76 million. Ex-vessel revenues in the BST fishery nearly doubled from 2020, to \$5.3 million, and increased by 57% in the processing sector, to \$77 million.





**Note** (a) Revenue, (b) Volume, and (c) Weighted Average Price, 2017 - 2021; 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 NSR, SMB, and PIG fisheries due to confidentiality. All dollar values are adjusted for inflation to 2021-equivalent value. See Table 1.1 footnotes for details. The BBR fishery was closed for the 2021/22 season, the Eastern portion (EBT) of the BST fishery was closed for the 2016/17 through 2021/22 seasons, and the Western portion (WBT) of the BST fishery was closed for the 2016/17 and 2019/20 seasons.

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.



Figure 1.6: BSAI crab ex-vessel and first wholesale price, 2017-2021.

Note Ex-vessel and First Wholesale Weighted Average Price, 2017 - 2021. All dollar values are adjusted for inflation to 2021-equivalent value. See Table 1.1 footnotes for details. Figure does not display information for NSR, SMB, and PIG fisheries due to confidentiality.

**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.

#### Employment and Income

A summary of employment and labor income indicators from the most recent employment data available for Crab Rationalization (CR) program fisheries is provided in Table 1.2 and depicted graphically in Figure 1.7, reporting results through calendar year 2021.<sup>6</sup>

During 2021, 67 vessels actively operated in one or more BSAI crab fishery, continuing the historically low level of vessel participation at the FMP-level from the previous year; this reflects the effective closure of the NSR fishery during 2020 and 2021, which supported 37 vessels as recently as 2017. Within CR program fisheries during 2021, 66 vessels were active, a small increase from the historical low of 64 vessels the previous year, prior to the currently ongoing fleet contraction that saw 51 vessels active during 2022 (a relatively small 23% contraction in comparison to the 78% reduction in 2022 catch volume; see reportcard metric figures above) and a much more severe reduction expected for 2023. The active fleet in the 2021 AIG fishery remained constant at five (four of which solely operate in AIG fisheries), while participation in the BSS fishery increased by three to 62, and vessels actively fishing in the 2021 BST (WBT) fishery during declined from 25 to 20.

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 683 crew positions in aggregate across all 66 vessels in CR fisheries during 2021, a 33% decline from the previous year, the lowest number of crew positions reported in CR fisheries to-date.<sup>7</sup>

<sup>&</sup>lt;sup>6</sup>BSAI Crab Economic Data Report (EDR) data are collected for CR fisheries only. The NSR and Pribilof Island golden king (PIG) crab fisheries are managed by the State of Alaska under the FMP, but are not included in the CR program.

<sup>&</sup>lt;sup>7</sup>Note that the 'All CR' aggregate count of vessels indicates the total number of distinct vessels operating in one or more crab fishery, while 'All CR' values reported for number of crew positions treats positions on a given vessel as distinct between fisheries, such that the a given crew position on a vessel is counted separately for each fishery in which the vessel operated.



Figure 1.7: Harvest and processing employment and compensation, selected crab fisheries, 2017-2021.

Note All dollar values are adjusted for inflation to 2021-equivalent value. See Table 1.2 footnotes for details.

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.

Across CR fisheries in 2021, revenue-share payments to crab vessel crew members as a group totaled \$41.4 million, with an additional \$17.5 million paid to vessel captains, increasing by 33% and 36% respectively.<sup>8</sup> Aggregate crew earnings in the AIG fishery during 2021 increased by 24% to \$6.6 million, and captain earnings declined by 3% to \$2.4 million. Aggregate crew earnings in the BSS fishery increased by 43% to \$14.7 million and captain earnings increased by 45% to \$6.4 million, while crew and captain earnings in the BBR fishery each declined slightly, to \$4.9 million and \$2.3 million, respectively. Earnings in the BST fishery also declined substantially, with captain earnings of \$410 thousand reduced by 32%, and aggregate crew earnings falling 35% from 2018 to \$920 thousand.

The number of active processing plants receiving deliveries from BSAI crab fisheries also continued a long declining trend in 2021, falling to just six, the lowest number in the history of BSAI crab fisheries (compared to 19 active plants in CR fisheries as of 2006), prior to additional TAC reductions and fishery closures beginning in 2022, for which data are not yet available. Crab processing employment in 2021, as measured by hours of processing labor input at plants that received IFQ and CDQ crab landings, is estimated at 534 thousand labor hours, an 18% increase from 2020. Aggregate wages paid to crab processing line employees across all CR fisheries during 2021 generated labor earnings of \$9.3 million, 23% greater 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 increased for a second year, by 2.9% to \$16.04 per hour in 2021. The BSS fishery accounted for the largest share of processing labor wages in 2021, at \$8.3 million.

The geographic distribution of employment and labor income in the crab harvest and processing sectors is critical to assessing associated economic effects of the current crab fishery closures on communities. Figures 1.8 and 1.9, and Tables 1.4 and 1.5 report statistics for CR program harvest and processing sector employment and labor earnings, respectively, broken out by community or region of residence<sup>9</sup> for vessel crew members and processing workers, for 2017 through 2021. Statistics reported include counts of individual crew members (including captains) and processing employee by location of residence, the share (percentage) of total employment in the respective pools attributable to each location of residence, and the estimated amount of labor income flowing to communities/locations (see table notes for Tables 1.4 and 1.5 for details on data sourcing and computation methods for reported values). In order to show geographic distribution for Alaska residents in greater detail, Figures 1.8 and 1.9 include results across all community locations, with Alaska represented at the state level, and Alaska community-level results in a separate panel, broken out by individual Alaska community/region.

Over the 2017 to 2021 period, Alaska and Washington have alternated between first and second largest state-level source for crab fishing crew members, with Alaska residents averaging a 34% share of crab crew employment over the period, and Washington state residents averaging 35%. In 2021, 170 Alaska residents and 193 Washington state residents were employed as crew or captain on crab vessels during 2021, 33% and 32% of the 2021 crew labor pool, respectively, and accounting for an estimated \$16.3 million and \$22.8 million labor settlement earnings from crab fishing. The

<sup>&</sup>lt;sup>8</sup>In addition to revenue-share payments, income is derived by some crew and many captains from royalties for harvesting quota shares held, either as initial issuance or more recent acquisition by either captain or crew. While this may become an increasingly important source of income as crab captains and crew members lose opportunities to participate in the fishery due to fleet contraction, 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.

<sup>&</sup>lt;sup>9</sup>Individual communities of residence are grouped by region where necessary, at the highest level of geographic detail that maintains data confidentiality.

Seattle MSA represents the single largest source of residents employed as crab crew, averaging 21% of the labor pool and 120 individual crew members employed per year over the five-year period, and with 108 crew members employed in 2021, accounting for \$14.7 million in crew labor earnings. The grouping of residence locations in states other than Alaska, Oregon and Washington (or where residence was reported as unknown) ranked second to Seattle MSA as the geographic linkage to individuals employed in crab fishing, averaging 16% of the crew labor pool over the period, and accounting for 86 crew members and \$8.7 million in income in 2021. Within the state of Alaska, Kodiak Island represented the single largest share of crab crew members as residents over the period, averaging 9% of the crew labor pool. However, the 43 Anchorage MSA-resident crab crew members accounted for substantially greater earnings in 2021, totaling an estimated \$4.98 million in 2021, compared to \$2.8 million in estimated earnings received by an equal number of Kodiak Island residents crewing in CR crab fisheries during the year, likely indicating that Anchorage residents collectively worked on vessels that accounted for a larger share of total crab landings and ex-vessel value during 2021.

In the processing sector, the largest share of individuals employed on crab processing lines were residents of locations other than Alaska, Oregon and Washington, averaging 37% of the processing labor pool over the 2017 to 2021 period, and 950 of the total 2,562 persons employed in crab processing during 2021, earning \$2.7 million of the total \$8.2 million in processing wages earned in 2021. Over the five-year period, California and Alaska residents each tied for the second largest source of crab processing employees, both averaging 24% of the labor pool, and residents of Washington and Oregon averaging 13% and 1% of the processing labor pool averaged over the period. However, in 2021, California declined to 20% of the processing labor pool, with 517 residents employed, while Washington increased to 17% of the labor pool, with 444 residents employed. Within the state of Alaska, Unalaska represented the largest share of processing employees as residents, comprising 15% of the labor pool on average over the period, and 19% in 2021, with 485 individual residents employed in crab processing, accounting for an estimated \$1 million in wages. Anchorage MSA and Kodiak Island each represented 35% of the labor pool on average over the period, although Kodiak declined to less that 1% of the pool in 2021, with only 6 residents reported by crab processors as employees, compared to 65 Anchorage MSA residents (3%) employed in 2021.



Figure 1.8: CR fisheries program - estimated crew employment and income, by community/region of residence.

Note Tabular data shown in Table 1.4.



Figure 1.9: CR fisheries program - estimated processing labor employment and income, by community/region of residence

Note Tabular data shown in Table 1.5.

#### IFQ Leasing

Summary indicators reporting on crab quota leasing activity are presented in Figure 1.10 and Table 1.3 for the 2017 to 2021 period. Results pertain to the segment of active crab vessels that participated in lease markets for the respective fisheries and quota types, noting that a segment of the fleet (approximately ten vessels per year) harvests only quota held by the vessel owner. Quota types are categorized as the following: catcher vessel owner (CVO) Class A IFQ ("A share"); catcher vessel owner Class B IFQ and catcher/processor owner (CPO) IFQ (B share); catcher vessel crew IFQ and catcher/processor crew IFQ (crew share), and Community Development Quota (CDQ). Indicators shown in Figure 1.10 include weighted average statistics for lease rates (lease price as percentage of ex-vessel price), and lease market total and vessel-level mean and median volume (pounds) and royalty cost of leased quota. As indicators of the scale of quota lease transfer, leased pounds as a proportion (%) of total pounds landed and lease cost as a proportion (%) of total ex-vessel gross revenue are calculated over all crab landings for the respective fishery, inclusive of landings by non-leasing vessels.



Average lease rate (lease price as % of ex-vessel price), vessel median, by quota type

Figure 1.10: Crab harvest quota lease market indicators, selected crab fisheries, 2017-2021. Note All dollar values are adjusted for inflation to 2021-equivalent value. Asterisks indicate confidential data that are not plotted.

Source NMFS AFSC BSAI Crab Economic Data Report (EDR) database. See Table 1.3 footnotes for details.

Most vessels active in CR program fisheries lease harvest quota for at least some portion of the crab that they catch and deliver to processors for ex-vessel sale (or, for catcher-processors, process onboard), while a segment of the fleet in the respective fisheries does not participate in the lease market, landing only harvest quota held by the vessel owner or otherwise not requiring royalty payment to QS holders. Through the end of 2021, the numbers of active vessels not reporting any quota leasing have remained quite consistent over time, at 1-2 AIG vessels per year, and varying between 10 and 12 vessels per year in the BSS and BBR fisheries; participation in BST quota leasing is more variable, from all 30 vessels with BST landings in 2018 reporting leased quota costs, to 17 out of 25 vessels active in the fishery during 2021. With few exceptions, all leasing vessels report lease costs for A share IFQ, while a typically somewhat smaller segment of vessels lease B share and crew IFQ. In 2021, 49 of the 51 BSS vessels leasing quota reported costs for A share IFQ, but only 39 reported B share leasing, and 33 reported leasing crew share. This pattern is generally similar over time in the BSS, BBR and BST fisheries; among vessels in the AIG fisheries, however, leasing has typically been more uniform across IFQ types over time. A significantly smaller segment of the fleets report leasing CDQ over time, generally 2-3 AIG vessels, 11 or fewer vessels in the BSS fishery, and between 5 and 8 vessels in the BBR fishery prior to 2021; likely as an effect of the BSS fleet being reduced to the smallest in record, the largest number and proportion of active vessels, 12 of 62, leased CDQ in 2021.

Median lease rates have generally remained quite stable over time in the BBR (through 2020), BSS, and BST fisheries, at approximately 65%, 48% and 32%, respectively, for A share quota, with modest premia of less than 2% intermittently for B share and crew share IFQ, and a larger and more consistent 2-5% premium for CDQ. Lease rates have been more variable over time in the AIG fishery, ranging from 40% to 51% over the most recent period for A share IFQ. In 2021, lease rates diverged significantly between types, with A share remaining stable at 41%, while B share and crew share lease rates increased by 5 and 8 percentage points, respectively, to 48% and 53%. The contrast between relatively variable lease rates in the AIG fishery and stability of those in other CR fisheries is a reflection of voluntary measures taken by members of the harvesting cooperatives in the BBR and BSS fisheries to limit A share lease rates to 65% and 50%, respectively.

The total volume of leased quota in the BSS fishery during 2021, aggregating over all IFQ and CDQ pounds leased, at 3.54 million pounds, represented the highest proportion of total ex-vessel pounds landed in the fishery in the available time series, increasing from 77% the previous year to 80% in 2021. Aggregate lease costs as a share of total ex-vessel gross value of BSS landings have increased only modestly over the recent period, however, and remained flat at 44% in 2020 and 2021. In the AIG fishery in 2021, total lease volume and cost both increased substantially from the previous year, in proportion to aggregate ex-vessel volume and value, from 81% to 84% of volume, and from 42% to 47% of ex-vessel value.

### 1.4 Analysis of Crab Quota Share Pools

In the design of the three-pie quota share system that comprises the core component of the CR program, the Council and NMFS created and allocated a relatively novel set of durable, transferable assets. Notwithstanding the formal designation of CR program Quota Share (QS) and Processor Quota Share (PQS) as granting revocable privileges rather than property rights, in principal, the market value of crab QS and PQS pools substantially capitalizes much of the expected stream of future economic rent value of the crab fishery resource (Holland, et al., 2015). Among other

management imperatives expressed in its' Crab FMP, by specifying and continually amending a comprehensive system of regulatory controls that govern and constrain the eligibility to hold, transact in the sale or purchase of, and exercise use privileges of CR Program QS and PQS, the Council has demonstrated its interest in managing various distributional aspects of crab QS and PQS pools. Changes over time in the demographics of quota share pools, the composition of equity ownership of QS/PQS-holding entities, concentration of QS/PQS holdings, changes in QS/PQS market values, and other distributional factors and outcomes, are important dimensions of the management performance of the CR program and of the economic status of the crab fishery and affected stakeholders and communities.

The recent and ongoing closures of both the BBR and BSS fisheries, uncertain prospects for stock recovery and timelines for resumption of targeted fishing, and limited ability for crab vessel owners and processors to diversify into other fisheries and income streams, present an unprecedented crisis for crab fishery stakeholders. In addition to direct and indirect effects of income and employment losses on individuals and communities associated with the immediate crisis, the potential for prolonged low to negative cash flow for many crab vessel owners, quota holders, and crab fishery-dependent processors (particularly recent, more debt-encumbered ownership entrants) poses the potential for broad structural changes in the crab industry, including structural turnover and consolidation of QS/PQS ownership. Improved data and methods for monitoring the status of QS and PQS pools is critical effective and transparent evaluation of CR program performance, particularly with respect to National Standard 4.

#### Distribution of Quota Entity Ownership and Holdings in CR Program Harvest Quota Share Pools

Although CR Program QS and PQS holder registries are public information,<sup>10</sup> most PQS and CVO/CPO (vessel owner) QS is held by corporate entities, many of which were chartered specifically for the purpose of holding assignment of their owners' QS/PQS assets. This presents a significant barrier to effectively monitoring and analyzing comprehensive changes in various aspects of crab quota pools: QS entities are not mutually distinct, with a network of ownership interests that cut across multiple entities, and the ownership and equity distribution of a given QS entity can change independently of the amount of QS the entity holds. In contrast, eligibility to hold CVC/CPC (crew) QS (comprising only 3% of the overall QS pool) is limited to natural persons. As such, more transparent monitoring and analysis of the distribution of ownership within crab quota pools, and changes in ownership composition over time, requires decomposition of the ownership of each corporate (non-individual) QS entity according to its constituent, individual owners' equity shares. In principal, this enables identification of 100% of the fractional QS shares in each QS pool with distinct, individual (non-divisible) persons through all direct and indirect ownership interests.

Figures 1.11 through 1.15 display the results of QS entity decomposition, performed using annual QS holder account registries, and confidential equity share data reported by each QS entity in annual permit applications for issuance of IFQ pounds submitted to NMFS Alaska Region.<sup>11</sup> Figure 1.11 illustrates the number of distinct individual CVO/CPO QS entities identifiable in the annual public registries for each of the six principal CR fisheries, compared to the number of distinct, non-divisible owners, and the change of both from 2005 to 2021. The population of QS entities is comprised

<sup>&</sup>lt;sup>10</sup>NMFS Alaska Region publishes annual CR Program QS and PQS Holder registries, annual IFQ/IPQ permit issuance, and other CR permit registries on its website; see https://www.fisheries.noaa.gov/alaska/commercial-fishing/permits-and-licenses-issued-alaska.

<sup>&</sup>lt;sup>11</sup>NMFS Annual Crab IFQ/IPQ Permit application forms are available online at here. Data curation and decomposition analysis is performed by Alaska Fisheries Information Network (AKFIN) staff; see Section 3.4.3 of the Economic SAFE for more detail.

mostly of corporate entities (corporations, LLCs, Partnerships), with smaller numbers of CDQ groups and individual persons.

At the QS entity level, the BBR, BBS, EBT/WBT<sup>12</sup> pools are nearly identical in structure and fairly static over time. In 2006, there were 222, 209, and 225 corporate entities in each pool, and 30, 27, and 28 individuals, respectively. As of 2021, there were 200, 214, and 187 corporate entities, and 35, 48, and 36 individuals, respectively. In contrast, the EAG and WAG pools are distinctly different in structure, with much smaller populations commensurate with the small number of vessels in these fisheries historically. Both EAG and WAG pools started with 14 corporate and one individual holders in 2005; as of 2021, the WAG pool was comprised of 14 corporate and 8 individual holders, compared to 9 corporate and 2 individual EBT QS holders.

Results of entity decomposition using available equity share data, shown in the right panel of Figure 1.11, identifies a much larger number of distinct individual persons, as well as somewhat more dynamically varying population in the respective pools.<sup>13</sup> Between 2007 and 2021, the number of distinct individuals in the BBR pool has varied between 394 and 456, peaking in 2014, and the EBT/WBT pool has followed the same pattern with slightly fewer (5-10) individuals, while the number in the BSS pool has varied between 341 and 416, on average about 8% fewer than in the BBR pool. Collectively the EAG and WAG pools have varied between 17 and 38 individual owners over the period.

The number of non-divisible corporate entities remaining in the decomposed results for each of the EAG and WAG pools has varied between 0 and 1 since 2008. In the BBR, BSS, and EBT/WBT pools, non-divisible corporate entities increased from just below 20 in 2007 to 80 in 2008, then declined to the low-70s in 2014. This dropped to eight or fewer across pools in 2015, and as of 2021, stands at five each in the BBR and EBT/WBT pools and four in BSS. The elevation in the number of corporate entities from 2008 to 2014 was attributable to the indirect entry of a number of corporate (functionally non-divisible) investment-fund shareholders through incidental acquisition of minor equity interest in a small number of QS entities. As discussed below, this did not translate to a significant effect in the distribution of QS shares.

Within the vessel owner QS pools at initial issuance, there were two CDQ groups registered as QS entities in each of the BBR, BSS, and EBT/WBT pools, and one in each of the EAG and WAG pools. By 2008, this had increased to four and two, respectively, which has remained constant through 2021, with the exception of a fifth CDQ group entering the BBR, BSS, and EBT/WBT pools as a registered QS entity as of 2012. In the decomposition results, the number of CDQ groups identified as owning equity in QS holdings in each of the BBR, BSS, and EBT/WBT pools peaked at seven from 2008 through 2014, during which time four CDQ groups were registered QS entities and three additional groups held indirect, equity interest in the respective QS pools. As of 2020, five CDQ groups held interest in the BBR and EBT/WBT pools, and six in BSS, increasing to 40 in 2021. In brief, this is the result of entry of a new QS entity, owned by a consortium of 40 Western Alaska community non-profit organizations, holding QS shares purchased with CDQ group collaboration.

 $<sup>^{12}</sup>$ The Bering Sea Tanner (BST) QS pools were initially issued for a consolidated fishery, but were split into EBT and WBT for the 2006/07 season, and all BST QS holders received equivalent QS shares in the respective fishery. Consequently, throughout most of the management history, the two pools are virtually (though not exactly) identical, and will be referenced collectively in this discussion as EBT/WBT.

 $<sup>^{13}</sup>$ Note that the initial increase in number of individuals and offsetting decline in number of corporate owners from 2005 to 2006 across fisheries is partially an artifact of data quality limitations in the available equity share data for ownership of QS entities that were resolved by 2007)

In addition to individuals, CDQ and associated community-based non-profit organizations (CDQ/Non Profit), and corporate owners in the decomposed results, a number of equity owners are non-divisible legal trusts and estates, none of which appear in the public registries of direct QS holding entities. Notably, the number of trust/estate entities holding equity in the BBR, BSS, and EBT/WBT pools has approximately tripled since initial issuance, growing from approximately 20 in each pool in 2006, to 60 or more as of 2021.

Figure 1.12 displays the change over time in the distribution of decomposed equity interest in QS pools by owner type: Individual, CDQ/Nonprofit, Corporate, Trust/Estate; where available equity interest does not sum to 100% for a given QS entity, the residual percentage of QS shares is assigned to Unknown. As noted above, data quality in the initial two years of the data series limits the completeness of the decomposition, and results shown for 2007 and later are more reliable for comparison across time.

Over the same period when the number of trust/estate entities tripled, the percentage of equity in QS pools collectively held by this owner category has more than tripled, from less than 2.5% in each of the pools in 2007, to nearly 10% in the BBR and EBT/WBT QS pools and 8% in the BSS pool in 2021. In addition to the increase in the proportion of equity in QS share pools held by trust/estate entities, CDQ groups and associated non-profit equity interest has approximately doubled over the post-CR period in the BBR, BSS and EBT/WBT pools, from approximately 12% each in 2007, to approximately 23% in BBR and EBT/WBT and 24% in BSS. CDQ ownership in the EAG pool varied little over the long term, starting at 31.5% in 2006, peaking at 36% in 2008, and returning to 31.5% as of 2021, while CDQ/Non-profit equity in the WAG pool gradually increased from 9% in 2007 until 2013, when it increased from 15.5% to 61.2% of the QS pool, remaining at that level through 2021.

The collective increase in equity interest in crab QS pools held by CDQ/Non-profit groups and trust/estate entities has been offset by the decline in equity held by individuals and non-divisible corporate entities. As noted above, the sharp decline in corporate equity between 2005-2006 and 2007 shown in Figure 1.15 is largely a data quality effect. However, as of 2007, corporate equity share remained at approximately 4% across the BBR, BSS, and EBT/WBT pools, from which it has gradually tapered to 1% or less as of 2021. Individual-owned equity in these pools has declined over the same period from approximately 80% of each to 67% as of 2021.

Collectively, this represents a shift to-date in the BBR, BSS and EBT/WBT vessel owner QS pools of approximately 16% of the equity interest held by individuals and corporate owners, to trust/estate entities and CDQ/Non-profit organizations. Figure 1.13 displays a visual depiction of distinct, decomposed equity holdings in the BBR, BSS, EAG, and WAG QS pools held by the populations of distinct owners, distinguished by individuals and non-individual entity types, in 2007 and 2021. This figure<sup>14</sup> combines the owner count information shown in the right panel of Figure 1.11 with the distribution of equity by owner-type shown for QS share pools in Figure 1.12, indicated by the number and color of tiles within a plot, respectively. In addition, the size of individual tiles indicates the relative size of distinct, decomposed equity holdings that are constrained by (i.e., equal to or larger than) QS use caps applicable to the respective entity types.<sup>15</sup>

With respect to the types of owners as categorized here, Figure 1.13 provides an integrated view of the structure of ownership and relative distribution of distinct, decomposed units of QS holdings,

<sup>&</sup>lt;sup>14</sup>Treemap figure generated using R package 'treemapify'; Wilkins and Rudis (2021).

 $<sup>^{15}\</sup>mathrm{QS}$  and IFQ use caps are specified at 50 CFR 680.42 here.
within and between owner categories and QS pools, over time (note that EBT/WBT pools are not shown). As of 2007, there was one corporate entity in the BBR pool constrained by QS use caps, and four individual owners with QS shares in excess of the use cap; as of 2021, there were four capped individual owners and one CDQ group, whereas in the BSS pool, there were five capped individual holders and one capped CDQ group.<sup>16</sup> A generally similar transition has occurred in the BSS QS pool; in both cases, only one large "Individual" holding in excess of the use cap remains in 2021, and otherwise, no obvious indication of a distributional shift toward or away from increased consolidation within the "Individual" segment of the owner population. In contrast, all of the original CDQ groups have increased their holdings substantially, while roughly maintaining the relative distribution of their original holdings. The recent entry of a new CDQ-associated QS holder, owned by a consortium of smaller community-based non-profit entities, is shown in the figure grouped with the CDQ/Non-profit; not formally a CDQ group and subject to the lower QS cap that applies to individual QS holders, the organization of smaller equity interests demonstrates the potential for community-affiliated acquisition of QS beyond use cap limits, and the structural effect on the ownership pool that results. Similarly, the increase in the number of trust/estate-owned QS holdings, and the increased size of the largest such holdings, appears to be a relatively pronounced structural change in the BBR and BSS pools (with similar results in the EBT/WBT pools, not shown). Although no single trust/estate-owned QS holding has reached the 1% use cap for individual QS, the growth of this segment QS ownership structures likely represents, to some degree, conveyance of equity in initial issuance QS holders, some of which may have been capped, from the original owners to beneficiaries of their estates; however, this is obscured by the non-public nature of this type of legal entity.

#### Active/Inactive QS Ownership

Figures 1.14 and 1.15 report on trends and current (as of 2021) status of CVO/CPO QS pools with regard to the degree of joint interest in QS pools and active crab fishing vessels, using QS and crab vessel ownership decomposition results. For the purpose of this analysis, "Active QS owner", in a given QS pool during a given year, is defined as a distinct QS equity owner that meets at least one of the following conditions during the year that QS is owned: 1) held ownership interest in a vessel that made landings in any CR program crab fishery during the year of QS ownership, or 2) participated in the IFQ crab fishery as a crab vessel gear operator. By extension, "Inactive QS owner" is defined as as a distinct QS equity owner that does not meet either of these conditions. Note that this method of characterizing "Active" is implemented for this analysis solely for the purpose of illustrating an additional distributional dimension of QS holdings that is facilitated with QS decomposition data. This is not a formal eligibility criteria for QS holders defined in CR program regulations, and these results are not intended to assess compliance with CR program quota management rules. Also note that this analysis is applied to CVO/CPO QS pools, and has no bearing on active participation requirements applying to CR Crew (C) share holders under 50 CFR 680.40-680.44.

Figure 1.14 reports the number of distinct owners in each QS pool over time, distinguishing between the number of owners meeting the respective "Active" conditions gear operator and vessel owner, the number meeting either condition, and the count of "Inactive" QS owners. As in the previous discussion, trends and status of active ownership are similar between BBR, BSS, and EBT/WBT pools. Active QS owner status through vessel ownership interest, though less clearly indicative of working engagement in the fishery than gear operators, does provide a tractable means of drawing

 $<sup>^{16}</sup>$ The smallest tiles in each plot shaded to indicate constrained status under QS use caps are generally indicative of the cap-limit; larger shaded tiles are associated with initial issues with exempted status under use cap limits.

a distinction between active and inactive QS owners using available data. The elevated number of "active" vessel owners shown in Figure 1.14 Also note that, due to incomplete data on vessel ownership decomposition, the results of the analysis represent the estimated minimum share of the QS pool held by active QS owners.

Across the BBR, BSS, and EBT/WBT pools, the number of CVO/CPO QS owners active as gear operators has been low relative to the number active as vessel owners, and has steadily trended downward over time, e.g., from 34 owners in the BBR QS pool during 2007 to 20 during 2020, compared to 205 vessel owners in 2007 and 195 in 2020, in contrast to a steady increase in the number of inactive QS owners over time, increasing from 251 to 313 in the BBR pool over the same period. Counts of both active gear operators and active vessel owners in these QS pools declined sharply during 2021, with a corresponding increase in inactive QS owners, as a result of the unprecedented level of fleet consolidation occurring during 2021. The relative distribution of active versus inactive QS owners in the EAG and WAG pools is distinctly different: within a much smaller active fleet, and smaller populations of vessel and QS equity owners, the level of inactive QS ownership is substantially lower than that of active QS/vessel ownership. The EAG QS pool exhibits the highest relative proportion of active gear operators beginning in 2016, with an average of 6 gear operators compared to an average 13 inactive owners is the EAG QS pool.

Figure 1.15 displays the corresponding results for the proportion of equity in the six QS pools between active (inclusive of both gear operator and vessel ownership criteria) and inactive owners. Consistent with the results discussed above regarding QS owner populations and proportional ownership between owner/entity types, the relative distribution of equity in the QS pools is much less variable over time than population counts. Across the BBR, BSS, and EBT/WBT pools between 2007 and 2020, the proportion of QS equity held by inactive owners varied between 33% and 42%, with a moderate increasing trend: inactive ownership in the BBR and BSS pools increased by 9% over that period, from 36% to 39% inactive in the BBR pool and from 34% to 37% in the BSS pool, and similar change in the EBT/WBT pools. The effect of fleet consolidation in active fisheries during 2021 is reflected in the sharp increase of 15% in the BBR pool, inactive ownership increased from 39% to 45%, and the BSS, EBT and WBT pools some even larger year-on-year shifts, all of which saw the largest year-on-year proportional increase to date. The EAG and WAG QS pools have seen an increase over time, and much higher, distribution of QS equity toward active ownership: as of 2021, inactive QS equity was 15% in the EAG pool and 5% in WAG.



Figure 1.11: CVO/CPO QS ownership decomposition - QS entity and owner counts by owner type and crab fishery.



Figure 1.12: CVO/CPO QS ownership decomposition - QS equity distribution by owner type and crab fishery.

Note Bering Sea Tanner (BST) crab quota was initially issued for the 2005/2006 season; for subsequent seasons, the pool was split into Eastern and Western BST quota (EBT, WBT).

 $\label{eq:source_NMFS} {\it Source NMFS Alaska Region - Restricted Access Management, crab IFQ quota holdings and company ownership data; Alaska Fisheries Information Network (AKFIN). Tabular data reported in Table 4.40$ 



Figure 1.13: CVO/CPO QS ownership decomposition - QS owner-equity distribution by owner type: BBR, BSS, EAG, and WAG QS Pools

**Note** Darker shading within a given tone/entity category indicates entities whose holdings exceed the respective use caps for the fishery. 2007 is shown as the earliest reference year, as data quality issues in the historical company ownership data result in a significant number of "unknown" entities in the decomposition of direct QS holders.

Source NMFS Alaska Region - Restricted Access Management, crab IFQ quota holdings and company ownership data.



- Active QS owner (gear operator) - Inactive QS owner



Note Active QS owners are decomposed owners of CVO/CPO QS that meet at least one of the following requirements during the year that QS is owned: 1) held ownership interest in a vessel that made landings in any CR program crab fishery during the year of QS ownership; 2) participated in the IFQ crab fishery as a gear operator. Due to incomplete data on decomposed QS and vessel ownership, these plots show the estimated minimum share of the QS pool held by active QS owners.

Source: NMFS Alaska Region - Restricted Access Management, crab IFQ quota holdings, vessel ownership, company company ownership data; eLandings landing reports.





Note Active QS owners are decomposed owners of CVO/CPO QS that meet at least one of the following requirements during the year that QS is owned: 1) held ownership interest in a vessel that made landings in any CR program crab fishery during the year of QS ownership; 2) participated in the IFQ crab fishery as a gear operator. Due to incomplete data on decomposed QS and vessel ownership, these plots show the estimated minimum share of the QS pool held by active QS owners.

Source: NMFS Alaska Region - Restricted Access Management, crab IFQ quota holdings, vessel ownership, company company ownership data; eLandings landing reports.

				Harvesting	g Sector: Ex	-Vessel Sta	$tistics^1$		Proce	ssing Sector	: First Wh	olesale Stati	$istics^2$
		Vessel	s 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	2017 2018 2019 2020 2021	$108 \\ 101 \\ 91 \\ 67 \\ 67 \\ 67$	$276 \\ 231 \\ 194 \\ 154 \\ 108$	$15.80 \\ 14.45 \\ 17.69 \\ 19.36 \\ 23.14$	$\begin{array}{c} 34.84\\ 31.87\\ 38.99\\ 42.69\\ 51.02 \end{array}$	23 20 21 23 17	\$ 202.13 \$ 181.47 \$ 213.11 \$ 218.18 \$ 296.82	- - -	$13 \\ 13 \\ 15 \\ 14 \\ 8$	$10.38 \\ 9.48 \\ 11.57 \\ 12.63 \\ 15.12$	22.88 20.90 25.52 27.85 33.33	\$ 240.61 \$ 216.27 \$ 255.54 \$ 282.94 \$ 372.02	- - - -
AIG	2017 2018 2019 2020 2021	5 5 5 5 5	$12 \\ 14 \\ 16 \\ 14 \\ 17$	$2.52 \\ 2.95 \\ 3.08 \\ 2.59 \\ 2.68$	5.56 6.51 6.78 5.72 5.90	$     13 \\     11 \\     11 \\     12 \\     10   $	\$ 33.94 \$ 43.18 \$ 45.94 \$ 43.46 \$ 71.98		$5 \\ 5 \\ 5 \\ 6 \\ 4$	2 2 2 2 2 2	3.53 4.13 4.30 3.63 3.75		\$ 12.20 \$ 13.05 \$ 13.84 \$ 15.04 \$ 20.42
BBR	2017 2018 2019 2020	$61 \\ 55 \\ 56 \\ 47$	$69 \\ 62 \\ 65 \\ 54$	$2.97 \\ 1.92 \\ 1.71 \\ 1.20$	$6.55 \\ 4.23 \\ 3.77 \\ 2.64$	$17 \\ 15 \\ 14 \\ 16$	\$ 66.06 \$ 47.20 \$ 47.26 \$ 33.61	\$ 10.09 \$ 11.16 \$ 12.53 \$ 12.73	11 $10$ $9$ $9$	2 1 1 1	$ \begin{array}{r} 4.42 \\ 2.86 \\ 2.55 \\ 1.78 \end{array} $	\$ 78.98 \$ 54.93 \$ 54.25 \$ 39.94	\$ 17.86 \$ 19.23 \$ 21.29 \$ 22.41
BSS	2017 2018 2019 2020 2021		78 78 77 77 82	9.67 8.55 12.36 15.24 20.02	$21.32 \\18.84 \\27.26 \\33.61 \\44.14$	14 13 13 13 13	\$ 95.90 \$ 80.76 \$ 114.33 \$ 137.67 \$ 219.13		8 8 8 8 8		$13.97 \\ 12.34 \\ 17.86 \\ 22.01 \\ 28.91$	\$ 109.75 \$ 94.24 \$ 134.05 \$ 183.50 \$ 287.39	\$ 7.86 \$ 7.64 \$ 7.51 \$ 8.34 \$ 9.94
BST	2017 2018 2019 2020 2021	$     \begin{array}{r}       16 \\       30 \\       18 \\       25 \\       20     \end{array} $	21 34 22 26 25	$\begin{array}{c} 0.64 \\ 1.04 \\ 0.54 \\ 0.28 \\ 0.43 \end{array}$	$1.41 \\ 2.29 \\ 1.18 \\ 0.62 \\ 0.95$	$11 \\ 14 \\ 10 \\ 9 \\ 11$		\$ 4.43 \$ 4.51 \$ 4.72 \$ 4.30 \$ 5.55	6 8 8 5 6	0 1 0 0 0	$\begin{array}{c} 0.96 \\ 1.57 \\ 0.81 \\ 0.42 \\ 0.65 \end{array}$	\$ 8.80 \$ 13.18 \$ 7.69 \$ 4.92 \$ 7.74	\$9.14 \$8.41 \$9.51 \$11.59 \$11.91
NSR	2017 2018 2019 2020 2021 2017	$     \begin{array}{r}       37 \\       34 \\       25 \\       1 \\       1     \end{array} $	$     \begin{array}{r}       110 \\       71 \\       32 \\       1 \\       3     \end{array} $	* * * *	* * * *	2 1 1 0 0	* * * *	* * * *	1 1 1 0 0	* * 0 0	* * 0 0	* * \$ 0 \$ 0	* * \$ 0 \$ 0

Table 1.1: BSAI crab harvesting and processing sector output – production volume, gross revenue, and average price

Table 1.1: BSAI crab harvesting and processing sector output – production volume, gross revenue, and average price (continued)

				Harvesting	g Sector: Ex	-Vessel Sta	$tistics^1$		Processing Sector: First Wholesale Statistics <sup>2</sup>				
		Vessels	CFEC permits	Landed s 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
	2018	1	2	*	*	1	*	*	1	*	*	*	*
PIG	2019	2	2	*	*	2	*	*	2	*	*	*	*
	2020	4	4	0.05	0.11	3	0.77	\$ 7.25	3	0	0.07	0.80	\$ 11.96
	2021	4	4	0.02	0.03	3	0.44	\$ 13.18	2	*	*	*	*

<sup>1</sup> Except where noted, ex-vessel results reflect total commercial sales volume and value across all management programs (LLP/open access, IFQ, CDQ, ACA), inclusive of all harvesting sector production (CV, CP, and catcher-sellers); ex-vessel 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

 $^{2}$  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 2015 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

Note Data shown for all BSAI crab fisheries by calendar year. All dollar values are adjusted for inflation to 2021-equivalent value. Information suppressed for confidentiality where indicated by "\*", and data not available where indicated by "-". Statistics reported for "All BSAI Fisheries" reflect information aggregated over all FMP crab fisheries, excluding fishery-level confidential information suppressed where indicated by "\*". Landings and ex-vessel revenue suppressed in years where CDQ fishery landings are confidential. 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.

		Cre	ew position	$ns^1$	Crev	$v \text{ share}^2$	Captain	share	Proce	ssing labor ho	ours <sup>3</sup>	Process	ing labor payr	$ment^4$
		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
	2017	72	996	-	\$ 27.56	-	\$ 11.94	-	9	425.52	31.95	\$ 13.09	\$ 5.66	\$ 335.78
All	2018	67	1,049	-	\$ 23.33	-	\$ 10.38	-	8	381.70	29.90	\$ 12.73	5.08	\$ 200.09
CR	2019	67	974	-	28.56	-	\$ 12.03	-	7	451.65	51.95	\$ 13.51	\$ 6.56	\$ 384.85
Fisheri	es 2020	64	948	-	\$ 31.09	-	\$ 12.89	-	7	451.97	56.43	\$15.59	\$ 7.56	\$ 440.36
	2021	66	633	-	\$ 41.41	-	\$ 17.50	-	6	534.37	74.54	\$ 16.04	\$ 9.33	\$ 920.53
	2017	5	36	7	\$ 5.12	\$ 853.27	\$ 2.16	\$ 398.48	5	58.08	9.67	\$ 12.85	\$ 0.74	\$ 113.32
	2018	5	37	7	\$ 5.61	\$ 1,072.72	\$ 2.62	\$ 413.05	5	64.96	8.23	\$ 12.72	0.85	\$ 132.58
AIG	2019	5	37	7	\$ 6.91	\$ 1,264.75	\$ 2.52	474.90	3	57.48	18.39	\$ 13.33	0.77	\$ 259.22
	2020	5	35	7	\$ 8.18	1,178.76	\$ 2.75	550.68	4	61.67	12.29	15.63	0.91	\$ 192.71
	2021	5	37	7	10.50	1,719.97	\$ 4.05	\$ 761.33	4	55.99	11.79	\$ 16.22	\$ 0.83	\$ 197.92
	2017	61	419	6	\$ 7.78	\$ 114.56	\$ 3.53	\$ 52.53	8	81.31	8.06	\$ 13.16	\$ 1.14	\$ 68.81
DDD	2018	55	365	6	5.35	\$ 86.74	\$ 2.46	\$ 42.50	7	55.27	5.38	\$ 13.09	\$ 0.80	\$ 51.09
DDR	2019	56	370	6	\$ 5.20	\$ 83.70	\$ 2.39	\$ 38.49	6	47.29	6.21	13.24	\$ 0.75	\$ 76.79
	2020	47	333	6	\$ 3.68	\$ 72.68	\$ 1.70	\$ 34.67	6	31.12	3.75	\$ 15.58	\$ 0.57	\$ 54.12
	2017	63	441	6	\$ 13.60	\$ 181.23	\$ 5.77	\$ 84.29	6	266.39	34.61	\$ 13.07	\$ 3.54	\$ 230.60
	2018	63	436	6	10.86	\$ 148.88	\$ 4.66	69.81	6	232.43	30.48	12.95	\$ 3.07	\$ 175.57
BSS	2019	61	428	6	15.48	\$ 210.89	\$ 6.69	102.74	6	332.59	45.70	13.63	\$ 4.83	\$ 323.26
	2020	59	417	6	18.83	\$ 281.60	\$ 8.28	128.66	6	351.19	50.53	15.52	\$ 5.96	\$ 418.30
	2021	62	448	6	\$ 30.05	\$ 433.03	\$ 12.57	\$ 182.62	6	468.95	61.83	\$ 16.10	\$ 8.26	\$ 682.89
	2017	16	100	6	\$ 1.06	\$ 70.65	0.48	\$ 27.86	5	19.74	3.25	\$ 11.72	\$ 0.24	\$ 37.19
	2018	30	211	6	1.50	\$ 40.74	0.64	\$19.79	6	29.04	2.01	\$ 12.33	0.37	\$ 24.12
BST	2019	18	139	6	0.97	\$ 41.99	0.43	\$ 16.69	6	14.29	1.61	13.54	\$ 0.21	\$ 23.19
	2020	25	163	6	0.40	\$ 13.47	0.17	\$ 6.31	5	8	0.89	\$ 15.83	\$ 0.11	\$ 14.10
	2021	20	149	6.50	0.87	\$ 31.89	0.88	\$ 14.42	5	9.43	1.01	\$ 15.30	0.17	18.06

Table 1.2: CR Program fisheries crew and processing sector employment and earnings

<sup>1</sup> 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

<sup>2</sup> Crew and captain payments reflect amounts paid for labor during the crab fishery and include all post-season adjustments, bonuses, and deductions for shared expenses such as fuel, bait, and food and provisions; payments for IFQ royalties, labor outside of crab fishery, health/retirement or other benefits are excluded.

<sup>3</sup> 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

<sup>4</sup> Pay per hour statistics reflect only the shoreside and floating processing sectors; all other processing labor pay statistics are reported inclusive of catcher/processors

Note Data shown for all BSAI crab fisheries by calendar year. All dollar values are adjusted for inflation to 2021-equivalent value. Information suppressed for confidentiality where indicated by "\*", and data not available where indicated by "-".

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

			Vessels	Lea (per ex-ves	use rate rcent of ssel price)	P(	ounds Leased 1000 pounds)			Cost (\$ 1000)		Lease pounds as % of pounds landed	Lease cost as % of ex-vessel gross
				Median	Wtd mean	Total	Median	Mean	Total	Median	Mean	Wtd mean	Wtd mean
		2017	5	51 %	54 %	4524.25	933.6	904.85	\$ 14981.47	\$ 2826.27	\$ 2996.29	81 %	45 %
	A 11	2018	4	$45 \ \%$	44 %	4674.25	1180.12	1168.56	13615.68	\$ 3261.27	\$ 3403.92	72 %	42 %
	All	2019	4	48~%	47 %	5197.49	1265.37	1299.37	\$ 16391.39	3583.64	4097.85	77 %	43 %
	Quota	2020	4	41 %	43 %	4644.75	1068.35	1161.19	\$ 15002.67	\$ 3407.64	3750.67	$81 \ \%$	42 %
		2021	4	46~%	47 %	4941.48	1131.43	1235.37	\$ 27769.07	\$ 6805.65	\$ 6942.27	84 %	47 %
		2017	5	51~%	$53 \ \%$	2367.87	570.18	473.57	\$ 7777.97	1589.04	\$ 1555.59	-	-
	CVO	2018	4	44 %	48 %	2763.35	776.44	690.84	8621.93	\$ 2371.55	2155.48	-	-
		2019	4	47 %	51 %	3129.09	889.97	782.27	\$ 10625.96	\$ 2803.82	2656.49	-	-
	Л	2020	4	40~%	47 %	2969.56	829.97	742.39	10294.31	\$ 2708.19	2573.58	-	-
		2021	4	$41 \ \%$	$50 \ \%$	2901.33	851.31	725.33	\$ 18900.47	\$ 5189.29	\$ 4725.12	-	-
		2017	5	$52 \ \%$	40 %	1284.75	118.42	256.95	\$ 3246.63	\$ 408.42	\$ 649.33	-	-
	CVO	2018	4	39~%	$35 \ \%$	1524.74	220.77	381.18	\$ 3711.72	\$ 760.85	\$ 927.93	-	-
	B +	2019	4	49 %	$37 \ \%$	1634.68	266.18	408.67	\$ 4325.31	997.32	\$ 1081.33	-	-
AIG	CPO	2020	4	40~%	$35 \ \%$	1439.82	207.27	359.96	\$ 3870.73	\$ 743.51	\$ 967.68	-	-
		2021	4	48~%	38~%	1431.29	175.03	357.82	6140.91	1265.56	\$ 1535.23	-	-
		2017	5	52~%	74~%	203.78	23.28	40.76	\$ 965.77	\$ 80.28	\$ 193.15	-	-
	CVC	2018	3	38~%	37~%	91	15.65	30.33	\$ 287.26	\$ 40.78	\$ 95.75	-	-
	+	2019	4	49 %	49 %	145.37	31.45	36.34	545.94	\$ 120.84	136.48	-	-
	CPC	2020	3	38~%	40 %	113.55	18.69	37.85	\$ 357.62	\$ 50.97	\$ 119.21	-	-
		2021	4	53 %	52 %	120.65	29.97	30.16	\$ 786.4	\$ 211.51	\$ 196.6	-	-
		2017	4	55~%	78~%	667.86	114.51	166.96	\$ 2991.1	\$ 378.66	\$ 747.78	-	-
	CDQ	2018	2	*	*	*	*	*	*	*	*	-	-
	+	2019	2	*	*	*	*	*	*	*	*	-	-
	ACA	2020	2	*	*	*	*	*	*	*	*	-	-
		2021	3	$53 \ \%$	46 %	488.21	233.98	162.74	\$ 1941.29	\$ 377.92	\$ 647.1	-	-
		2017	52	62~%	64 %	4958.53	69.57	95.36	31869.09	\$ 441.12	612.87	76~%	54 %
	All	2018	45	63~%	65 %	3328.31	47.95	73.96	\$ 24016	\$ 360.36	\$ 533.69	79~%	58 %
	Quota	2019	46	63~%	64 %	2937.66	42.23	63.86	\$ 23562.74	\$ 334.51	\$ 512.23	78 %	57 %
		2020	38	64 %	64~%	2060.68	41.31	54.23	\$ 16869.3	\$ 314.5	\$ 443.93	78 %	60 %
		2017	50	62~%	63~%	3709.03	56.49	74.18	\$ 23728.22	\$ 352.5	\$ 474.56	-	-
	CVO	2018	42	62~%	64 %	2503.37	41.08	59.6	\$ 17777.29	\$ 295.18	\$ 423.27	-	-
	А	2019	42	62 %	63 %	2164.44	34.61	51.53	\$ 16922.98	\$ 274.53	\$ 402.93	-	-
		2020	36	64 %	64~%	1577.71	33.47	43.83	\$ 12725.82	\$ 267.71	\$ 353.49	-	-
		2017	43	63~%	63~%	545.68	8.89	12.69	\$ 3535.33	\$ 56.04	\$ 82.22	-	-
		2018	39	63 %	$65 \ \%$	358.37	5.81	9.19	2690.6	\$ 41.61	68.99	-	-

Table 1.3: Crab harvest quota lease activity, volume, cost, and average lease prices and rates, CR Program fisheries

			Vessels	Lea (per ex-ves	se rate ccent of sel price)	P (	ounds Leased 1000 pounds)			Cost (\$ 1000)		Lease pounds as % of pounds landed	Lease cost as % of ex-vessel gross
	CVO			Median	Wtd mean	Total	Median	Mean	Total	Median	Mean	Wtd mean	Wtd mean
BBR	B + CPO	$2019 \\ 2020$	$42 \\ 35$	$\begin{array}{c} 63 \ \% \\ 63 \ \% \end{array}$	$\begin{array}{c} 67 \ \% \\ 64 \ \% \end{array}$	365.83 203.03	7 $4.35$	8.71 5.8	\$ 3174.9 \$ 1700.81	\$ 57.53 \$ 34.76	\$ 75.59 \$ 48.59	- -	-
	CVC	$2017 \\ 2018$	$\frac{39}{35}$	$\begin{array}{c} 62 \ \% \\ 64 \ \% \end{array}$	$\begin{array}{c} 64 \ \% \\ 67 \ \% \end{array}$	153.27 109.13	$\begin{array}{c} 3.36\\ 3\end{array}$	$3.93 \\ 3.12$	\$ 1013.28 \$ 821.59	\$ 24.59 \$ 23.09	\$ 25.98 \$ 23.47	-	- -
	CPC	$2019 \\ 2020$	35 33	$\begin{array}{c} 63 \ \% \\ 65 \ \% \end{array}$	$\begin{array}{c} 65 \% \\ 62 \% \end{array}$	$92.52 \\ 60.36$	$2.54 \\ 1.55$	$2.64 \\ 1.83$	\$ 785.38 \$ 505.61	\$ 23 \$ 13.2	\$ 22.44 \$ 15.32	-	-
	$\begin{array}{c} \mathrm{CDQ} \\ + \\ \mathrm{ACA} \end{array}$	2017 2018 2019	6 6 5	$egin{array}{c} 63 \ \% \ 66 \ \% \ 67 \ \% \ cs \ \% \end{array}$	$\begin{array}{c} 64 \ \% \\ 67 \ \% \\ 68 \ \% \\ 68 \ \% \end{array}$	550.55 357.44 314.86 210.50	93.72 70.88 54.43	91.76 59.57 52.48	\$ 3592.27 \$ 2726.52 \$ 2679.48	601.79 527.67 446.56	\$ 598.71 \$ 454.42 \$ 446.58 \$ 287.41	- - -	- - -
	All Quota	2020 2017 2018 2019 2020 2021	54 52 51 47 51	$\begin{array}{c} 46 \ \% \\ 47 \ \% \\ 46 \ \% \\ 46 \ \% \\ 46 \ \% \\ 46 \ \% \end{array}$	48 % 48 % 48 % 50 % 47 %	$\begin{array}{r} 1219.39\\ \hline 16448.37\\ 14030.42\\ 21151.14\\ 25347.84\\ 35392.48 \end{array}$	$ \begin{array}{r}     217.96 \\     187.35 \\     303.24 \\     429.27 \\     540.71 \\ \end{array} $	$\begin{array}{r} 43.92\\ \hline 304.6\\ 269.82\\ 414.73\\ 539.32\\ 693.97\end{array}$	\$ 1937.00 \$ 35532.37 \$ 28864.41 \$ 42300.3 \$ 51878.58 \$ 83620.28	\$ 409.32 \$ 470.51 \$ 367.19 \$ 623.54 \$ 893.79 \$ 1244.87	\$ 658.01 \$ 555.08 \$ 829.42 \$ 1103.8 \$ 1639.61	77 % 74 % 78 % 75 % 80 %	42 % 43 % 43 % 44 % 44 %
	CVO A	2017 2018 2019 2020 2021	$52 \\ 48 \\ 48 \\ 45 \\ 49$	$\begin{array}{c} 46 \ \% \\ 46 \ \% \\ 46 \ \% \\ 46 \ \% \\ 46 \ \% \\ 46 \ \% \end{array}$	$\begin{array}{c} 47 \ \% \\ 47 \ \% \\ 47 \ \% \\ 49 \ \% \\ 46 \ \% \end{array}$	$11518.5 \\10046.25 \\15318.28 \\18443.06 \\25135.09$	$175.73 \\ 152.56 \\ 234.57 \\ 338.02 \\ 428.24$	$221.51 \\ 209.3 \\ 319.13 \\ 409.85 \\ 512.96$	\$ 24229.17 \$ 20107.52 \$ 29873.12 \$ 36918.65 \$ 57261.06	\$ 354.79 \$ 302.8 \$ 461.58 \$ 663.33 \$ 948.82	\$ 465.95 \$ 418.91 \$ 622.36 \$ 820.41 \$ 1168.59	- - - -	- - - -
BSS	CVO B+ CPO	2017 2018 2019 2020 2021	48     42     45     41     39	$\begin{array}{c} 48 \ \% \\ 47 \ \% \\ 46 \ \% \\ 46 \ \% \\ 46 \ \% \end{array}$	$50 \% \\ 48 \% \\ 47 \% \\ 53 \% \\ 50 \%$	$\begin{array}{c} 2469.05\\ 2091.39\\ 3094.09\\ 3584.52\\ 4913.15\end{array}$	$27.98 \\ 31.87 \\ 43.6 \\ 55.03 \\ 91.75$	$51.44 \\ 49.8 \\ 68.76 \\ 87.43 \\ 125.98$	\$ 5628.76 \$ 4548.1 \$ 6403.54 \$ 7864.76 \$ 12497.46	\$ 61.17 \$ 66.4 \$ 89 \$ 119.38 \$ 206.41	\$ 117.27 \$ 108.29 \$ 142.3 \$ 191.82 \$ 320.45	- - - -	- - - - -
	CVC + CPC	2017 2018 2019 2020 2021	37 36 37 34 33	$\begin{array}{c} 49 \ \% \\ 46 \ \% \\ 46 \ \% \\ 46 \ \% \\ 46 \ \% \\ 46 \ \% \end{array}$	$55 \% \\ 50 \% \\ 49 \% \\ 50 \% \\ 49 \% \\ 49 \% $	$\begin{array}{r} 478.8\\ 500.19\\ 704.22\\ 829.43\\ 1233.8\end{array}$	$11.64 \\ 11.96 \\ 17.51 \\ 21.45 \\ 31.61$	$12.94 \\ 13.52 \\ 19.03 \\ 24.39 \\ 37.39$	\$ 1143.24 \$ 1116.31 \$ 1541.35 \$ 1789.53 \$ 3165.02	\$ 24.41 \$ 27.52 \$ 40.39 \$ 46.23 \$ 75.32	\$ 30.9 \$ 31.01 \$ 41.66 \$ 52.63 \$ 95.91	- - - -	- - - -
	CDQ + ACA	2017 2018 2019 2020 2021	8 6 8 8 12	50 % 51 % 48 % 51 % 51 %	$51 \% \\ $	$1982.02 \\1392.59 \\2034.55 \\2490.83 \\4110.45$	221.57 228.12 227.54 294.37 233.83	$247.75 \\ 232.1 \\ 254.32 \\ 311.35 \\ 342.54$	\$ 4531.19 \$ 3092.47 \$ 4482.28 \$ 5305.63 \$ 10696.75	\$ 515.33 \$ 513.98 \$ 503.94 \$ 648.62 \$ 623.42	\$ 566.4 \$ 515.41 \$ 560.29 \$ 663.2 \$ 891.4	- - - -	- - - - -

Table 1.3: Crab harvest quota lease activity, volume, cost, and average lease prices and rates, CR Program fisheries (continued)

			Vessels	Lea (per ex-ves	se rate ccent of sel price)	Pe (1	ounds Leased 1000 pounds)		C	Cost (\$ 1000)		Lease pounds as % of pounds landed	Lease cost as % of ex-vessel gross
				Median	Wtd mean	Total	Median	Mean	Total	Median	Mean	Wtd mean	Wtd mean
		2017	15	$28 \ \%$	29~%	1188.25	69.9	79.22	\$ 1541.85	\$ 85.65	\$ 102.79	84 %	26~%
	A 11	2018	30	$31 \ \%$	$31 \ \%$	1891.37	53.97	63.05	\$ 2662.82	\$ 76.79	88.76	$83 \ \%$	29 %
	All	2019	16	32~%	33~%	1010.27	41.65	63.14	\$ 1577.89	65.08	98.62	86 %	$33 \ \%$
	Quota	2020	17	$30 \ \%$	$32 \ \%$	592.23	21.68	34.84	\$ 799.11	\$ 24.1	\$ 47.01	96 %	$31 \ \%$
		2021	17	29~%	32~%	806.02	38.85	47.41	\$ 1408.95	\$ 50.33	\$ 82.88	$85 \ \%$	31 %
		2017	15	28 %	$29 \ \%$	828.59	60.07	55.24	\$ 1047.19	\$ 58.07	\$ 69.81	-	-
	avo	2018	28	29~%	30~%	1394.36	44.26	49.8	\$ 1890.86	\$ 56.93	67.53	-	-
		2019	15	32~%	$33 \ \%$	691.37	32.05	46.09	\$ 1092.14	\$ 55.81	\$ 72.81	-	-
	А	2020	17	30~%	$32 \ \%$	487.52	19.38	28.68	\$ 654.19	\$ 23.85	38.48	-	-
		2021	13	31~%	31~%	556	43.86	42.77	955.95	\$ 69.1	\$ 73.53	-	-
		2017	15	28~%	29~%	172.2	7.23	11.48	\$ 234.12	\$ 8.14	\$ 15.61	-	-
	CVO	2018	26	$31 \ \%$	$35 \ \%$	244.16	5.44	9.39	\$ 399.13	\$ 7.43	\$ 15.35	-	-
	B +	2019	14	32 %	$33 \ \%$	145.52	4.69	10.39	226.65	6.88	\$ 16.19	-	-
BST	CPO	2020	9	28 %	27~%	51.37	3.41	5.71	\$ 64.43	\$ 3.48	\$ 7.16	-	-
		2021	13	32~%	$34 \ \%$	125.11	8.31	9.62	\$ 234.77	\$ 14.78	\$ 18.06	-	-
		2017	14	28 %	$28 \ \%$	31.49	1.9	2.25	\$ 41.2	\$ 2.21	\$ 2.94	-	-
	CVC	2018	22	29~%	30~%	53.59	1.66	2.44	\$ 72.3	\$ 2.15	\$ 3.29	-	-
	+	2019	14	32 %	$32 \ \%$	41.67	1.26	2.98	\$ 64.29	\$ 1.84	\$4.59	-	-
	CPC	2020	9	27~%	$28 \ \%$	13.68	1.3	1.52	16.52	\$ 1.35	\$ 1.84	-	-
		2021	10	31~%	34~%	32.52	2.42	3.25	\$ 61.03	\$ 3.88	\$ 6.1	-	-
		2017	4	32~%	31~%	155.97	43.75	38.99	\$ 219.35	\$ 58.96	\$ 54.84	-	-
	CDQ	2018	5	29~%	$31 \ \%$	199.27	43.9	39.85	\$ 300.54	63.88	\$ 60.11	-	-
	+	2019	3	29~%	$32 \ \%$	131.7	46.34	43.9	\$ 194.81	\$ 62.68	64.94	-	-
	ACA	2020	1	*	*	*	*	*	*	*	*	-	-
		2021	3	29~%	29~%	92.39	34.64	30.8	\$ 157.2	\$ 41.42	\$ 52.4	-	-

Table 1.3: Crab harvest quota lease activity, volume, cost, and average lease prices and rates, CR Program fisheries (continued)

Notes Asterisks indicate data suppressed due to confidentiality All dollar values are adjusted for inflation to 2021-equivalent 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. Lease data shown represent arms-length lease transactions reported by vessel owners in the Crab EDR. Vessels column shows total count of vessel-level observations where both pounds and cost of quota leased were reported as non-zero values, noting that a segment of active vessels do not report leasing quota of any type, i.e., harvest only quota held by the vessel owner. Lease rate statistics by fishery and quota type are calculated as the median and weighted mean, respectively, of the ratio of quota lease cost per pound to ex-vessel revenue per pound, over all observations where all four elements were reported as non-zero values. Lease pounds as **Source** NMFS AFSC BSAI Crab Economic Data Report (EDR) database.

		Year	Crew Member Count	Employment Share	Income \$million
		2017	36	5.96~%	\$ 1.85
	A l	2018	41	7.13~%	\$ 1.87
	Anchorage	2019	47	7.78~%	\$ 2.66
	M5A	2020	41	6.74~%	\$ 3.31
		2021	43	8.40~%	\$ 4.98
		2017	15	2.48~%	\$ 1.02
		2018	20	3.48~%	\$ 1.13
	Homer	2019	22	3.64~%	\$ 1.23
		2020	13	2.14 %	\$ 1.46
		2021	21	4.10 %	\$ 1.87
		2017	66	10.93~%	\$ 3.19
	Kodiak	2018	63	10.96~%	2.52
	Island	2019	55	9.11~%	\$ 2.61
	Island	2020	33	5.43~%	2.08
		2021	43	8.40 %	\$ 2.82
		2017	14	2.32~%	\$ 1.83
	Unalaska /Dutch	2018	20	3.48~%	\$ 2.11
	Harbor	2019	19	3.15~%	\$1.91
	1121001	2020	5	0.82 %	\$ 0.58
		2021	15	2.93 %	\$ 2.73
		2017	18	2.98~%	0.82
Alaska	Other	2018	16	2.78~%	0.71
	Western	2019	18	2.98~%	0.97
	Alaska	2020	42	6.91~%	\$ 2.08
		2021	21	4.10 %	\$ 1.73
		2017	12	1.99~%	\$ 0.62
	Southeast	2018	12	2.09~%	0.34
	Alaska	2019	12	1.99~%	0.63
	THUSILO	2020	76	12.50~%	4.02
		2021	5	$0.98 \ \%$	\$ 0.42
		2017	26	4.30 %	\$ 1.39
	Other	2018	24	4.17 %	\$ 0.82
	Alaska	2019	22	3.64 %	\$ 0.99
		2020	40	6.58 %	\$ 2.47
		2021	22	4.30 %	\$ 1.70
		2017	187	30.96 %	\$ 10.72
		2018	196	34.09 %	\$ 9.49
	Total	2019	195	32.28 %	\$ 11
		2020	250	41.12 %	\$ 16 \$ 16 25
		2021	170	33.20 %	\$ 10.25
		2017	29	4.80 %	\$ 1.43 © 1.19
California	All	2018	24	4.1770	D 1.10 0 1 40
California	Communities	2019	22		\$ 1.43 0.11
		2020 2021	$40 \\ 24$	0.58 % 4 69 %	\$ 3.11 \$ 2 31
		2021		4 AT 07	¢ 2.01
		2017	27	4.4/ 70	5 3.09 © 0.00
	Lincoln	2018	23	4 %	ð 2.62 © 2.62
	County	2019	26	4.30 %	\$ 3.66
	v	2020	8	1.32 %	\$ 1.53
		2021	28	5.47 %	\$ 5.76
		2017	34	5.63~%	\$ 2.23
		2018	31	5.39~%	\$ 1.90

Table 1.4: CR Program fisheries estimated crew employment and income, by community of residence

		Year	Crew Member Count	Employment Share	Income \$million
	Other	2019	33	5.46~%	\$ 2.91
Oregon	Oregon	2020	18	2.96 %	\$ 1.03
		2021	41	8.01~%	\$ 4.33
		2017	61	10.10 %	\$ 5.32
		2018	54	9.39~%	\$ 4.52
	Total	2019	59	9.77~%	\$ 6.58
		2020	26	4.28~%	\$ 2.56
		2021	69	13.48~%	\$ 10.09
		2017	153	25.33~%	\$ 11.56
	Soattle	2018	128	22.26~%	\$ 9.07
	MSA	2019	135	22.35~%	\$ 10.50
	MOA	2020	80	13.16~%	\$ 8.27
		2021	108	21.09~%	\$ 14.73
		2017	87	14.40~%	\$ 6.31
	Other	2018	90	15.65~%	\$ 6.44
Washington	Washington	2019	87	14.40~%	\$ 6.86
washington	washington	2020	101	16.61~%	\$ 7.40
		2021	55	10.74~%	\$ 8.07
		2017	240	39.74~%	\$ 17.87
		2018	218	37.91~%	\$ 15.52
	Total	2019	222	36.75~%	\$ 17.36
		2020	181	29.77~%	\$ 15.67
		2021	163	31.84 %	\$ 22.80
		2017	87	14.40~%	\$ 4.58
Other		2018	83	14.43~%	\$ 3.39
State/Unkne	win .	2019	106	17.55~%	\$ 4.84
State/ Olikile	/// 11	2020	111	18.26~%	\$ 7.32
		2021	86	16.80 %	\$ 8.69
		2017	604	$100 \ \%$	\$ 39.92
A 11		2018	575	$100 \ \%$	\$ 34.04
Locations	-	2019	604	100~%	\$ 41.21
LOCATIONS		2020	608	$100 \ \%$	\$ 44.66
		2021	512	$100 \ \%$	\$ 60.14

Table 1.4: CR Program fisheries estimated crew employment and income, by community of residence *(continued)* 

**Note** 'Employee count' reports the number of individual vessel crew members across all CR Crab fisheries identified as residents of the listed community or location. 'Employment share' reports the proportion of the total vessel employment pool associated by residence with the listed community or location. 'Income' (reported in \$million, inflation-adjusted to 2021-equivalent value) is the estimated amount of vessel labor income, by community/location of residence, that is distributed to vessel crew members in aggregate. This estimate is derived by apportioning vessel-level fishing crew and captain labor payments among crew members reported in the EDR and CFEC gear operator permit holders with recorded landings of CR crab, then aggregating payments by community of residence. This method does not control for differential pay rates across positions, apart from deck crew and captain (or vessel master), or other differentiating factors, such as experience or length of employment.

**Source** NMFS AFSC BSAI Crab Economic Data Report (EDR) database, ADFG commercial crew license database, and CFEC gear operator permit database; source data and compilation are provided by the Alaska Fisheries Information Network (AKFIN).

		Year	Employee Count	Employment Share	Income \$million
		2017	130	5.41 %	\$ 0.18
	Anchorago	2018	103	4.10~%	\$ 0.18
	MSA	2019	61	2.38~%	0.15
	MBA	2020	51	1.75~%	0.12
		2021	65	2.54~%	\$ 0.14
		2017	211	8.77~%	\$ 0.05
	Kodiak	2018	48	1.91~%	\$ 0.01
	Island	2019	93	3.63~%	0.05
	Island	2020	49	1.69~%	0.02
		2021	6	0.23~%	\$ 0.02
		2017	272	11.31~%	0.64
	Unalaska/Dutch	2018	263	10.47~%	0.57
	Harbor	2019	434	16.95~%	0.91
	Harbor	2020	464	15.96~%	\$ 0.96
		2021	485	18.93 %	\$ 1
Alaska		2017	18	0.75~%	\$ 0.11
1 Habita	Other	2018	55	2.19~%	0.24
	Western	2019	25	0.98~%	0.12
	Alaska	2020	26	0.89~%	0.13
		2021	27	1.05~%	\$ 0.14
		2017	40	1.66~%	\$ 0.08
	Other	2018	46	1.83~%	\$ 0.06
	Alasha	2019	32	1.25~%	0.13
	Alaska	2020	28	0.96~%	0.04
		2021	50	1.95~%	\$ 0.13
		2017	671	27.90~%	\$ 1.05
		2018	515	20.50~%	\$ 1.05
	Total	2019	645	25.19~%	\$ 1.36
		2020	618	21.26~%	\$ 1.29
		2021	633	24.71~%	\$ 1.43
		2017	709	29.48~%	\$ 1.60
	CA	2018	727	28.94~%	\$ 1.48
California	Communities	2019	595	23.23~%	\$ 1.63
	Communities	2020	570	19.61~%	\$ 1.68
		2021	517	20.18 %	\$ 2.03
		2017	54	2.25~%	\$ 0.11
	OB	2018	34	1.35~%	0.08
Oregon	Communities	2019	31	1.21~%	0.11
	Communities	2020	20	0.69~%	0.08
		2021	18	0.70~%	\$ 0.07
		2017	323	13.43~%	\$ 0.84
	τλ/Δ	2018	325	12.94~%	0.82
Washington	Communities	2019	308	12.03~%	\$ 1.23
	Communities	2020	334	11.49~%	\$ 1.40
		2021	444	17.33~%	\$ 1.97
		2017	648	26.94~%	\$ 1.64
Other		2018	911	36.27~%	\$ 1.30
State/Unkno	-	2019	982	38.34~%	\$ 1.60
State/ Olikile	/ ** 11	2020	1,365	46.96~%	\$ 2.43
		2021	950	37.08~%	\$ 2.70
		2017	2,405	100~%	\$ 5.24

Table 1.5: CR Program fisheries estimated shoreside and floating processor processing crew employment and income, by community of residence

Table 1.5: CR Program fisheries estimated shoreside and floating processor processing crew employment and income, by community of residence *(continued)* 

	Year	Employee Count	Employment Share	Income \$million
All - Locations	2018 2019 2020 2021	$2,512 \\ 2,561 \\ 2,907 \\ 2,562$	$egin{array}{cccc} 100 \ \% \ 100 \ \% \ 100 \ \% \ 100 \ \% \ 100 \ \% \end{array}$	\$ 4.73 \$ 5.93 \$ 6.88 \$ 8.19

Note 'Employee count' reports the number of shoreside and floating processor processing line employees across all CR Crab fisheries identified as residents of the listed community or location. 'Employee share' reports the annual share of the total processor labor pool associated with the community or location. 'Income' (reported in \$million, inflation-adjusted to 2021-equivalent value) is the estimated amount of processor labor payments to communities in proportion with the share of plant employees reported for each location. Alaska communities of residence for processing employees are grouped as follows: Anchorage MSA (includes all communities in the Anchorage and Matanuska-Susitna Borough); Kodiak Island (includes all communities of Kodiak Island Borough); Unalaska/Dutch Harbor; Other Western Alaska (includes all communities of Aleutians West, Kusilvak, Northwest Arctic, Nome, Dillingham, Bristol Bay, and Bethel Census Areas and Boroughs, as well as Lake and Peninsula Borough communities included in the Western Alaska CDQ program). All other Alaska communities are grouped as 'Other Alaska'.

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

			Count of QS	Holders			Share of QS P	ool Held	
	Season	Active (vessel owner)	Active (gear operator)	Active (total)	Inactive	Active (vessel owner)	Active (gear operator)	Active (total)	Inactive
	2017/18 2018/19	203 198	25 23	$209 \\ 203$	$314 \\ 316$	$0.61 \\ 0.61$	$0.05 \\ 0.04$	$0.63 \\ 0.62$	$0.37 \\ 0.38$
BBR	2019/20	202	23	207	310	0.62	0.04	0.63	0.37
	2020/21	195	20	200	313	0.61	0.03	0.61	0.39
	2021/22	168	13	170	369	0.55	0.02	0.55	0.45
	2017/18	212	29	219	262	0.64	0.05	0.65	0.35
	2018/19	205	26	210	275	0.62	0.04	0.63	0.37
BSS	2019/20	208	28	215	255	0.64	0.04	0.65	0.35
	2020/21	205	23	210	264	0.63	0.03	0.63	0.37
	2021/22	178	18	182	320	0.57	0.02	0.57	0.43
	2017/18	202	25	208	309	0.60	0.05	0.61	0.39
	2018/19	195	23	200	311	0.59	0.04	0.60	0.40
EBT	2019/20	199	23	204	303	0.62	0.04	0.62	0.38
	2020/21	192	20	197	309	0.60	0.04	0.61	0.39
	2021/22	165	13	167	366	0.53	0.03	0.53	0.47
	2017/18	202	26	209	309	0.60	0.05	0.61	0.39
	2018/19	195	24	201	309	0.60	0.05	0.60	0.40
WBT	2019/20	199	24	205	303	0.62	0.05	0.63	0.37
	2020/21	192	20	197	310	0.60	0.04	0.61	0.39
	2021/22	165	13	167	366	0.53	0.03	0.53	0.47
	2017/18	27	5	29	13	0.86	0.07	0.86	0.14
	2018/19	25	6	28	13	0.86	0.07	0.86	0.14
$\mathbf{EAG}$	2019/20	26	6	29	12	0.88	0.08	0.88	0.12
	2020/21	25	6	28	13	0.86	0.08	0.86	0.14
	2021/22	25	5	27	15	0.85	0.08	0.85	0.15
	2017/18	24	1	24	6	0.95	0	0.95	0.05
	2018/19	25	1	25	7	0.95	0	0.95	0.05
WAG	2019/20	26	1	26	6	0.97	0	0.97	0.03
	2020/21	25	1	25	7	0.95	0	0.95	0.05
	2021/22	25	1	25	7	0.95	0	0.95	0.05
	2017/18	169	15	172	160	0.65	0.04	0.66	0.34
	2018/19	160	13	162	169	0.63	0.03	0.63	0.37
SMB	2019/20	164	14	167	151	0.66	0.03	0.67	0.33
	2020/21	161	12	164	152	0.64	0.03	0.64	0.36
	2021/22	138	9	140	210	0.57	0.01	0.57	0.43

Table 1.6: Estimated active and inactive QS owners and share of QS pool held

			Count of QS	Holders		Share of QS Pool Held				
	Season	Active (vessel owner)	Active (gear operator)	Active (total)	Inactive	Active (vessel owner)	Active (gear operator)	Active (total)	Inactive	
	2017/18	156	16	160	126	0.58	0.06	0.59	0.41	
	2018/19	144	14	147	139	0.55	0.05	0.56	0.44	
PIK	2019/20	142	15	146	134	0.53	0.06	0.54	0.46	
	2020/21	148	11	151	140	0.57	0.05	0.58	0.42	
	2021/22	130	7	132	176	0.51	0.03	0.51	0.49	
	2017/18	53	9	55	40	0.84	0.02	0.85	0.15	
	2018/19	53	7	55	41	0.84	0.01	0.85	0.15	
WAI	2019/20	52	7	54	40	0.84	0.01	0.85	0.15	
	2020/21	51	6	53	37	0.85	0.01	0.86	0.14	
	2021/22	32	5	34	68	0.80	0.01	0.81	0.19	

Table 1.6: Estimated active and inactive QS owners and share of QS pool held (continued)

Note Active QS owners are decomposed owners of CVO/CPO QS that meet at least one of the following requirements during the year that QS is owned: 1) held ownership interest in a vessel that fished for BSAI crab during the year of QS ownership; 2) participated in the IFQ crab fishery as a gear operator. Due to incomplete data on decomposed QS and vessel ownership, these plots show the estimated minimum share of the QS pool held by active QS owners.

Source NMFS Alaska Region - Restricted Access Management, crab IFQ quota holdings, vessel ownership, company company ownership data; eLandings landing reports.

		BBR			BSS		
Season	Туре	QS Entities - Count	Owners - Count	Owners - QS Percent	QS Entities - Count	Owners - Count	Owners - QS Percent
	Individual	35	425	68.80~%	45	389	68.41 %
	Corp/Invest Fund	206	7	1.09~%	210	4	0.93~%
2017/18	CDQ/Nonprofit	4	6	19.59~%	5	6	20.82~%
	Trust/Estate	-	51	7.49~%	-	51	6.82~%
	Unknown	-	34	0.03~%	-	31	0.02~%
	Individual	37	418	67.99~%	44	390	68.26~%
	Corp/Invest Fund	206	7	1.08~%	214	4	0.94~%
2018/19	CDQ/Nonprofit	4	5	19.34~%	5	6	20.64~%
·	Trust/Estate	-	56	8.60~%	-	55	7.15~%
	Unknown	-	33	0.01~%	-	31	0 %
	Individual	34	415	67.17~%	46	377	67.62~%
	Corp/Invest Fund	204	7	1.05~%	211	4	0.94~%
2019/20	CDQ/Nonprofit	4	5	19.34~%	5	6	20.64~%
	Trust/Estate	-	61	9.43~%	-	58	7.78~%
	Unknown	-	29	0.01~%	-	27	0 %
	Individual	35	411	68.33~%	46	376	68.53~%
	Corp/Invest Fund	201	5	0.53~%	214	3	0.41~%
2020/21	CDQ/Nonprofit	4	5	19.35~%	5	6	20.65~%
	Trust/Estate	-	60	8.79~%	-	59	7.40~%
	Unknown	-	32	0.01~%	-	33	0.01~%
	Individual	35	398	64.09~%	48	366	64.88~%
	Corp/Invest Fund	200	5	1.01~%	214	4	0.94 %
2021/22	CDQ/Nonprofit	4	40	22.42~%	5	41	23.34~%
	Trust/Estate	-	62	9.47~%	-	60	7.81~%
	Unknown	-	34	0.01~%	-	33	0.01~%

#### Table 1.7: CVO/CPO entity decomposition by entity type, BBR and BSS QS pools

Note Statistics shown for Owner QS report combined crab catcher vessel and catcher/processor owner (CVO and CPO) quota share pools, and report the number of distinct QS entities ('Entities'), and number of distinct individuals and equity owners of QS entities ('Owners") obtained by decomposition of ownership information reported to NMFS in Annual IFQ Permit applications, and summed percentages of QS pool shares collectively by Entities and Owners, categorized by type – Individual, CDQ Group/Non-profit, Corporate, Trust/Estate, and Unknown (rounding error and incomplete company ownership data, particularly in the early years of the CR program, result in residual shares that are assigned to "Unknown" entities).

Source NMFS Alaska Region - Restricted Access Management, Quota Share holder files; Alaska Fisheries Information Network (AKFIN).

## Chapter 2

# 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 2021 was 51 million pounds (23.1 thousand metric tons (mt)), with an estimated gross ex-vessel revenue value of \$297 million. Total sales of finished crab production reported by processors in 2021 across all FMP crab species and product forms was 33 million pounds (15.1 thousand mt), with an estimated first wholesale value of \$372 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 23.1 million mt tons of commercial catch of BSAI king and tanner crab in 2021 represented 0.60% of the 3.87 million mt total volume of U.S. commercial seafood landings; the \$297 million ex-vessel value of BSAI crab accounted for 4.63% of \$4.62 billion total ex-vessel value of U.S. landings (NMFS, 2021). With respect to Alaska alone, BSAI crab fisheries accounted for 0.97% of total commercial landings volume of 2.38 million mt and 14.7% of \$2.92 billion total ex-vessel value produced in commercial fisheries off Alaska (Groundfish Economic SAFE, 2022).

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, support preparation and use of such information in more targeted analyses, and over time, develop improved social and economic metrics for effective monitoring and evaluation of management goals and objectives. 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 topics, 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 2021-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.

### 2.1 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, St. Matthew Island blue 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,<sup>1</sup> four fisheries were open to targeted fishing and were actively prosecuted during 2021, including the BSS fishery, both Eastern and Western Aleutian Islands golden king crab (EAG/WAG) fisheries, and the Western Bering Sea Tanner crab (WBT) and Pribilof Islands golden king crab (PIG) fisheries. The Bristol Bay red king crab (BBR) fishery has not been declared by the Council to be overfished, however, the Alaska Department of Fish and Game (ADFG) closed the fishery for the 2021/22 and 2022/23 seasons. Both the Eastern Bering Sea Tanner (EBT) and Saint Matthew blue king crab (SMB) fisheries were closed to targeted fishing by ADFG for the 2016/17 and subsequent crab seasons; in October, 2018, the Council declared the SMB fishery to be overfished and adopted a rebuilding plan in June, 2020. <sup>2</sup> The Norton Sound red king crab (NSR) fishery was declared open by ADFG for the 2021 season, however, the principal buyer of commercial NSR landings continued its suspension of purchasing from the fishery that began in 2020, and the fishery did not operate during 2021

<sup>&</sup>lt;sup>1</sup>There are currently 11 distinctly managed fisheries on the 10 crab stocks managed under the FMP; catch allocations and other management elements are administered separately for the Eastern and Western components of the Bering Sea Tanner crab stock, and for the Eastern and Western components of the Aleutian Islands golden king crab stock, and the Pribilof Island blue and red king crab stocks are managed collectively as a single fishery.

<sup>&</sup>lt;sup>2</sup>Issued as Amendment 50 to the FMP by NMFS in October, 2020 (85 FR 71272)

(ADFG, 2022). The Pribilof Islands blue king crab stock has been designated overfished, and the combined Pribilof blue and red king crab (PIK) fishery has been closed, since 1999. To date, there has been no stock survey for Western Aleutian (Adak) red king crab (WAI) and therefore no basis for stock status determinations, and the fishery has been closed since 2003/2004.

Subsequent to the 2021 calendar year and 2020/21 crab season, Council and ADFG management has largely maintained the status determinations and fishery closures in place during that period, including closure of the BBR fishery for the 2022/23 season. In addition, as a result of the 2021/22 stock assessment, the Council declared the Eastern Bering Sea snow crab stock overfished on October 19, 2021, and the BSS fishery opened for the 2021/22 season with a sharply reduced TAC issued by ADFG; the fishery was subsequently closed by ADFG for the 2022/23 season, and the Council took final action on a preferred alternative rebuilding plan at its February, 2023 meeting. The EAG, WAG, WBT, and PIG fisheries have remained open to targeted fishing for the 2021/22 and 2022/23 seasons; in addition, the EBT fishery was reopened to targeted fishing for the 2022/23 season.

#### 2.1.1 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 and IFQ/IPQ annual allocations; 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/CrabFMPOct11. pdf
  - Bering Sea and Aleutian Islands Crab Rationalization Program: http://www.npfmc.org/ crabrationalization/
  - BSAI Crab Plan Team: http://www.npfmc.org/fishery-management-plan-team/bsai-crab-plan-team/
- ADF&G Shellfish Management
  - Westward Region, Bering Sea & Aleutian Islands Area Shellfish: http://www.adfg.alaska.gov/index.cfm?adfg=commercialbyareaaleutianislands.shellfish

 Arctic-Yukon-Kuskokwim Region, Norton Sound and Kotzebue Shellfish (for information on the Norton Sound red king crab fishery): http://www.adfg.alaska.gov/index. cfm?adfg=commercialbyareanortonsound.shellfish

#### 2.2 Data Sources

The current report summarizes information available to date, largely comprising data reported through 2022 for the 2021 calendar year, spanning the end of the 2020/2021 and beginning of the 2021/2022 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 the Crab Rationalization Program 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.<sup>3</sup>

### 2.3 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

<sup>&</sup>lt;sup>3</sup>With the exception of Norton Sound red king crab, all fisheries included in the BSAI crab FMP are managed as part of the ADF&G Westward Region, Bering Sea/Aleutian Islands Management Area, with annual reporting on these fisheries available in the Annual Management Report for the Commercial and Subsistence Shellfish Fisheries of the Aleutian Islands, Bering Sea and the Westward Region's Shellfish Observer Program link. Norton Sound red king crab is managed as part of the Norton Sound and Kotzebue Management Area within the Artic-YukonKuskokwim Region; reporting is provided in Annual Management Report Norton Sound, Port Clarence, and Kotzebue link. 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.

units. Data cited in this report have been aggregated across individual reporting entities by year and management unit so as to satisfy confidentiality requirements, while maximizing detail and comparability of statistics both within and among tables and figures.

All price, revenue, and other monetary values in the report, unless otherwise noted. 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 2021 are provided in Table 4.52 of Section 6.<sup>4</sup>

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

<sup>&</sup>lt;sup>4</sup>Previous editions of the report used U.S. Bureau of Labor Statistics Producer Price Index for unprocessed and packaged fish to adjust for inflation, but for consistency with the Groundfish Economic SAFE document, this and subsequent editions of the report use the GDP deflator.

in this report:

Abbrevations and notations used in tables and figures

*	Data suppressed to prevent disclosure of confidential information
n/a or -	Not applicable
_	No data available (data not collected, no observations in reported data, or available data are insufficient for public reporting).
2005 or 05	Calendar year, or FMP crab fishing season that occurred
wholly within	
calendar year	
2005/06 or $05/06$	FMP crab fishing year
lbs	Pounds
mt or t	Metric tons
obs or observations for	Number of observations with value $> 0$
measure of interest	
sd	Standard deviation
\$	US dollars; inflation-adjusted to 2019-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.

## Chapter 3

# 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, 2020), or crab fishery year (spanning July-June and denoted, for example, as 2019/20). Generally, annual economic statistics are reported for calendar years up to 2021, the most recent year for which primary data sources are complete (encompassing the spring portion of the 2020/21crab season and fall portion of the 2021/22 crab season). Where available, more current statistics and information are reported for calendar year 2022, crab season 2021/22, and crab season 2022/23.

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, and structural changes developing in the crab industry subsequent to Crab Rationalization (CR) program implementation where indicated. 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.

### 3.1 Economic Output

#### 3.1.1 Annual TAC/GHL, Landings, and Finished Product Volume

As detailed in the 2022 Crab Stock Assessment and Fishery Evaluation Report link, poor and declining abundance and recruitment trends across BSAI crab stocks that have historically accounted for nearly all of the commercial production in FMP crab fisheries, in conjunction with increased uncertainty in stock assessments associated with poor environmental conditions in the current and recent years and the suspension of the EBS trawl survey data for 2020 due to the COVID-19 pandemic, resulted in OFL and ABC specifications adopted by the Council in October, 2021 that collectively were at historically low levels. Commensurate with Council action on ABC and OFL specifications, Crab Plan Team recommendations, and a conservative management strategy in light of elevated scientific uncertainty, ADF&G announced moderate to severe reductions in 2021/2022 season TACs and closure of the BBR fishery.

Given the retrospective nature of this report, necessitated by the *post-hoc* data collection and production timelines for principal data sources, the authors wish to acknowledge the untimeliness of the information presented below, in light of the historically low TAC levels issued for the current crab season and elevated concerns among industry and the public regarding the current status and outlook for BSAI crab fisheries. It is clear that physical production in the harvesting and processing sectors, yet to be determined or assessed for 2021 and 2022 as of publication of this report, will be in sharp decline relative to the historical baseline, up to calendar year 2020, that is documented herein. These and other recent changes and trends, including the ongoing COVID-19 pandemic, clearly have critical implications for the current status of BSAI crab fisheries, and that of direct and indirect participants in the crab harvesting and processing sectors, including vessel and processing plant owners and managers, crew members and employees, quota share holders, material and service suppliers and other businesses, and communities. It can be anticipated that short-term structural adjustment within both industry sectors, to minimize costs and maintain operating efficiency at reduced production levels, will result in immediate contraction in the active fleet, and potentially in engagement of crab processing plants. Any such structural adjustment, however ultimately resolved, will have immediate distributional effects within and between the respective industry sectors, with community-level effects, including direct effects on employment and income, and may accelerate or precipitate longer-term structural and distributional changes. As data become available and additional analytical metrics developed, future updates of this report will provide the basis for *post hoc* assessment of the short-term effects of TAC reductions for the 2021/22 crab season, propagating through, and as measured by the scope of metrics reported below. Pending direction from NMFS regarding any specific analyses to support assessments addressing current or anticipated economic disruption in the crab industry, no attempt has been made in the current report to expand the scope of reporting to include additional in-season information and statistics, or to forecast values of performance metrics beyond the 2020 calendar year. It should be noted, however, that the documentation in this report of baseline status conditions for rationalized crab fisheries as of 2020, as facilitated by the enhanced data collections implemented as part of the CR Program, is substantially more complete than that available for most other fisheries and sectors under Council oversight.

Crab season Total Allowable Catch (TAC) and Guideline Harvest Limit (GHL) levels are reported by crab fishery in Table 4.1 and summarized graphically in Figure 3.1, including TACs issued for 2021/22 and 2022/23. TACs in the BBR fishery declined steadily from the 9.99 million pounds issued for the 2014/15 season, to 2.65 million pounds issued for 2020/21, representing the lowest TAC since the last closure of the fishery in 1995/96. The fishery was subsequently closed for 2021/22, continuing to 2022/23. After reaching a historical low (to that point) of 19 million pounds issued for the 2017/18 season, TACs in the BSS fishery trended successively upward over the following three seasons, reaching 45 million pounds for the 2020/21 season, before declining by 90% to 5.6 million pounds for 2021/22, followed by closure for 2022/23. This represents the first time in the management history of commercial crab fishing in the BSAI that these two fisheries, comprising the principal target and income source for largest segment of the BSAI crab fleet, have been simultaneously closed. TACs in both EAG and WAG fisheries intermittently saw small incremental increases up through the 2015/16 season, reaching 3.31 million pounds in the EAG fishery and 2.98 million pounds in the WAG fishery. The latter was reduced to 2.24 million pounds for the 2016/17season, and has incrementally increased over successive seasons, to 2.96 million pounds for the 2020/21 season, successively declining to 2.32 million pounds for 2021/22 and 1.73 million pounds for 2022/23, while the TAC in the EAG fishery peaked at 4.31 million pounds for the 2019/20season, declining successively over the following three seasons, to 3.32 million pounds for 2022/23. 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, but reopened for 2020/21 with a TAC of 2.35 million pounds, which was reduced for 2021/22 to 1.1 million pounds, and marginally increased to 1.16 million pounds for 2022/23. The EBT fishery opened for the 2022/23 season for the first time since 2015/16, with a much-reduced TAC of 0.85 million pounds. As a result of 2016 and subsequent stock assessments, closure in the SMB fishery continued through 2022/23, as did those in other BSAI crab fisheries that have remained closed since rationalization.

As of the 2015/16 crab season, allowable catch quantities in all BSAI crab fisheries open to targeted fishing had reached full exploitation (i.e., 98-100 percent of total allocation landed), including the WBT, which previously varied below 50% during some seasons (Table 4.1). Since the 2010/11 crab season, all FMP crab fisheries that were in considered 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 prior to subsequent closures in the SMB and EBT fisheries, and the decline to 62% exploitation in the 2020/21 WBT fishery.



Figure 3.1: TACs/GHLs and management program allocations, BSAI crab fisheries

Source ADF&G. Tabular data available in Table 4.1 Numeric values indicate total TAC/GHL allocations (in millions or thousands of pounds) to directed fishing. All dollar values are adjusted for inflation to 2021-equivalent value.

Across all fisheries managed under the BSAI Crab FMP, the total volume of commercial ex-vessel

landings during 2021 was 51.2 million pounds (23.1 thousand metric tons), low relative to the decade prior to 2017, but representing a gain of nearly 20% since 2020, and a 60% increase from the historical low production level of 31.87 million pounds (14.45 thousand metric tons) during 2018 (Figure 3.2). The increase in aggregate production during 2021 was driven mainly by the 32% increase in total catch landed in the BSS fishery, to 44 million pounds (20 thousand mt) in 2021. Increased catch in the AIG and BST fisheries during 2021, to nearly 6 million pounds and one million pounds, respectively, also contributed to the net increase in aggregate harvest volume at the FMP level, despite the closure of the BBR fishery.

Crab processors produced 33 million pounds (15.1 thousand mt) aggregated over all BSAI crab species and product forms, also increasing 20% from the previous year and 60% from 2018, which was also the lowest historical level of production for the sector. Similar to ex-vessel production, the 9% increase in processing sector output volume aggregated over all active crab fisheries during 2021 was driven in the largest part by increased production in the BSS fishery during 2021, with finished volume of nearly 29 million pounds (13 thousand mt), increasing 31% over the previous year, as well as a 3% increase in finished volume in the AIG fishery, to 3.8 million pounds (2.0 thousand mt), and 53% increase in production volume in the BST fishery, to 650 thousand pounds (294 mt).

Figures 3.2 and 3.3 summarize 1998 to 2021 annual (calendar year) values for total landed live catch and gross ex-vessel revenue (detailed in Tables 4.4 to 4.6). Finished production volume and first wholesale value are reported in Tables 4.7 to 4.9 for all crab fisheries managed under the BSAI crab FMP. Figure 3.3 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 3.2 displays values of revenue and volume, respectively, aggregated over all crab fisheries and color coded by fishery in proportional area of vertical bars.



Figure 3.2: 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 4.4 and 4.7. Asterisks indicate data for one or more fisheries were not plotted due to confidentiality. 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. All dollar values are adjusted for inflation to 2021-equivalent value.



Figure 3.3: 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 4.4 and 4.7. Asterisks indicate data were not plotted due to confidentiality. 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. All dollar values are adjusted for inflation to 2021-equivalent value.
#### 3.1.2 Ex-vessel and First Wholesale Prices and Revenue Value of Production

The Bering Sea/Aleutian Islands (BSAI) crab fisheries managed under the FMP are currently (as of calendar year 2021) prosecuted by an active fleet of 65 catcher vessels and two catcher processors, and landed and processed at 8 processing facilities throughout the region. Across all fisheries managed under the BSAI Crab FMP during 2021, the total volume of ex-vessel landings was 51 million pounds (23.1 thousand metric tons (mt)), a 20% increase from the previous year. Processing sector finished production volume during 2021 was 33 million pounds (15.1 thousand mt) aggregated over all BSAI crab species and product forms, also increasing 20% from the previous year. The effect of a net increase in production volume across crab fisheries, combined with changes in market prices, produced an aggregate 36% increase in ex-vessel revenue over all fisheries in 2021, totaling \$297 million for the year, and with aggregate first wholesale revenues increasing by 31% to \$372 million.

Results for ex-vessel sale volume, value, and prices reported in Tables 4.4 to 4.6 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 4.8, and sales by crab species and product type in Table 4.9.

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 Annual Community Engagement and Participation Overview  $(ACEPO)^1$  from Alaska Fisheries Science Center is intended to provide a more comprehensive analysis of community-level distributional aspects of groundfish and crab fishery management, including income and employment effects, and ownership of crab harvest and processing quota assets and vessels.

 $Prices\{\# prices\}$  Figure 3.4 summarizes the corresponding time series of 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.<sup>2</sup>

<sup>&</sup>lt;sup>1</sup>Seehttps://shinyfin.psmfc.org/acepo/.

<sup>&</sup>lt;sup>2</sup>A note on the term "price" as used in this report: a variety of price indices are presented herein that are derived from data on volume and revenue of sales of landed crab and/or finished crab product, collected and reported at different levels of aggregation. The typical representation of ex-vessel or first-wholesale prices in fishery management reports (e.g., NMFS, 2012) is fishery- or fleet-level average price, calculated as aggregate revenue divided by aggregate volume. Rather than representing the per-unit market "price" for a uniform commodity, this index is equivalent to the weighted arithmetic mean calculated over individual P sale price observations, weighted by volume of individual sale. For P P 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  $\sum_i v_i$  of sold landings, aggregated over all vessels  $i \dots j$ , is equivalent to the weighted arithmetic mean price calculated as the individual price observation for the *i*<sup>th</sup> 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

As a result of unusual market dynamics arising from the global Covid-19 pandemic and evolving public health measures undertaken by various levels of government within the U.S. and internationally, global market values for premium seafood products, particularly shellfish, including Alaskan king and snow crab, surged beginning in late 2020. In broad terms, pandemic restrictions in most U.S. states beginning in mid-2020 reduced consumer access to restaurants and other food service outlets, while federal income support payments increased disposable incomes for many households, stimulating consumer demand for retail sales of premium seafood products that could be prepared and consumed at home. In contrast to most commodity seafood products oriented toward various food service sectors, units of frozen king and snow crab clusters packaged for food service could be more readily redirected toward retail warehouse outlets (e.g., Costco), facilitating conversion to retail market distribution throughout much of the first two years of the pandemic, during which consumer demand drove prices to unprecedented levels beginning in late 2020 through early 2022.

As a result, ex-vessel and first-wholesale price records were set across all BSAI crab fisheries that were open to commercial harvest during 2021. This notably excluded Bristol Bay red king crab, which closed for the 2021/22 season, after a historically low TAC in 2019/20. The largest proportional crab price increases for 2021 were reported for Aleutian Islands golden king crab, which increased by 61% at ex-vessel from the previous record high of \$7.60 per pound in 2020, to \$12.20 per pound. Average first wholesale price for sales of finished production from the AIG crab fishery in 2021 increased by 36% from the record high of \$15.04 per pound the previous year, to \$20.42 per pound. In the BSS fishery, average ex-vessel and first-wholesale prices showed somewhat more modest gains from the previous year, but similarly reached record levels during 2021. Following a slight decline in ex-vessel price reported for the 2020 BSS fishery (noting that landings in the 2020 BSS fishery predated the emergence of Covid-related seafood market dynamics), ex-vessel price in 2021 increased by 21% to \$4.96 per pound landed, and first-wholesale prices for BSS production showed successive 12% year-on-year gains in both years, reaching \$9.94 per pound in 2021. Possibly as a result of cooling demand late in 2021, average first wholesale price in the BST fishery exhibited the smallest gain for the year, increasing by 3% to \$11.91 per pound for the year, compared to the 22% gain reported for the previous year; in contrast, following a 9% year-on-year decline in 2020, ex-vessel price in the BST fishery gained by 30% for 2021, reaching an average of \$5.55 per pound for the year.

The right panel of Figure 3.4 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 4.4 and 4.7 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 3.4 provides a general indication of the relative value of ex-vessel and first wholesale prices

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.

over time.

Since 1998, the price ratio in the AIG fisheries has varied between a low of 41% in 2007 to a high of 64% in 2010, with a sharp increase during 2021 to 60%. The ratio has varied from a low of 28% in the 1998 BSS fishery to a high of 57% in 2017, a was 50% in 2021. In the BBR fishery, the ratio reached a high of 59% during 2019, except for the sharp increase in relative ex-vessel value in 2000, which was observed across fisheries that year. While the ratio of ex-vessel to first wholesale prices has been comparatively stable in the BBR and BSS fisheries after 2000, both exhibit a long-term upward trend.

The values shown in Figure 3.4 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 in Figure 3.4 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 4.6, 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 3.4.4 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, 2019).<sup>3</sup>

The combination of production and price increases in the harvest and processing sectors across crab fisheries open to targeted fishing during 2021 produced a net increase at the FMP-level of 36% in aggregate ex-vessel value, to \$296 million, and a 31% increase in first-wholesale value, to \$372 million. As usual given the relative scale of the BSS fishery, production and price increases in both sectors accounted for the largest share of net change in aggregate value of BSAI crab in 2021, with ex-vessel value increasing by 59% to \$219 million and first-wholesale value gaining by 57% to \$287 million for the year. Ex-vessel revenues in the AIG fisheries increased 66%% from 2020, to \$72 million, and by 40%% in the processing sector, to \$76 million. Ex-vessel revenues in the BST fishery nearly doubled from 2020, to \$5.3 million, and increased by 57% in the processing sector, to \$7.7 million.

<sup>&</sup>lt;sup>3</sup>Available at https://repository.library.noaa.gov/view/noaa/25242/noaa\_25242\_DS1.pdf



Figure 3.4: 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 4.4 and 4.7- see table notes for additional detail on calculation and sourcing for price and value statistics. All dollar values are adjusted for inflation to 2021-equivalent value. 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. The figure excludes results for WAI, PIG, and PIK fisheries, for which data cannot be reported due to confidentiality.

# 3.2 Income and Employment

#### 3.2.1 Processing Sector Employment and Wages

Figure 3.5 summarizes data on crab processing labor employment and wages associated with CR program fisheries (see Table 4.10 for tabular results). Crab processing employment in 2021, as measured by hours of processing labor input (including employees at shore-based plants as well as processing employees on crab catcher/processors) is estimated at 452 thousand labor hours, unchanged from 2019, and 18% increase from a previous historical low of 382 thousand labor hours in 2018. Aggregate wages paid to crab processing line employees across all CR fisheries during 2021 generated labor earnings of \$7.2 million, 15% greater 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 a record high of \$15.18 per hour in 2021, at 351 thousand hours and \$5.7 million, while processing labor in the BBR fishery during 2021 accounted for 31 thousand hours and \$550 thousand in wages, declining by approximately 24% and 34% from 2020.



Figure 3.5: Harvest and processing employment and compensation, selected crab fisheries

**Source** NMFS AFSC BSAI Crab Economic Data. Data shown by calendar year. All dollar values are adjusted for inflation to 2021-equivalent value. Tabular results are shown in Tables 4.10, 4.16, and 4.18. 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. Asterisks indicates values that are not plotted due to 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.

As indicated in Figure 3.5, 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 the figure, 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 \$13.04 and \$12.82 per hour in the 2016 BBR and BSS fisheries, the highest reported wage rates previously observed 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.

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 3.10 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.<sup>4</sup>

Table 4.12 provides 2005 to 2021 results for 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.. <sup>5</sup> Between 2014 and 2020, the number of active crab processing plants varied between 7 and 9, and declined to 6 in 2021, compared to between 12 to 17 active plants from 2005 to 2013. 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 2020, a sharp increase in recruitment of non-U.S. workers brought in 386 workers, representing 13% of the processing employee labor pool, while the number of Alaska state residents employed in crab processing declined from 636 to 609 (21% of the pool), and residents of Pacific Northwest and other U.S states modestly increased by count, whole both declined in proportional employment shares. The relative attrition of Alaska and, particularly, Pacific Northwest residents from the crab processing labor pool reported for the three 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

 $<sup>^{4}</sup>$ As 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 4.10 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.

 $<sup>{}^{5}</sup>$ See Figure 1.9 and Table 1.5 in Chapter 1 above for a summary overview of the geographic distribution of employment and labor income in the crab processing sector by employee community of residence, with greater detail at for Alaska communities, over the most recent five years

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 4.11 for the 1998/01/04 baseline period through 2011, and for 2012 to 2021.<sup>6</sup> Data reported for 2012 to 2021 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 2021, salaried and other non-processing employment totaled 1,139 individuals, and 180 per plant (median). Total wage and salary expenditures of \$59.3 million (exclusive of non-wage benefits, taxes, and other payroll and employment expenses) were a decline from 2020, while median salary payments per plant increased to \$11.1 million and to \$51 thousand per salaried employee, both the highest values reported to-date.

#### 3.2.2 Harvest Sector Employment and Compensation

A summary overview of harvest sector employment and labor earnings is presented in Figure 3.5, with tabular results and a range of additional indicators reported in Tables 4.13 to 4.17.<sup>7</sup> Table 4.13 reports aggregate and vessel-level average (mean and median) number of crew positions within the fleet active in each CR fishery, from 1998 to 2021.

The geographic distribution of crab vessel crew employment and earnings is reported in Figure 1.8 and Table 1.4 in Chapter 1, showing statistics for harvest sector employment and estimated labor earnings, broken out by community or region of residence for vessel crew members for 2017 through 2021. Alaska residency status of CR fishery crews is reported at the CR program level for 1998 to 2021 in Table 4.14, reporting counts of total non-resident and Alaska-resident crew members, distinguishing between number of distinct crew members holding commercial crew licenses compared to those identified by CFEC gear-operator permit, [^Counts of commercial crew license holders exclude captains, whereas counts of CFEC gear operators include crab vessel captains, but not exclusively, also including crew members that held gear operator permits in lieu of a commercial crew license.] and the relative distribution of vessel-level gross revenue by Alaska resident status of crab vessel captains is reported in Table 4.15.

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 have remained ongoing

 $<sup>^{6}</sup>$ See table notes regarding discontinuities in processor sector salary cost data.

<sup>&</sup>lt;sup>7</sup>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), including number of paid fishing crew members and aggregate crew settlement payments, and captain settlement payment, at the fishery level for each vessel. 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 3.14 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.

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 generally 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 shown in Figure 3.5.

Table 4.16 reports an additional pro-rata index of crew compensation, derived by standardizing annual payments to crew relative to the average price received by the vessel for landed crab, resulting in a metric denominated in pounds of crab.<sup>8</sup> The "crab-equivalent" metric further decomposes inter-annual changes in gross crew settlement payments to isolate the effects of varying ex-vessel prices in addition to varying TACs and season lengths, and effectively represents a piece-rate measure of crew compensation as a share of the vessel's physical production of crab. Table 4.17 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.

# 3.3 Harvest Sector Operating and Production Costs and Net Earnings Indices

Statistics reporting information available for crab vessel operating expenditures are summarized in Figure 3.6; in addition to tables and figures reporting vessel crew labor and quota costs presented in other sections, Tables 4.19 through 4.21 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.<sup>9</sup> Table 4.22 provides a compilation of diesel prices per gallon from 1999 to current for the five principal fueling ports for Alaska fishing vessels.

<sup>&</sup>lt;sup>8</sup>The index is calculated by dividing vessel-level crew payments in a given crab season by the average ex-vessel price received by the vessel; statistics shown are the median value of the index over all active vessels. See Abbott et al (2022) for further discussion of the index and analysis applied to effects of the CR program and IFQ leasing on crew remuneration.)

<sup>&</sup>lt;sup>9</sup>Cost elements that were discontinued in the crab EDR data collection program as of 2012 are not included; see the 2013 edition of this report for additional detail on discontinued harvest and processing cost data collected prior to 2012. 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.



Figure 3.6: Aggregate crab vessel operating costs, by cost item and fishery

**Source** NMFS AFSC BSAI Crab Economic Data.All dollar values are adjusted for inflation to 2021-equivalent value. Tabular data available in Tables 4.16, 4.19, 4.21, and 4.25. Values shown represent total annual expenditures by cost item for calendar years 2012-present, 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.

#### 3.3.1 Harvest Sector Net Earnings Indices

Figures ?? and ??, with tabular results shown in Tables 4.23 and 4.24, integrate and synthesize available data on crab vessel operating operating costs and ex-vessel revenues to provide a partial cash-flow analysis, with results reported at the average vessel-level and in aggregate at the fleet level. Results are reported for 2012 through 2021, for the CR program fisheries in aggregate, with fishery-level detail for BBR and BSS fisheries. Results presented as gross ex-vessel profit in the tables, and illustrated in Figures ?? and ??, provide relative indices of gross profitability of vessels operating in the respective crab fisheries. In addition to reflecting different levels of scale, gross profit results reported at the vessel- and fleet-level also differ in treatment of quota lease costs; in vessel-level results, quota lease costs are treated as transfer payments within the harvest sector, and are reported as a distribution of gross profit between vessel- and quota- capital components of the harvest sector.

It is important to note that this analysis is limited to crab vessel costs and revenues directly associated with crab fishing and ex-vessel landings, exclusive of any ex-vessel landings in non-CR crab or other fisheries, or other sources of vessel income, such as tendering or vessel charters. Crab fishing operating cost data reported by vessel owners in the Crab EDR are limited to items discussed above, i.e., crew and captain labor costs, fuel, bait, and provisions, as well as quota lease costs, discussed below in Section @ref(quota\_leasing). Additional operating costs not accounted for in available data are substantial, including other direct, variable vessel operating and capital maintenance and repair costs, and other expenses that enter cash flow, including overhead and financial (principal and interest) expenses. As such, the estimated residual values reported in these results represent an incomplete and imperfect index of actual gross profit of vessel operations within the active BSAI crab fleet. As such, results should be interpreted with caution, and should not be misinterpreted as estimates or indices of net operating profit, which would result from a full and

SOMPLETMESSAFSOBSAFSLADEConomic Data. All dollar values are adjusted for inflation to 2021-equivalent value. Tabular data available in Table 4.23. Values shown represent mean vessel-level earnings and expenditures by cost item for calendar years 2012-present, 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.

**Source** NMFS AFSC BSAI Crab Economic Data. All dollar values are adjusted for inflation to 2021-equivalent value. Tabular data available in Table 4.24 Values shown represent aggregate earnings and expenditures by cost item for calendar years 2012-present, 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.

## 3.4 Quota Holdings, Leasing Activity, and Quota Share 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 and distribution of crab harvesting and processing quota share (QS and PQS, respectively) holdings among eligible shareholder entities under the CR program.

#### 3.4.1 Harvest Quota Lease Market Activity and Average Prices

Table 4.25, summarized in Figure 3.7, displays aggregated results for indicators of quota lease market activity and value reported for crab vessels that landed crab IFQ and/or CDQ pounds on leased quota (as indicated by reporting quota lease costs in EDR data) during 2012 through 2021 calendar year CR fisheries<sup>10</sup>. Indicators shown in Figure 3.7 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 4.25 also reports the number of vessels leasing quota, 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. Note that lease market statistics are exclusive of crab vessels that do not report quota lease costs (i.e., solely harvest the vessel owner's IFQ), which in recent years generally comprise approximately 10 vessels in the active fleets in the respective fisheries; as such, the value of lease market indicators reported in this section, including average and aggregate pounds leased as a percentage of total landings, may differ from similar metrics reported in other sections (e.g., 2.3.1) that are inclusive of all vessels active in the respective fisheries and years. Median and arithmetic mean values computed over leasing vessels are presented together to show information on the variation in reported values within each fishery. 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).

Statistics reported in Figure 3.7 and Table 4.25 represent CR program IFQ lease activity within crab harvesting cooperatives. 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 of 2009, only a small fraction of the issued IFQ was landed by non-cooperative vessels, and beginning with the 2009/10 crab season, virtually all IFQ has been pooled within harvest cooperatives.<sup>11</sup> Correspondingly, since

 $^{11}$ For the 2009/10 crab season, the Inter-Cooperative Exchange (ICE) harvest cooperative was formed. As of the

<sup>&</sup>lt;sup>10</sup>EDR data collection for the 2012 calendar year implemented newly revised data collection protocols under Amendment 42 to the BSAI King and Tanner Crabs FMP (78 FR 36122, June 17, 2013); prior to the implementation of EDR revisions, data collected regarding EDR lease activity and costs did not differentiate between transfers of quota between independent entities that were priced at competitive market rates from non-arms length transactions (i.e., those between affiliated entities or other types of non-market transfers characterized by nominal prices or in-kind compensation). For this reason, EDR quota lease data collected previously for 2005-2011 fisheries was not deemed of sufficient quality to disseminate. For collection of data associated with 2012 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 , e.g., 2015 BBR and BSS calendar year fisheries, are based primarily on data reported for the 2014/15 BSS season and 2015/16 BBR season.

2008/09, virtually all IFQ lease transactions registered with NMFS (Table 4.26 have taken place within harvest cooperatives, primarily in the form of IFQ assignment to a cooperative by member QS holders.

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



Average lease rate (lease price as % of ex–vessel price), vessel median, by quota type

Figure 3.7: Crab harvest quota lease market indicators, selected crab fisheries

Note All dollar values are adjusted for inflation to 2021-equivalent value. Asterisks indicate data suppressed due to confidentiality Source NMFS AFSC BSAI Crab Economic Data Report (EDR) database. See Table 4.25 footnotes for details.

#### 3.4.2 Quota Share Sale Transfers and Average Prices

Figure 3.8 provides a summary of the annual volume of QS and PQS sale transfers spanning the 2005/26 to 2021/22 period, reporting the number of individual transfers registered with NMFS

AKR (upper panel) and quantity of QS units transferred (lower panel) per crab season, by CR fishery and category of quota pool: Crew (CVC/CPC) QS, Vessel owner (CVO/CPO) QS, and Processor (PQS) quota. More detailed information on QS/PQS sale transfers by CR fishery and QS type is shown in Tables 4.27 and 4.28, including counts of entities transferring, total and median volume of QS units transferred, and median price per QS unit. Note that an individual QS sale transfer may include shares in multiple QS pools. Table 4.26 reports the total number of distinct QS and PQS transfers (comprising transactions in which shares in one or more QS/PSQ pool were transferred) completed, by crab season, through 2021/22.



Figure 3.8: QS and PQS sales

Note Asterisks indicate data for one or more sectors were not plotted due to confidentiality

Source NMFS Alaska Region - Restricted Access Management, Quota share transfer data. Tabular results are shown in Tables 4.27. 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.

Table 4.30 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 4.30 are the average of observed selling prices for completed sales of crab QS, denominated in units under which such sales are commonly valued.<sup>12</sup> 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 4.30Table 4.30va 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 the time of sale relative to contemporaneous ex-vessel price.<sup>13</sup>

#### 3.4.3 QS/PQS Holdings

CR Program QS 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 and community-based non-profit entities affiliated with Alaska Native tribes or corporations in acquiring control of IFQ and IPQ program quota shares. The recent public announcement of acquisitions negotiated by Coastal Villages Region Fund and the Bristol Bay Economic Development Corporation of BBR and BSS QS holdings comprising 3% of the respective QS pools, and 7 crab vessels, from Seattle-based initial QS recipient Mariner Companies<sup>14</sup> is the

$$QS_{price} = (\frac{1}{r}) * IFQ_{leaseprice}$$

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

 $<sup>^{12}</sup>$ QS price per IFQ pound values are comparable to current brokerage offers, for example: https://dockstreetbrokers.com/crab-ifqs/crew-shares))

<sup>&</sup>lt;sup>13</sup>In principal, in a well-functioning competitive market, price per pound of IFQ reflects QS holders and fishermen's expectations regarding the surplus to be produced from fishing the leased quota during the current season, taking account of uncertainty regarding factors that influence fishing costs and ex-vessel revenue. Similarly, QS sale prices reflect holder's expectations for the surplus value of the fishery over time, defined as the present value of the stream of annual lease earnings for the indefinite future, where distant future expected lease revenues are ascribed a lower value (discounted) relative to near-term expected earnings. Implicit in the ratio of IFQ price to QS price is the average discount rate,  $r_i$ , such that

<sup>&</sup>lt;sup>14</sup>National Fisherman, January 7, 2021, Bering Sea buyout: Western Alaska coalition now owns 3 percent of crab quota.

most recent such acquisition, which was completed after the beginning of the 2020/21 season and, is reflected in QS transfer and holdings data in this report as of the 2021/22 crab season.

CR program rules <sup>15</sup> limit the consolidation of CVO/CPO QS to a maximum share proportion of the quota share pool (as defined at initial issuance) held by a CDQ group to 5% in BBR, BSS, EBT, and WBT fisheries, 10% in PIK and SMB, and 20% in EAG, WAG, and WAI fisheries, by non-individual PQS holders to 5% across all pools, and by individuals and all other entities, to 1% in BBR, BSS, EBT, and WBT fisheries, 2% in PIK and SMB, and 20% in EAG, WAG, and WAI fisheries. "Grandfathering' exceptions to QS use caps and eligibility requirements apply for initial issuees. 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.

Figure 3.9 provides a high-level summary of the composition of CVC/CPC (Crew) and CVO/CPO (Vessel owner) QS and PQS pools, as of initial issuance, and as of the most recent two crab seasons (2020/21 and 2021/22), in terms of the number of distinct QS holders, median and maximum QS holding (as % of the respective pool). Tabular data, also including mean and standard deviation of the size (as % of the respective QS pool) of distinct QS holdings is reported in Table 4.31 and 4.32.

<sup>&</sup>lt;sup>15</sup>50 CFR 680.42(a)(2)(i); https://www.ecfr.gov/current/title-50/chapter-VI/part-680#p-680.42(a)(2)(i)





**Source** NMFS Alaska Region - Restricted Access Management, quota share holders files. Tabular results are shown in Tables 4.31 and 4.32.

More detailed information on CR program vessel owner and crew QS share holdings is reported in Tables 4.35 through 4.38, as outlined below. Information reported for CR program QS pools in Figures 3.8, 3.9, and @ref{fig:qs\_shares}, and Tables 4.31 through 4.38 summarize, the status and change over time in crab QS pools based on public registries of QS holder accounts, including those of non-individual QS entities, and do not incorporate results of QS entity decomposition discussed

in Section 1.4 above. Results reported regarding aspects of crew QS pools, comprised solely of individual persons, reliably represent the respective QS holdings and populations of QS holders. In contrast, results reported regarding CVO/CPO QS and PQS pools, while important to monitor, are limited in the extent to which they transparently represent the distribution and dynamics of QS ownership and control, which may be obscured by indirect changes in QS pools through underlying changes in QS entity ownership.

Tables 4.33 and 4.34 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.

Table 4.35 reports partial metrics of active participation by QS holders in the CVC and CPC pool as a whole (aggregating over CR fishery) over the course of the CR program. Results represent participation of crew QS holders as confirmed by a QS holder's CFEC gear operator permit number appearing on at least one ADF&G fishticket landing report record of a CR crab landing during a given crab season. Note that this exceeds the requirements for active participation that apply to CVC/CPC QS holders for retention of QS or eligibility to receive annual IFQ issuance under 50 CFR 680.40(g)(2) and 50 CFR 680.43, both in terms of the recency of at-sea participation and the documentation required. <sup>16</sup>(https://www.ecfr.gov/current/title-50/chapter-VI/part-680# p-680.40(g)(2)) As such, statistics shown in Table 4.35 undercount the numbers and proportion of Crew QS holders and associated QS that meet active participation requirements of 50 CFR 680 in a given season.

Tables @ref(tab:qsinittbl} and 4.38 report statistics showing the progress of attrition of initial issuees and entry of new share holder individuals and entities in each of the respective PQS and Vessel Owner and Crew QS pools.

#### 3.4.4 Structure of QS Entities

Analysis of CR Program CVO/CPO QS pools using QS entity decomposition is presented in detail in Section 1.4. Tables 4.39 and 4.40 report extended time series for counts and QS share percentage statistics by QS entity type using decomposed equity holdings data, as summarized in Figures 1.11 and 1.12.

Further analysis of decomposition results will be developed in future editions of this report. Efforts to provide more detailed analysis of the geographic distribution of QS holdings and benefits is in development, but has been limited by incomplete residence information for a substantial proportion of the individual owners identified in the decomposition, limiting the utility of the analysis relative to the existing information available from the QS registry information directly. Efforts to improve the decomposition results and database with additional residence information are pending.

## 3.4.5 Concentration in Ex-vessel Markets

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

<sup>&</sup>lt;sup>16</sup>https://www.ecfr.gov/current/title-50/chapter-VI/part-680#p-680.40(g)(2)

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.

Tables 4.43 and 4.44 report indices of the distribution of volume ex-vessel sales among landings vessels (sellers) and Registered Crab Receivers (buyers), including the number of buyer and seller participants in the respective markets, the aggregate volume of sales, the median volume and proportion of aggregate volume of sales over the population of distinct buyers and sellers, respectively, and Gini coefficient values, showing changes in concentration of IFQ landings across active vessels within the crab fleet, and the equivalent for crab purchasing across the set of active Registered Crab Receivers (crab buyers). As calculated<sup>17</sup>, the coefficient measures the relative evenness of the distribution of vessel-level total IFQ landings (or buyer-level total crab purchases) across the set of active vessels and buyers in a given crab fishery season. The index varies between 0 and 1, where 0 indicates equal quantity of pounds landed or purchased across all vessels/buyers, and 1 indicates complete concentration, with one vessel (buyer) landing (purchasing) all landed pounds.

# 3.5 Fishing Capacity, Effort, and Efficiency

Figure 3.10 displays the size and composition of the active fleet by calendar year for CR fisheries from 1998 to 2021, and more granular indicators of applied fishing effort and productivity are reported in Tables  $\sim$ 4.45 through  $\sim$ 4.50.

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





Source Tabular results are shown in Tables 4.2 and 4.3. Gaps in time series for BST, PIG, PIK, SMB, and WAI indicate fishery closure years.

Figure 3.11 displays vessel days at sea by calendar year for crab fisheries over the 2007 to 2021 period, reporting vessel median and fleet aggregate values for active vessel-days at sea, and vessel-days of active fishing effort, and tabular results are reported in Table 4.18.<sup>18</sup> Systematic monitoring of crab vessel fishing activity was not developed at the time of CR program implementation, and initially, crab vessel EDR reporting provided the most comprehensive vessel-level source of data on vessel-day metrics of fishing effort, despite being limited to vessel-level annual reporting of total days by crab season. Systematic capture of trip-level fishing effort by ADF&G was not implemented until 2007.

Table 4.45 provides a summary of crab vessel trip statistics by crab fishery season, including the total number of vessel-trips by fishery and season, average (mean and sd) of trips per vessel, and average volume of landings per trip.<sup>19</sup> Crab vessels often make deliveries to multiple processors following a single fishing trip, and Table 4.45 provides the total number of deliveries per season, average deliveries per trip, and average landings volume per delivery.

<sup>&</sup>lt;sup>18</sup>See notes for the table describing data sources available for calculating vessel activity days during different periods, which introduces a degree of discontinuity in counts of vessel activity days over the pre- and post 2008 period, and in statistics calculated using these data to estimate daily pro-rata rates for various indicators. Table 3.18 and Figure 2.13 display results using eLandings and ADF&G Crab observer program data to estimate vessel activity days.

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



Figure 3.11: Harvest vessel activity days, selected fisheries

**Source** ADF&G Shellfish Observer Program, Confidential Interview Form Data. Tabular data is presented in Tables 4.18; the figure displays CIF vessel activity data only, from 2007 to present. Data for PIK and WAI fisheries not shown.

Table ?? reports information on crab seasons by fishery for 1998 through 2020/21, including season lengths in days, and for seasons subsequent to rationalization, the date-span of active fishing, 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.

Figure 3.12 summarizes the timing and level of active fishing by season for BBR and BSS fisheries from 2005/06 to 2021/22, depicting the number af active vessels per week, and the cumulative percentage of TAC allocations landed over the course of active seasons, by quota type; results demonstrate the relative delay in landings of quota types that are not subject to share-matching requirements that apply to A-Class IFQ.



Figure 3.12: Crab vessel landing activity and cumulative catch, by quota share class and week of season: Bristol Bay Red King and Bering Sea Snow Crab

**Source**ADF&G fish tickets via eLandings; NMFS RAM Division, IFQ accounting database. Tabular data available in Tables 4.48 and 4.49. 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.

Summary statistics for harvesting sector operating effort, measured as pot lifts per vessel are reported in Table 4.50 for all CR fishery seasons from 2005/06 to 2020/21, 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).

## 3.6 International Trade in Crab Commodities

U.S. foreign trade statistics for frozen, processed king and snow crab are summarized for the period 1991 to current\_yr in Figure 3.13 and Table @ref(tab:impexp.tbl), including annual volume and value time series for imports, exports, and net imports, and average per-unit value of import and export streams.



Figure 3.13: Balance of trade (imports and exports) in king and snow crab by calendar year

**Source** U.S. Foreign Census Bureau Foreign Trade Division, via NMFS Fisheries Statistics Division, U.S. Foreign Trade Database. Data available at http://www.st.nmfs.noaa.gov/st1/trade/; Tabular data shown in figure available in Table 4.51. Trade value is inflation-adjusted to 2021-equivalent dollars using the GDP index. Imports and exports shown are for TSUSA product codes 306144010 (frozen king crab) and 306144020 (frozen snow crab). Exports are plotted as positive balance and imports plotted as negative balance.

# References

Abbott, Joshua K., B. Leonard and B. Garber-Yonts. 2022. The distributional outcomes of rights-based management in fisheries. Proceedings of the National Academy of Sciences of the United States of America, 119(2), e2109154119.

Abbott, J.K., B. Garber-Yonts and J.E. Wilen. 2010. Employment and remuneration effects of IFQs in the Bering Sea/Aleutian Islands crab fisheries. Marine Resource Economics, 25(4), 333-54.

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

Alaska Department of Fish & Game. *Fish ticket data*. Accessed via Pacific States Marine Fisheries Commission, Alaska Fisheries Information Network database. Metadata available at http://www.akfin.org/images/stories/UserGuide\_Comprehensive\_FT2.1.doc.

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

Alaska Fisheries Science Center. 2019. Wholesale Market Profiles for Alaska Groundfish and Crab Fisheries. Technical report, Alaska Fisheries Science Center, NOAA, National Marine Fisheries Service, 7600 Sand Point Way NE, Seattle WA 98115. 170p. Accessed January, 2021 at https://repository.library.noaa.gov/view/noaa/25242/noaa\_25242\_DS1.pdf?.

Holland, D.S., Thunberg, E., Agar, J., Crosson, S., Demarest, C., Kasperski, S., Perruso, L., Steiner, E., Stephen, J., Strelcheck, A. and Travis, M., 2015. US catch share markets: a review of data availability and impediments to transparent markets. Marine Policy, 57, pp.103-110. https://www.sciencedirect.com/science/article/pii/S0308597X15000767

Nichols, E., M. Westphal, and J. Shaishnikoff. 2021. Annual Management Report for Shellfish Fisheries in the Bering Sea/Aleutian Islands Management Area, 2019/20. Alaska Department of Fish and Game, Fishery Management Report No. 21-06, Anchorage. Accessed December 2021 at https://www.adfg.alaska.gov/FedAidPDFs/FMR21-06.pdf.

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

National Marine Fisheries Service. 2004. Final Environmental Impact Statement for Bering Sea and Aleutian Islands Crab Fisheries. NMFS Alaska Region, Juneau, Alaska. August 2004. Accessed

December 2011 at http://www.alaskafisheries.noaa.gov/sustainablefisheries/crab/eis/default.htm.

National Marine Fisheries Service (NMFS). 2021. *Fisheries of the United States - Landings*. Online data query. NMFS Office of Science and Technology: Silver Spring, MD. March, 2021. https://www.fisheries.noaa.gov/foss/f?p=215:200.

NOAA Fisheries, Alaska Fisheries Science Center, 2011. *BSAI crab economic data*. Accessed via Pacific States Marine Fisheries Commission, Alaska Fisheries Information Network database. Metadata available at link.

NOAA Fisheries, Alaska Fisheries Science Center, 2011. BSAI Crab EDR Database: Data Quality Summary. Accessed December 2011 at http://www.afsc.noaa.gov/REFM/Socioeconomics/Metadata/crabEDR\_m

NOAA Fisheries, Alaska Region, Restricted Access Management. *BSAI crab rationalization IFQ landings data*. Accessed via Pacific States Marine Fisheries Commission, Alaska Fisheries Information Network database (no public access).

NOAA Fisheries, Alaska Region, Restricted Access Management. *BSAI crab rationalization permits and quota share holder files*. Accessed at https://www.fisheries.noaa.gov/alaska/commercial-fishing/permits-and-licenses-issued-alaska.

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

North Pacific Fisheries Management Council. 2017. Ten-Year Program Review for the Crab Rationalization Management Program in the Bering Sea/ Aleutian Islands (Final Draft). North Pacific Fisheries Management Council. Anchorage, Alaska. January, 2017. Available at http://http://www.npfmc.org/wp-content/PDFdocuments/catch\_shares/Crab/Crab10yrReview\_Final2017.pdf.

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

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

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

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

U.S. Bureau of Economic Analysis (BEA). Gross Domestic Product: Chain-type Price Index (GDPCTPI), retrieved from FRED, Federal Reserve Bank of St. Louis; https://fred.stlouisfed.org/ series/GDPCTPI, December 28, 2021.

Wilkins, David, and B. Rudis. "Treemapify: Draw Treemaps in "ggplot2". 2021." R package version 2.5. https://cloud.r-project.org/web/packages/treemapify/index.html

Chapter 4

Tables Reporting Economic Data for the King and Tanner Crab Fisheries of the Bering Sea and Aleutian Islands Regions

	Year	IFQ / general allocation (million lbs)	CDQ/ACA allocation (million lbs)	TAC/GHL (million lbs)	Percent IFQ/general allocation	Percent CDQ allocation landed
			, ,		landed	
	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	$100 \ \%$	$100 \ \%$
BBR	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	$100 \ \%$	$100 \ \%$
	2020/21	2.38	0.26	2.65	$100 \ \%$	100~%
	2022/23	-	-	-	-	-
	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 %
Daa	2013/14	48.58	5.40	53.98	100 %	100 %
BSS	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	100 %	100 %
	2020/21	40.50	4.50	45.00	100 %	100 %
	2021/22	5.04	0.56	5.60	99 %	100 %
	$\frac{2022}{23}$	-	-	-	-	-
BST	2005/06	1.46	0.16	1.62	54 %	100 %
	2006/07	1.69	0.19	1.88	75 %	72 %
	2000/01 2007/08	3 10	0.34	3.00	46 %	42%
	2008/09	2.49	0.28	2.76	62 %	100 %
EBT	2000/00 2009/10	1 22	0.14	1.35	98 %	100 %
	2003/10 2013/14	1.22	0.11	1.00	99 %	100 %
	2010/11 2014/15	7.63	0.10	8.48	100 %	100 %
	2011/10 2015/16	10.14	1 13	11 27	100 %	100 %
	2010/10 2022/23	0.77	0.09	0.85	-	-
	2006/07	0.00	0.11	1.00	GA 07	70.07
	2000/07	U.98 1 06	0.11	1.09	04 70	19 70
	2007/08	1.90	0.22	2.18 1 E4	24 70 0 07	20 70
	2008/09 2012/14	1.38 1.40	0.10	1.04 1.65	ð 70 01 07	- 79 07
	2013/14	1.48 5.06	0.10	60.1 6.69	81 % 70 07	13 70
	2014/15	5.90	0.00	0.03	18 %	93 %

Table 4.1: TACs/GHLs, BSAI ci	rab fishery management	program allocations and	usage
-------------------------------	------------------------	-------------------------	-------

	Vear	IFO / general	CDQ/ACA	TAC/GHL	Percent	Percent CDO
	rour	allocation	allocation	(million lbs)	IFQ/general	allocation
		(million lbs)	(million lbs)	()	allocation	landed
					landed	
WBT	2015/16	7 56	0.84	8.40	100 %	100 %
WDI	2010/10 2017/18	2.25	0.25	2.50	100 %	100 %
	2017/10 2018/19	2.20 2.20	0.24	2.50 2.44	100 %	100 %
	2020/21	2.11	0.23	2.35	62 %	60 %
	2020/21 2021/22	0.99	0.11	1.10	100 %	100%
	$\frac{2022}{23}$	1.05	0.12	1.16		-
	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	*	$100 \ \%$
TAC	2013/14	2.98	0.33	3.31	*	$100 \ \%$
EAG	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	$100 \ \%$	$100 \ \%$
	2020/21	3.29	0.37	3.65	$100 \ \%$	$100 \ \%$
	2021/22	3.25	0.36	3.61	100~%	100~%
	2022/23	2.99	0.33	3.32	-	-
	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	*	*
WAG	2013/14	2.68	0.30	2.98	*	*
WAG	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	99~%	*
	2020/21	2.66	0.30	2.96	94~%	*
	2021/22	2.09	0.23	2.32	*	*
	2022/23	1.56	0.17	1.73	-	-
	2009/10	1.05	0.12	1.17	44 %	0 %
	2010/11	1.44	0.16	1.60	77 %	98~%
SMB	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 %
	2005	0.34	0.03	0.37	$108 \ \%$	$100 \ \%$

Table 4.1: TACs/GHLs, BSAI crab fishery management program allocations and usage (continued)

	Year	IFQ / general allocation	CDQ/ACA allocation	TAC/GHL (million lbs)	Percent IFQ/general	Percent CDQ allocation
		(million lbs)	(million lbs)		allocation landed	landed
	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~%
NGD	2013	0.46	0.04	0.46	81~%	50~%
Non	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	50~%	0 %
	2020	0.16	0.01	0.17	0 %	0 %
	2021	0.29	0.02	0.31	0 %	0 %
	2022	0.32	0.03	0.34	-	-
	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	*	-
DIC	2014	0.15	-	0.15	*	-
110	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	$100 \ \%$	-
	2020	0.13	-	0.13	*	-
	2021	0.13	-	0.13	*	-
	2022	0.13	-	0.13	-	-

Table 4.1: TACs/GHLs, BSAI crab fishery management program allocations and usage (continued)

Note 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. Asterisks indicate data suppressed due to confidentiality

**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)

	Year	CFEC	Vessels	Buvers/processors
		permits		
	1998	773	286	53
	1999	590	283	41
	2000	525	262	34
	2001	487	251	34
	2002	513	248	35
	2003	514	253	33
	2004	492	256	32
	2005	307	182	27
	2006	231	102	18
	2007	190	86	23
	2008	228	94	21
All BSAI	2009	213	89	24
Crab	2010	194	79	21
	2011	195	77	25
	2012	219	83	23
	2013	184	81	24
	2014	191	75	21
	2015	198	81	19
	2016	187	82	19
	2017	164	72	21
	2018	158	68	19
	2019	160	66	20
	2020	149	64	22
	2021	102	66	17
	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
BBR	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
	2019	65	56	14
	2020	54	47	16
	1998	276	230	44
	1999	298	241	37
	2000	244	231	28
	2001	219	207	23
	2002	205	191	26
	2003	202	190	21

Table 4.2: BSAI crab fishery participation by calendar year
	Year	CFEC	Vessels	Buyers/processors
		permits		
	2004	200	189	23
	2005	178	167	20
	2006	106	78	13
	2007	89	68	18
	2008	108	78	17
BSS	2009	103	77	18
200	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	78	63	13
	2019	77	61	13
	2020	77	59	13
	2021	82	62	13
	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
EAG	2009	9	3	6
2110	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
	2019	10	3	9
	2020	10	3	11
	2021	11	3	0
	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	Υ	3	3
	2007	6	4	4
	2008	6	3	5

Table 4.2: BSAI crab fishery participation by calendar year (continued)

	Year	CFEC permits	Vessels	Buyers/processors
WAC	2009	4	2	6
WAG	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
	2019	7	3	6
	2020	6	3	8
	2021	7	3	8
	1998	136	131	16
	2009	7	7	6
	2010	14	11	9
SMB	2011	23	18	11
	2012	22	17	11
	2014	5	4	6
	2015	3	3	4
PIK	1998	58	58	17
	1998	1	1	1
	1999	0	0	0
WAI	2002	33	33	9
	2003	30	30	10
	2004	0	0	0
	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
NCD	2009	29	23	3
NSK	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
	2019	32	24	1
	2020	1	0	0
	2021	3	0	ů 0
	1998	4	3	3
	1999	4	3	2

Table 4.2: BSAI crab fishery participation by calendar year (continued)

	Year	CFEC permits	Vessels	Buyers/processors
	2000	8	6	4
	2001	6	6	3
	2002	9	8	3
	2003	3	3	2
	2004	5	5	2
	2005	4	4	2
DIC	2010	1	1	2
PIG	2011	2	2	1
	2012	1	1	1
	2013	1	1	1
	2014	1	1	1
	2017	2	2	2
	2018	2	1	1
	2019	2	2	2
	2020	4	4	3
	2021	4	4	3

Table 4.2: BSAI crab fishery participation by calendar year *(continued)* 

Note Data shown by calendar year. 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. 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. Count of buyers/processors for Norton Sound red king crab excludes catcher seller operations. Excludes participation in 2000/2001 and 2001/2002 Western Aleutian Islands red king crab Petrel Bank test fishery.

Source ADF&G fish ticket data and eLandings

1998         274         263         11           1999         256         248         8           2000         244         238         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           2011/12         62         61         2           2013/14         63         62         2           2014/15         63         62         2           2015/16         64         63         2           2016/17         63         62         2           2015/16         64         63         2           2016/17         63         62         2           2018/19         55         53         2           2018/19         55         5         1           20002         191         183         9		Season	Total vessels	Catcher vessels	Catcher/processors
1999         256         248         8           2000         244         238         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           2010/11         65         64         2           2011/12         62         61         2           2013/13         64         63         2           2014/15         63         62         2           2014/15         63         62         2           2016/17         63         62         2           2018/19         55         53         2           2019/20         56         55         1           20001         207         201         8           20002         191         183         9           2001         207         201         8		1998	274	263	11
BBR         2000         244         238         8           2001         230         224         8           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           2011/12         62         61         2           2013/14         63         62         2           2014/15         63         62         2           2015/16         64         63         2           2014/15         63         62         2           2015/16         64         63         2           2014/15         63         62         2           2018/19         55         53         2           2018/20         56         55         1           2020/21         47         45         2           2003         190         183         6           2000         231         222 <td rowspan="2"></td> <td>1999</td> <td>256</td> <td>248</td> <td>8</td>		1999	256	248	8
200123022482002241234920032502428200425124382005/06898642006/07817932008/09787632009/10706922011/12626122011/12626122013/14636222013/14636222014/15636222015/16646322016/17636222018/19555322019/20565512019/20565312019/20565312019/20565312019/20565312019/202012012019/20565312019/20565312019/2020118362001207201820021911839200319018556200418918362005/067874442007/08787442007/08787442007/08787442017/13706822013/14706822013/147068		2000	244	238	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           2011/12         62         61         2           2011/12         62         61         2           2013/14         63         62         2           2015/16         64         63         2           2016/17         63         62         2           2015/16         64         63         2           2015/16         64         63         2           2016/17         63         62         2           2018/19         55         53         2           2019/20         56         55         1           2000         211         47         45           2000         201         18         9           2001         207         201         8		2001	230	224	8
2003         250         242         8           2004         251         243         8           2005/06         89         86         4           2006/07         81         79         3           2007/08         74         72         3           2009/10         70         69         2           2011/11         65         64         2           2012/13         64         63         2           2011/12         62         61         2           2011/13         64         63         2           2015/16         64         63         2           2016/17         63         62         2           2016/17         63         62         2           2019/20         56         55         1           2020/21         47         45         2           2019/20         56         55         1           2000         231         232         10           2000         231         232         10           2000         101         88         9           2001         207         201         8		2002	241	234	9
2004         251         243         8           2005/06         89         86         4           2006/07         81         79         3           2008/09         78         76         3           2008/09         78         76         3           2009/10         70         699         2           2010/11         65         64         2           2011/12         62         61         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           2019/20         56         55         1           2020/21         47         45         2           2000         231         222         9           2001         207         201         8           2002         191         183         9           2002         191         183         9 <td></td> <td>2003</td> <td>250</td> <td>242</td> <td>8</td>		2003	250	242	8
2005/06         89         86         4           2006/07         81         79         3           2007/08         74         72         3           2008/09         78         76         3           20101/11         65         64         2           2011/12         62         61         2           2011/13         64         63         2           2015/16         64         63         2           2016/17         63         62         2           2015/16         64         63         2           2016/17         63         62         2           2017/18         61         60         2           2019/20         56         55         1           2020/21         47         45         2           1999         241         232         10           2000         231         222         9           2001         207         201         8           2002         191         183         9           2003         190         185         5           2004         189         183         6 <td></td> <td>2004</td> <td>251</td> <td>243</td> <td>8</td>		2004	251	243	8
BBR 2006/07 81 72 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 2012/13 64 63 2 2014/15 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 2019/20 56 55 1 2020/21 47 45 2 1998 230 219 12 1998 230 219 12 1999 241 232 10 2020/21 47 45 2 1998 183 6 2000 231 222 9 2000 201 8 2000 1207 201 8 2000 1207 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 2006/07 69 65 4 2007/08 78 74 4 2008/09 77 73 4 BSS 2009/10 68 66 2 2010/11 68 67 2 2011/12 72 70 2 2012/13 70 68 2 2013/14 70 70 7 2013/14 70 70 7 2013/14 70 7 2014 7 2013/14 70 7 2014 7 2014 7 2014 7 2015/16 7 2014 7 2015/16 7 2		2005/06	89	86	4
BBR 2007/08 74 72 3 2008/09 78 76 3 2008/09 78 76 3 2010/11 65 64 2 2011/12 62 61 2 2012/13 64 63 2 2013/14 63 62 2 2013/14 63 62 2 2015/16 64 63 2 2016/17 63 62 2 2016/17 63 62 2 2016/17 63 62 2 2017/18 61 60 2 2019/20 56 55 1 2020/21 47 45 2 1998 230 219 12 1998 230 219 12 1999 241 232 10 1999 241 232 10 1999 241 232 9 2000 231 222 9 2001 207 201 8 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 2007/08 75 72 70 2 2011/12 72 70 2 2012/13 70 68 2 2011/12 72 70 2 2012/14 70 70 7 2012/14 70 7 2012/14 70 7 2012/14 7 2012/14 7 2012/14 7 2014/15 70 7 20		2006/07	81	79	3
BBR 2009/10 78 78 76 3 2008/09 78 76 64 2 2010/11 65 64 2 2011/12 62 61 2 2012/13 64 63 2 2013/14 63 62 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 2019/20 56 55 1 2020/21 47 45 2 1998 230 219 12 1999 241 232 10 2020/21 47 45 2 1998 230 219 12 1999 241 232 10 2000 231 222 9 2001 207 201 8 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 2005/06 78 74 4 2007/08 74 74 4 2007/08 74 74 74 75 76 76 76 76 76 76 76 76 76 76 76 76 76		2000/01	74	70	3
BBR         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           2016/17         63         62         2           2017/18         61         60         2           2018/19         55         53         2           2019/20         56         55         1           2020/21         47         45         2           1999         241         232         10           2000         231         222         9           2001         207         201         8           2002         191         183         9           2003         190         185         5           2004         189         183         6           2005/06         78         74         4           2007/08         78         74         4           2007/08         78         74 <td></td> <td>2001/00</td> <td>78</td> <td>76</td> <td>3</td>		2001/00	78	76	3
DDA         2003/10         10         03         04         23           2010/11         65         64         2         2           2012/13         64         63         2         2           2013/14         63         62         2         2           2014/15         63         62         2         2           2015/16         64         63         2         2           2016/17         63         62         2         2           2018/19         55         53         2         2           2019/20         56         55         1         2           2020/21         47         45         2         2           1998         230         219         12         1           1999         241         232         10         2           2000         231         222         9         2         2           2001         207         201         8         2         2           2002         191         183         9         2         3         6           2005         167         161         6         2	BBB	2000/00 2000/10	70 70	10 60	0 9
2010/11         00         04         2           2011/12         62         61         2           2013/14         63         62         2           2014/15         63         62         2           2015/16         64         63         2           2016/17         63         62         2           2018/19         55         53         2           2018/19         55         53         2           2019/20         56         55         1           2020/21         47         45         2           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           2005/06         78         74         4           2005/06         78         74         4           2007/08         78         74         4	DDR	2009/10 2010/11	65	64	$\frac{2}{2}$
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		2010/11 2011/12	62	61	2
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		2011/12 2012/12	02 64	01 62	2
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		2012/13 2012/14	04 62	00	2
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		2015/14	05	02 69	2
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		2014/15	03	62 62	2
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		2015/16	64	63	2
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		2016/17	63	62	2
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		2017/18	61	60	2
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		2018/19	55	53	2
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		2019/20	56	55	1
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		2020/21	47	45	2
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		1998	230	219	12
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		1999	241	232	10
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		2000	231	222	9
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		2001	207	201	8
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		2002	191	183	9
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		2003	190	185	5
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		2004	189	183	6
$\begin{array}{cccccccccccccccccccccccccccccccccccc$		2005	167	161	6
$\begin{array}{cccccccccccccccccccccccccccccccccccc$		2005/06	78	74	4
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		2006/07	69	65	4
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		2007/08	78	74	4
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		2008/09	77	73	4
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	BSS	2009/10	68	66	2
$\begin{array}{cccccccccccccccccccccccccccccccccccc$		2010/11	68	67	2
$\begin{array}{cccccccccccccccccccccccccccccccccccc$		2011/12	72	70	2
$\begin{array}{cccccccccccccccccccccccccccccccccccc$		2012/13	70	68	2
$\begin{array}{cccccccccccccccccccccccccccccccccccc$		2013/14	70	68	2
$\begin{array}{cccccccccccccccccccccccccccccccccccc$		2014/15	70	68	2
$\begin{array}{cccccccccccccccccccccccccccccccccccc$		2015/16	70	69	2
$\begin{array}{cccccccccccccccccccccccccccccccccccc$		2016/17	63	61	2
$\begin{array}{cccccccccccccccccccccccccccccccccccc$		2017/18	63	61	2
$\begin{array}{cccccccccccccccccccccccccccccccccccc$		2018/19	61	59	2
$\begin{array}{cccccccccccccccccccccccccccccccccccc$		2010/10	59	58	2
2020/21 $02$ $00$ $2$		2010/20 2020/21	62	60 60	2
$\Delta U \Delta 1 / \Delta \Delta $ $4 \Delta $ $4 U $ $\lambda$		2021/22	42	40	2

Table 4.3: Fleet composition by season, CR Program fisheries

	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
	2008/09	3	3	0
EAG	2009/10	3	3	0
LING	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
	2019/20	3	3	0
	2020/21	3	3	0
	2021/22	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
	2008/09	3	2	1
WAG	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
	2019/20	3	3	0
	2020/21	3	3	0
	2021/22	3	3	0

Table 4.3: Fleet composition by season, CR Program fisheries (continued)

	Season	Total vessels	Catcher vessels	Catcher/processor
	1998	131	129	2
	2009/10	7	7	0
	2010/11	11	11	0
SMB	2011/12	18	18	0
	2012/13	17	17	0
	2014/15	4	4	0
	2015/16	3	3	0
PIK	1998	58	58	0
	1998/99	1	0	1
WAI	2002/03	33	31	2
	2003/04	30	28	2

Table 4.3: Fleet composition by season, CR Program fisheries (continued)

Note Data shown for crab rationalization (CR) fisheries by season. 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

		Sold weight (million lbs)	Ex-vessel value (\$million)	Weighted average, price (\$/lb)	Mean(sd) price (\$/lb)
	1000	5.04	(¢mminon)	(\$715)	<b>A A A C (A A 1</b> )
	1998	5.24	\$ 15.84	\$ 3.02	\$ 3.06(0.21)
	1999	4.89	\$ 22.95	\$ 4.70	-
	2000	5.76	\$ 28.87	\$ 5.02	• 100(0 FF)
	2001	6.36	\$ 31.40	\$ 4.94 © 4.91	\$ 4.99(0.55)
	2002	5.54	\$ 27.21	\$ 4.91 © 5 00	-
	2003	5.82	\$ 29.19	\$ 5.02	Φ 4 <b>Ε</b> Θ(Ο 11)
	2004	6.02	\$ 27.33	\$ 4.54	\$ 4.53(0.11
	2005	4.44	\$ 15.72	\$ 3.54	\$ 3.51(0.31
	2006	5.24	\$ 13.26	\$ 2.53	\$ 2.7(0.44
	2007	5.44	\$ 15.29	\$ 2.81	\$ 2.84(0.38
	2008	5.73	\$ 23.49	\$ 4.10	\$ 4.45(0.5
AIG	2009	5.51	\$ 16.96	\$ 3.08	\$ 3.06(0.47
-	2010	6.09	\$ 28.43	\$ 4.67	\$ 4.78(1.11
	2011	6.00	\$ 33.35	\$ 5.56	\$ 5.81(0.39
	2012	5.92	\$ 27.22	\$ 4.60	\$ 4.55(0.4
	2013	5.94	\$ 28.05	\$ 4.72	\$ 4.71(0.41
	2014	6.07	\$ 28.15	\$ 4.64	4.78(0.31)
	2015	5.80	\$ 28.41	\$ 4.90	5.07(0.63)
	2016	5.60	\$ 33.71	\$ 6.02	6.4(1.07)
	2017	5.56	\$ 33.94	\$ 6.10	6.15(0.89)
	2018	6.51	\$ 43.18	\$ 6.63	6.87(0.78)
	2019	6.78	\$ 45.94	6.78	6.76(0.81)
	2020	5.72	\$ 43.46	\$ 7.60	7.66(0.62)
	2021	5.90	\$ 71.98	\$ 12.20	\$ 10.37(1.17)
	1998	14.70	\$ 61.43	\$ 4.18	\$ 4.21(0.77)
	1999	11.53	\$ 109.33	9.48	
	2000	8.07	56.56	\$ 7.01	
	2001	8.30	\$ 59.12	\$ 7.13	7.13(0.59)
	2002	9.48	83.97	\$ 8.86	
	2003	15.39	\$ 110.20	\$ 7.16	
	2004	15.02	98.12	6.53	6.56(0.32)
	2005	18.14	\$ 110.42	\$ 6.09	6.05(0.18)
	2006	15.55	\$ 78.24	5.03	5.06(0.24)
	2007	20.17	\$ 114.80	5.69	5.77(0.68)
	2008	20.13	131.25	\$ 6.52	6.46(0.36)
BBR	2009	15.78	\$ 91.68	\$ 5.81	5.86(0.21)
	2010	14.73	\$ 133.96	\$ 9.09	9.16(0.79)
	2011	7.79	97.79	\$ 12.56	12.64(1.68)
	2012	7.80	\$ 73.89	9.47	9.55(0.48)
	2013	8.52	\$ 70.90	\$ 8.32	8.46(0.59)
	2014	9.87	\$ 74.91	7.59	7.7(0.58)
	2015	9.77	88.46	9.05	9.17(0.41)
	2016	8.41	\$ 102.34	\$ 12.17	\$ 12.32(0.29
	2017	6.55	\$ 66.06	\$ 10.09	\$ 10.14(0.22
	2018	4.23	\$ 47.20	\$ 11.16	\$ 11.28(0.83
	2019	3.77	\$ 47.26	\$ 12.53	\$ 12.17(0.61
	2020	2.64	\$ 33.61	\$ 12.73	\$ 10.67(3.13
	1998	249.05	\$ 221.68	\$ 0.89	\$ 0.89(0.06
	1999	192.41	\$ 286.25	\$ 1.49	Ň
	2000	32.81	\$ 89.72	\$ 2.73	
	2001	24.78	\$ 56 66	\$ 2 29	\$ 2 3(0 14)

Table 4.4: Ex-vessel volume, gross revenue value, and average price: harvesting sector total, BSAI crab fisheries

		Sold weight	Ex-vessel	Weighted	Mean(sd),
		(million lbs)	value	average, price	price $(\$/lb)$
			(\$million)	(/lb)	
	2002	31.94	\$ 62.98	\$ 1.97	-
	2003	27.51	\$ 70.83	2.57	-
	2004	23.69	67.17	\$ 2.84	2.85(0.11)
	2005	24.86	57.39	\$ 2.31	2.44(0.24)
	2006	38.02	55.75	1.47	1.48(0.19)
	2007	34.76	\$ 76.32	\$ 2.20	2.18(0.26)
	2008	62.23	\$ 133.79	\$ 2.15	2.25(0.56)
DCC	2009	57.68	\$ 104.34	\$ 1.81	1.83(0.27)
000	2010	47.84	\$ 75.79	\$ 1.58	1.59(0.24)
	2011	54.05	\$ 166.34	\$ 3.08	3.1(0.39)
	2012	88.23	\$ 227.85	2.58	2.63(0.27)
	2013	70.69	\$191.25	2.71	2.78(0.12)
	2014	55.22	\$ 150.42	\$ 2.72	2.87(0.49)
	2015	60.91	\$ 140.30	\$ 2.30	2.32(0.15)
	2016	39.57	\$ 120.80	3.05	3.15(0.79)
	2017	21.32	95.90	\$ 4.50	4.59(0.69)
	2018	18.84	\$ 80.76	\$ 4.29	\$ 4.38(0.29)
	2019	27.26	\$ 114.33	\$ 4.19	4.29(0.25)
	2020	33.61	137.67	\$ 4.10	\$ 4.18(0.31)
	2021	44.14	\$ 219.13	\$ 4.96	\$ 5.12(0.41)
	2005	0.26	\$ 0.51	\$ 1.99	\$ 1.99(0.03)
	2006	0.99	\$ 2.01	\$ 2.02	1.92(0.46)
	2007	2.25	\$ 5.20	\$ 2.32	2.3(0.75)
	2008	2.33	5.52	\$ 2.36	2.33(0.29)
	2009	2.14	\$ 5.17	\$ 2.42	\$ 2.39(0.21)
	2010	0.37	\$ 0.83	\$ 2.21	2.17(0.31)
	2013	1.25	\$ 3.59	\$ 2.87	2.87(0.79)
BST	2014	9.09	\$ 24.83	\$ 2.73	2.8(0.37)
	2015	14.98	\$ 44.15	2.95	\$ 3.05(0.39)
	2016	10.45	\$ 34.29	\$ 3.28	3.34(0.21)
	2017	1.41	\$ 6.23	\$ 4.43	\$ 4.5(0.31)
	2018	2.29	\$ 10.33	\$ 4.51	4.54(0.43)
	2019	1.18	\$ 5.58	\$ 4.72	4.7(0.23)
	2020	0.62	2.67	\$ 4.30	\$ 4.18(1.11)
	2021	0.95	\$ 5.27	\$ 5.55	5.51(0.55)
PIK	1998	1.03	\$ 3.83	\$ 3.73	3.8(0.6)
	1998	2.95	\$ 8.74	\$ 2.97	\$ 3(0.23)
	2009	0.45	\$ 1.64	\$ 3.64	\$ 3.7(0.31)
	2010	1.25	\$ 7.49	\$ 5.98	\$ 6.07(0.32)
SMB	2011	1.85	\$ 11.76	\$ 6.35	\$ 6.79(0.72)
51112	2012	1.59	\$ 7.97	\$ 5.00	\$ 5.02(0.3)
	2014	0.30	\$ 1 49	\$ 4 90	\$ 4 98(0.08)
	2015	0.10	\$ 0.59	\$ 5.59	5.72(0.23)
	1998	*	*	*	*
WAI	2002	0.50	\$ 4.43	\$ 8.83	-
	2003	0.48	\$ 3.40	\$ 7.16	-
	1998	0.03	\$ 0.07	\$ 2.47	
	1999	0.03	\$ 0.15	\$ 4.91	-
	2000	0.32	\$ 1.47	\$ 4.60	-
	-000	0.0=	÷ 1.11	÷ 1.00	

Table 4.4: Ex-vessel volume, gross revenue value, and average price: harvesting sector total, BSAI crab fisheries *(continued)* 

		Sold weight (million lbs)	Ex-vessel value (\$million)	Weighted average, price (\$/lb)	Mean(sd), price (\$/lb)
	2001	0.28	\$ 1.55	\$ 5.60	-
	2002	0.26	\$ 2.23	8.62	-
	2003	0.28	\$ 1.55	\$ 5.51	-
	2004	0.33	\$ 1.40	\$ 4.20	-
	2005	0.40	\$ 1.81	\$ 4.56	-
	2006	0.44	\$ 1.45	3.28	-
	2007	0.32	1.13	3.59	-
	2008	0.40	\$ 1.76	\$ 4.40	-
NSB	2009	0.40	\$ 1.54	\$ 3.90	-
1010	2010	0.42	\$ 1.89	\$ 4.49	-
	2011	0.40	2.47	6.12	-
	2012	0.50	\$ 3.15	\$ 6.34	-
	2013	0.44	\$ 2.92	6.59	-
	2014	0.42	2.47	5.91	-
	2015	0.49	3.08	\$ 6.31	-
	2016	0.50	\$ 3.64	\$ 7.35	-
	2017	0.48	\$ 3.32	6.88	-
	2018	0.32	2.17	\$ 6.73	-
	2019	0.08	0.56	\$ 7.34	-
	2020	*	*	*	-
	2021	*	*	*	-
	1998	0.04	0.11	\$ 3.04	-
	1999	*	*	*	-
	2000	0.12	0.63	\$ 5.15	-
	2001	0.14	0.64	\$ 4.69	-
	2002	0.14	0.70	\$4.97	-
	2003	*	*	*	-
	2004	*	*	*	-
	2005	*	*	*	-
DIC	2010	*	*	*	-
ГIG	2011	*	*	*	-
	2012	*	*	*	-
	2013	*	*	*	-
	2014	*	*	*	-
	2017	*	*	*	-
	2018	*	*	*	-
	2019	*	*	*	-
	2020	0.11	0.77	\$ 7.25	-
	2021	0.03	0.44	\$ 13.18	-

Table 4.4: Ex-vessel volume, gross revenue value, and average price: harvesting sector total, BSAI crab fisheries *(continued)* 

Note 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-present for CR program fisheries) and secondarily from CFEC gross earnings estimates (1999-2000, 2002-2003 for CR fisheries; all years for non-CR fisheries). Asterisks indicate data suppressed due to confidentiality Excludes landings in the 2001 Western Aleutian Islands red king crab Petrel Bank test fishery. Excludes landings in Petrel Bank test fishery in 2001. Data for Norton Sound red king crab are aggregated over the summer and winter commercial fisheries. Mean and standard deviation of vessel-level observations. All dollar values are adjusted for inflation to 2021-equivalent value.

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.

		State	Vessels	Share of ex-vessel volume	Share of ex-vessel revenue	Weighted average price (\$/lb)	Mean(sd) price (\$/lb)
	98/01/	AK 04WA Other	3(2) 43(18) 6(2)	- % - % - %	- % - % - %	* \$ 4.23 *	$^{*}$ \$ 4.32(0.91) $^{*}$
	2005	WA	8	80 %	80 %	\$ 3.57 *	\$ 3.46(0.27)
	2006	WA	5	80 %	80 %	\$ 2.52 *	\$ 2.63(0.22) *
	2007	AK	1 1 4	* 70 %	* 67 %	* \$ 2.70	* \$ 2.67(0.4)
		Other	1	*	*	*	*
	2008	AK WA Other	$\begin{array}{c} 1 \\ 2 \\ 1 \end{array}$	* *	* *	* * *	* *
	2009	AK WA	1 2	* *	* *	* *	* * *
	2010	AK WA Other	1 1 2 1	* *	* *	* *	*
	2011	AK WA Other	1 1 2 1	* *	* *	* *	* *
	2012	AK WA Other	2 3 1	* 66 %	* 68 % *	* \$ 4.68 *	* \$ 4.57(0.36) *
	2013	AK WA Other	2 3 1	* 75 % *	* 74 % *	* \$ 4.68 *	* \$ 4.54(0.4)
AIG	2014	AK WA Other	1 1 3 1	* 67 % *	* 68 % *	* \$ 4.71 *	(0.31)
	2015	AK WA Other	1 1 3 1	* 62 % *	* 63 % *	* \$ 4.98 *	* \$ 4.96(0.58) *
	2016	AK WA Other	1 3 1	$^{*}_{65~\%}$	* 68 % *	* \$ 6.32 *	$^{*}$ \$ 6.31(0.89) $^{*}$
	2017	AK WA Other	1 3 1	$^{*}_{65~\%}$	$^{*}_{65\%}$	$^{*}_{\$ 6.11}$	* \$ 6.01(1.08)
	2018	AK WA Other	1 3 1	* 68 % *	* 68 % *	* \$ 6.68 *	* \$ 7.03(1.02) *
	2019	AK WA Other	$\begin{array}{c} 1 \\ 3 \\ 1 \end{array}$	* 70 % *	* 71 % *	* \$ 6.91 *	(1)
	2020	AK WA Other	1 3 1	* 66 % *	$^{*}_{64 \%}$	* \$ 7.45 *	* \$ 7.52(0.42) *
	2021	AK WA Other	1 3 1	* 72 % *	* 70 % *	* \$ 11.92 *	* \$ 9.96(1.12) *
		AK	100(41)	- %	- %	\$ 1.18	\$ 1.99(0.86)

Table 4.5: 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)
	98/01/	04WA Other	354(143) 70(30)	- % - %	- % - %	$     $ 1.19 \\     $ 1.19 $	2.02(0.83) 1.98(0.83)
		ΔК	20	16 %	17 %	\$ 2.45	\$ 2 45(0.04)
	2005	WA	103	73%	71 %	\$ 2.25	\$ 2.42(0.28)
		Other	18	11 %	12~%	\$ 2.47	\$ 2.48(0.11)
		ΔK	17	20 %	20 %	\$ 1.44	\$ 1.46(0.09)
	2006	WA	48	67%	67%	\$ 1.47	1.48(0.22)
		Other	9	$13 \ \%$	$13 \ \%$	\$ 1.50	\$ 1.49(0.18)
		AK	14	23 %	23 %	\$ 2 17	\$ 2 19(0 24)
	2007	WA	43	66 %	66 %	\$ 2.21	\$ 2.19(0.28)
		Other	7	$11 \ \%$	$11 \ \%$	2.17	\$ 2.11(0.17)
		AK	15	22 %	21 %	\$ 2.09	\$ 2,13(0.33)
	2008	WA	50	66 %	69 %	\$ 2.22	\$ 2.31(0.6)
		Other	9	$12 \ \%$	$11 \ \%$	\$ 1.88	\$ 2.1(0.51)
		AK	19	32~%	33 %	\$ 1.84	\$ 1.88(0.39)
	2009	WA	45	59 %	59 %	\$ 1.80	\$ 1.81(0.19)
		Other	9	9 %	9 %	\$ 1.75	\$ 1.79(0.26)
		AK	14	23 %	23 %	\$ 1.59	\$ 1.6(0.09)
	2010	WA	40	65 %	65 %	\$ 1.59	\$ 1.59(0.29)
		Other	12	$11 \ \%$	$11 \ \%$	\$ 1.55	1.57(0.13)
		AK	15	24 %	24 %	\$ 3.08	\$ 3.14(0.19)
	2011	WA	40	62 %	63 %	\$ 3.09	\$ 3.07(0.47)
		Other	11	14 %	$13 \ \%$	\$ 3.05	\$ 3.16(0.23)
		AK	24	33 %	33 %	\$ 2.58	\$ 2.6(0.38)
	2012	WA	38	53 %	53 %	\$ 2.58	\$ 2.64(0.18)
		Other	9	$13 \ \%$	13 %	\$ 2.58	\$ 2.69(0.15)
		AK	25	33 %	33 %	\$ 2.71	\$ 2.78(0.11)
	2013	WA	35	56 %	55%	\$ 2.70	\$ 2.77(0.14)
		Other	9	$12 \ \%$	$12 \ \%$	\$ 2.71	2.79(0.1)
		AK	25	36 %	36 %	\$ 2.77	\$ 2.85(0.22)
BSS	2014	WA	33	51 %	50 %	\$ 2.69	2.8(0.37)
		Other	10	$13 \ \%$	14 %	\$ 2.76	\$ 3.16(1.02)
		AK	26	37 %	37 %	\$ 2.30	\$ 2.31(0.13)
	2015	WA	32	50 %	50 %	\$ 2.29	\$ 2.33(0.09)
		Other	10	$13 \ \%$	$13 \ \%$	\$ 2.37	2.31(0.31)
		AK	25	35~%	35 %	\$ 3.05	\$ 3.09(0.14)
	2016	WA	32	54 %	54 %	\$ 3.06	3.09(0.17)
		Other	8	$11 \ \%$	11 %	\$ 3.04	3.11(0.1)
		AK	24	33 %	33 %	\$ 4.49	\$ 4.6(0.28)
	2017	WA	28	56 %	56 %	\$ 4.49	4.57(0.98)
		Other	9	$11 \ \%$	12~%	\$ 4.55	4.61(0.19)
		AK	23	30~%	30~%	\$ 4.28	4.32(0.29)
	2018	WA	29	$59 \ \%$	$59 \ \%$	\$ 4.28	\$ 4.41(0.31)
		Other	8	$11 \ \%$	11 %	\$ 4.32	4.39(0.15)
		AK	23	34 %	34~%	\$ 4.22	\$ 4.29(0.25)
	2019	WA	28	53 %	54 %	\$ 4.22	\$ 4.32(0.18)
		Other	8	$13 \ \%$	12~%	\$ 4.03	4.09(0.44)
		AK	21	28 %	27 %	\$ 4.06	\$ 4.13(0.34)
	2020	WA	29	60 %	60 %	\$ 4.09	\$ 4.18(0.28)
		Other	8	12 %	12 %	\$ 4.18	\$ 4.29(0.29)
		AK	22	26 %	26 %	\$ 5.05	5.16(0.31)
	2021	AK WA	$\frac{22}{30}$	$26 \% \\ 60 \%$	26 % 60 %	\$ 5.05 \$ 4.95	

Table 4.5: Ex-vessel price and share of fishery-year landings by owner or leaseholder state of residence, catcher vessels - CR Program fisheries *(continued)* 

		State	Vessels	Share of ex-vessel	Share of ex-vessel	Weighted average	Mean(sd) price
				volume	Tevenue	price (#/1b)	(#/16)
		AK	122(49)	- %	- %	\$ 5.92	5.95(1.39)
	98/01/	04WA Other	429(174)	- %	- %	\$ 5.82 \$ 5.70	\$ 5.97(1.38)
		Other	82(33)	- 70	- 70	\$ 5.70	\$ 0.03(1.32)
	2005	AK	19	16 %	16%	\$ 6.04 \$ 6.10	(0.22)
	2005	WA Other	53 13	69 % 14 %	70 % 14 %	\$ 6.09	\$ 6.07(0.16) \$ 6.03(0.22)
		A 1/2	0.4	04.07	02.07	¢ r 00	¢ r 02(0.00)
	2006	WA	24 48		67%	\$ 5.00 \$ 5.05	\$ 5.03(0.20) \$ 5.08(0.23)
		Other	8	10 %	10 %	\$ 4.98	4.98(0.22)
		AK	17	22 %	23 %	\$ 5.72	\$ 5.8(1.26)
	2007	WA	44	67 %	68 %	\$ 5.69	\$ 5.77(0.43)
		Other	9	$10 \ \%$	$10 \ \%$	\$ 5.51	5.74(0.26)
		AK	17	$20 \ \%$	20~%	\$ 6.71	6.57(0.65)
	2008	WA	51	71 %	71~%	\$ 6.47	6.43(0.22)
		Other	8	9 %	9 %	\$ 6.51	\$ 6.45(0.15)
		AK	19	28 %	28 %	\$ 5.76	5.82(0.17)
	2009	WA	40	62%	62 %	\$ 5.84 ¢ = 7=	5.87(0.17)
		Other	9	10 %	10 %	ð 5.75	ə ə.əə(0.38)
	0010	AK	12	25 %	24 %	\$ 8.95	9(0.87)
	2010	WA Other	38 13	62 % 14 %	63 % 13 %	\$ 9.20 \$ 8.84	\$ 9.31(0.73) \$ 8.87(0.78)
			10	22.67	10 //	0.01	¢ 10.01(0.00)
	2011	AK WA	12 36	23 % 60 %	22 % 61 %	\$ 11.94 \$ 12.88	\$ 10.91(0.98) \$ 9.81(2.39)
	2011	Other	11	17%	17%	\$ 12.28	\$ 9.68(2.78)
		ΔK	91	31 %	31 %	\$ 9 57	\$ 9 59(0.48)
	2012	WA	33	55 %	55 %	\$ 9.42	\$ 9.5(0.44)
		Other	9	$13 \ \%$	$13 \ \%$	\$ 9.45	9.64(0.62)
		AK	23	37 %	37 %	\$ 8.35	\$ 8.4(0.43)
	2013	WA	28	49~%	49 %	\$ 8.30	\$ 8.47(0.46)
BBR		Other	10	14 %	14 %	\$ 8.34	\$ 8.34(0.47)
		AK	22	34 %	$34 \ \%$	\$ 7.68	7.75(0.38)
	2014	WA	28	51 %	51 %	\$ 7.55	\$ 7.7(0.56)
		Other	10	15 %	15 %	\$ 7.53	\$ 7.6(0.98)
	0015	AK	23	36 %	36 %	\$ 9.11	\$ 9.2(0.41)
	2015	WA Other	29 10	50 % 14 %	50 % 14 %	\$ 9.00 \$ 9.08	\$ 9.14(0.43) \$ 9.2(0.31)
			10	14 70	14 70	\$ 10.01	0.5.2(0.01)
	2016	AK WA	21 30	35 % 52 %	35 % 52 %	\$ 12.21 \$ 12.17	- \$ 11 6(0 3)
	2010	Other	10	13%	13%	\$ 12.10	\$ 11.0(0.5)
		AK	- 21	33 %	33 %	\$ 10.00	\$ 10 12(0.25)
	2017	WA	21 29	55%	55%	\$ 10.09 \$ 10.11	\$ 10.12(0.23) \$ 10.17(0.16)
		Other	9	12~%	11 %	\$ 9.99	\$ 10.09(0.33)
		AK	19	36 %	36 %	\$ 11.17	\$ 11.29(0.49)
	2018	WA	27	53 %	53 %	\$ 11.15	\$ 11.26(1.06)
		Other	7	11 %	11 %	\$ 11.14	\$ 11.37(0.32)
		AK	18	$31 \ \%$	30~%	\$ 12.44	11.11(0.37)
	2019	WA	29	58 %	58 %	\$ 12.51	\$ 9.49
		Other	8	12 %	12 %	\$ 12.84	\$ 9.49
	000-	AK	16	34 %	34 %	\$ 12.74	6.27(2.12)
	2020	WA Other	24 6	55 % 11 %	55 % 11 %	\$ 12.72 \$ 12.72	-
		o ther				Φ 12.73	-
	2005	AK WA	1	* 61.07	* 61 07	* ድጋቢ1	* ف ع\(۱ (مع)
		vvA.	Э	04 70	04 70	⊕ 2.01	⊕ 2(0.03)

Table 4.5: Ex-vessel price and share of fishery-year landings by owner or leaseholder state of residence, catcher vessels - CR Program fisheries *(continued)* 

		State	Vessels	Share of ex-vessel	Share of ex-vessel	Weighted average	Mean(sd) price
				volume	revenue	price (\$/lb)	(\$/lb)
		AK	6	11 %	12~%	\$ 2.08	\$ 1.9(0.34)
	2006	WA	30	81 %	81 %	\$ 2.02	1.97(0.49)
		Other	5	7 %	7 %	\$ 1.94	\$ 1.6(0.26)
		AK	7	26~%	25~%	\$ 2.23	2.22(0.31)
	2007	WA	17	55 %	57 %	\$ 2.43	2.32(0.9)
		Other	3	19 %	17 %	\$ 2.11	\$ 2.33(0.4)
	2002	AK	6	5 %	4 %	\$ 2.09	1.95(0.54)
	2008	WA Other	19 4	$\frac{61}{34}$		5 2.35 \$ 2.43	2.38(0.19) 2.46(0.09)
		A 1/	-	17.07	17.07	¢ 0.44	¢ 0.49(0.12)
	2009	AK WA	э 10	17% 43%	17% 41%	5 2.44     \$     2.32	32.42(0.13) 32.36(0.23)
		Other	2	*	*	*	*
		AK	1	*	*	*	*
	2010	WA	1	*	*	*	*
		Other	2	*	*	*	*
		AK	7	$19 \ \%$	$20 \ \%$	\$ 3.02	2.95(0.76)
	2013	WA	9	55 %	51 %	\$ 2.64	\$ 2.67(0.84)
		Other	3	25 %	29 %	\$ 3.27	\$ 3.42(0.34)
		AK	14	23 %	24 %	\$ 2.77	\$ 2.86(0.35)
	2014	WA Other	16	48 %	47 %	\$ 2.68 \$ 2.77	2.75(0.37)
		Other	8	29 70	30 78	φ 2.11	\$ 2.84(0.4)
	2015	AK WA	18 25	27 % 46 %	28 % 46 %	\$ 3.10 \$ 2.00	3.12(0.46) 3.08(0.31)
BST	2015	Other	23 10	$\frac{40}{27}$ %	$\frac{40}{25}$ %	\$ 2.73	\$ 2.8(0.33)
		AK	14	22.07	22.0%	¢ 9 90	\$ 2 4(0 12)
	2016	WA	20	49%	49%	\$ 3.30	\$ 3.32(0.21)
		Other	8	29 %	28 %	\$ 3.18	3.29(0.32)
		AK	2	*	*	*	*
	2017	WA	10	58 %	59~%	\$ 4.54	4.6(0.12)
		Other	4	23 %	21 %	\$ 4.06	\$ 4.2(0.52)
		AK	9	36~%	36~%	\$ 4.61	4.58(0.29)
	2018	WA	17	55 %	53 %	\$ 4.39	4.47(0.51)
		Other	3	10 %	10 %	\$ 4.82	\$ 4.73(0.2)
	2010	AK	5	38 %	38 %	\$ 4.71 \$ 4.74	4.63(0.36)
	2019	Other	8 4	12%	12%	\$ 4.74 \$ 4.71	\$ 4.73(0.13) \$ 4.71(0.03)
		AV	-	17.07	10.07	¢ 4 57	¢ 4 56(1.94)
	2020	WA	13	72%	18 % 73 %	\$ 4.37 \$ 4.37	\$ 4.16(1.1)
		Other	2	*	*	*	*
		AK	6	24 %	$23 \ \%$	\$ 5.37	\$ 5.4(0.25)
	2021	WA	9	36~%	36~%	\$ 5.60	5.54(0.84)
		Other	4	40 %	41 %	\$ 5.62	\$ 5.63(0.19)
		AK	12(12)	- %	- %	\$ 3.79	3.99(0.84)
PIK	98/01/	04WA	28(28)	- %	- %	\$ 4.04	3.88(0.75)
		Other	5(5)	- %	- %	\$ 3.61	\$ 3.63(0.07)
	00/01/	AK	20(20)	- %	- %	\$ 2.93	2.94(0.09)
	98/01/	04 WA Other	01(01) 14(14)	- % - %	- % - %	\$ 2.98 \$ 2.94	3.03(0.27) 2.95(0.11)
		A 17	()	ر 70	/ U	ψ <u>μ</u> .υ ι Ψ	* =.00(0.11)
	2009	AK WA	1 5	71 %	72 %	\$ 3.71	3.76(0.34)
		Other	1	*	*	* 0.1.1	*
		AK	3	28 %	29 %	\$ 6.16	\$ 6.19(0.07)
		WA	5	47 %	49 %	\$ 6.20	6.2(0.08)

Table 4.5: Ex-vessel price and share of fishery-year landings by owner or leaseholder state of residence, catcher vessels - CR Program fisheries *(continued)* 

	2010	State	Vessels	Share of ex-vessel volume	Share of ex-vessel revenue	Weighted average price (\$/lb)	Mean(sd) price (\$/lb)
	2010	Other	2	*	*	*	*
SMB		AK	6	$25 \ \%$	26~%	\$ 6.67	6.95(0.76)
	2011	WA	9	50 %	$50 \ \%$	\$ 6.36	6.79(0.65)
		Other	3	25~%	23~%	\$ 6.00	6.55(0.81)
		AK	9	43 %	43 %	\$ 5.06	\$ 5.09(0.28)
	2012	WA	6	38 %	37~%	\$ 4.86	4.88(0.31)
		Other	2	*	*	*	*
		AK	2	*	*	*	*
	2014	WA	1	*	*	*	*
		Other	1	*	*	*	*
		AK	1	*	*	*	*
	2015	WA	1	*	*	*	*
		Other	1	*	*	*	*
MA I	08/01/0	WA	2(2)	- %	- %	*	*
WAI	96/01/0	<sup>74</sup> Other	1(1)	- %	- %	*	*

Table 4.5: Ex-vessel price and share of fishery-year landings by owner or leaseholder state of residence, catcher vessels - CR Program fisheries *(continued)* 

Note 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. Excludes landings in the 2001 Western Aleutian Islands red king crab Petrel Bank test fishery. 1998 fishery data for WAI unavailable. 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. All dollar values are adjusted for inflation to 2021-equivalent value.

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

		Type Vesse	els	Share of ex-vessel	Share of ex-vessel	Weighted average price	Mean(sd) price (\$/lb)
		CIVO A	0			(0/10)	<b>(() ()() () ()(</b>
	2006	CVOA CVOB/CDO/CDO/ADAK	6	75 %	72 %	\$ 2.41 ¢ 2.02	2.48(0.18)
	2000	CVC/CPC	3	23 % 2 %	27% 2 %	$\frac{5}{2.58}$	2.94(0.02) 2.73(0.29)
		CVOA	5	81 %	81 %	\$ 2.83	\$ 2.86(0.35)
	2007	CVOB/CPO/CDQ/ADAK	6	17%	16%	\$ 2.72	2.00(0.00) 2.75(0.45)
		CVC/CPC	3	2 %	2 %	\$ 2.92	\$ 2.98(0.36)
		CVOA	4	77 %	76 %	\$ 4.15	\$ 4.26(0.37)
	2008	CVOB/CPO/CDQ/ADAK	4	20~%	$21 \ \%$	\$ 4.42	4.59(0.87)
		CVC/CPC	4	2 %	3 %	\$ 4.51	\$ 4.55(0.2)
		CVOA	4	75 %	75 %	\$ 3.04	3.04(0.53)
	2009	CVOB/CPO/CDQ/ADAK	4	20 %	21 %	\$ 3.11	3.08(0.51)
		CVC/CPC	4	4 %	4 %	\$ 2.91	\$ 3.07(0.52)
		CVOA	4	74 %	72 %	\$ 4.50	\$ 4.46(0.78)
	2010	CVOB/CPO/CDQ/ADAK	4	20 %	21 %	\$ 4.77	4.78(0.99)
		CVC/CPC	4	6 %	7%	\$ 5.04	\$ 5.11(1.58)
		CVOA	4	69 %	69%	\$ 5.49	5.46(0.19)
	2011	CVOB/CPO/CDQ/ADAK	4	25 %	25 %	\$ 5.56	5.83(0.42)
		CVC/CPC	4	6 %	6 %	\$ 6.02	\$ 6.14(0.17)
		CVOA	4	62 %	63 %	\$ 4.67	\$ 4.7(0.36)
	2012	CVOB/CPO/CDQ/ADAK	6	36 %	35 %	\$ 4.49	\$ 4.51(0.32)
		CVC/CPC	4	2 %	2 %	\$ 4.34	\$ 4.45(0.58)
	0010	CVOA	4	56 %	58 %	\$ 4.90	4.97(0.19)
	2013	CVOB/CPO/CDQ/ADAK	6 5	41 %	39 %	\$ 4.47 \$ 4.67	4.57(0.36)
			5	3 70	3 70	\$ 4.07	\$ 4.00(0.34)
	2014	CVOA	5	69 %	69 %	\$ 4.65	\$ 4.67(0.39)
		CVOB/CPO/CDQ/ADAK	5 5	29 %	28%	\$ 4.57 \$ 4.06	\$ 4.77(0.3)
AIG			5	2 70	2 70	\$ 4.90	\$ 4.32(0.24)
	2015	CVOA CVOB/CDO/CDO/ADAK	5	60 %	61 % 25 %	\$ 4.98	5.12(0.52)
		CVC/CPC	5 5	30 %	55 % 4 %	5 4.75 \$ 5 02	\$ 4.91(0.09) \$ 5.17(0.78)
			4	<u> </u>	F0.07	\$ 5.52 \$ 5.70	¢ 5.11(0.10)
	2016	CVOR/CPO/CDO/ADAK	4 5	60 % 38 %	58 % 40 %	\$ 5.79 \$ 6.37	5.92(1.4) 6.58(0.75)
	2010	CVC/CPC	$\frac{1}{4}$	2%	40 % 2 %	\$ 6.12	\$ 6.65(1.2)
		CVOA	5	58 %	58 %	\$ 6 16	\$ 6.34(0.61)
	2017	CVOB/CPO/CDO/ADAK	5	38 %	38 %	\$ 6.10 \$ 6.01	\$ 5.96(0.86)
	-011	CVC/CPC	5	4 %	4 %	\$ 6.08	6.15(1.27)
		CVOA	5	62 %	60 %	\$ 6.46	\$ 6.42(0.13)
	2018	CVOB/CPO/CDQ/ADAK	5	36 %	37~%	\$ 6.85	(0.78)
		CVC/CPC	4	3 %	$3 \ \%$	\$ 7.90	\$ 7.31(1.08)
		CVOA	5	63~%	63~%	\$ 6.70	\$ 6.63(0.31)
	2019	CVOB/CPO/CDQ/ADAK	5	33~%	34 %	\$ 6.86	6.84(0.73)
		CVC/CPC	5	3 %	3~%	\$ 7.46	6.82(1.27)
		CVOA	5	66 %	65 %	\$ 7.53	\$ 7.39(0.46)
	2020	CVOB/CPO/CDQ/ADAK	5	32~%	32~%	\$ 7.71	7.82(0.65)
		CVC/CPC	4	3 %	3 %	\$ 8.14	\$ 7.81(0.81)
		CVOA	5	$59 \ \%$	$64 \ \%$	\$ 13.11	10.7(1.45)
	2021	CVOB/CPO/CDQ/ADAK	5	38 %	33 %	\$ 10.68	\$ 9.93(1.23)
		CVC/CPC	5	3 %	3 %	\$ 13.10	10.69(1.43)

Table 4.6: Ex-vessel price and share of fishery-year landings by quota type, catcher vessels, CR Program fisheries

		Type Vessels	Share of ex-vessel	Share of ex-vessel	Weighted average price	Mean(sd) price (\$/lb)
	2006	CVOA 77 CVOB/CPO/CDO/ADAK 65	77 %	77 %	\$ 5.02 \$ 5.10	\$ 5.02(0.22) \$ 5.09(0.23)
	2000	CVC/CPC 49	4 %	3%	\$ 4.98	5.08(0.23)
	2007	CVOA69CVOB/CPO/CDQ/ADAK 53CVC/CPC41	78 % 19 % 3 %	$egin{array}{ccc} 78 \ \% \ 19 \ \% \ 3 \ \% \end{array}$	\$ 5.68 \$ 5.68 \$ 5.56	
	2008	CVOA 73 CVOB/CPO/CDQ/ADAK 56 CVC/CPC 38	$egin{array}{cccc} 76 \ \% \ 22 \ \% \ 2 \ \% \end{array}$	$egin{array}{cccc} 76 \ \% \ 22 \ \% \ 2 \ \% \end{array}$	\$ 6.54 \$ 6.47 \$ 6.51	6.45(0.5) 6.44(0.22) 6.5(0.19)
	2009	CVOA 68 CVOB/CPO/CDQ/ADAK 53 CVC/CPC 39	$77 \ \% \\ 20 \ \% \\ 3 \ \%$	$77 \ \% 20 \ \% 3 \ \%$	\$ 5.79 \$ 5.86 \$ 5.88	
	2010	CVOA 63 CVOB/CPO/CDQ/ADAK 52 CVC/CPC 33	$egin{array}{cccc} 76 \ \% \ 20 \ \% \ 4 \ \% \end{array}$	$egin{array}{cccc} 76 \ \% \ 21 \ \% \ 4 \ \% \end{array}$	\$ 9.01 \$ 9.44 \$ 8.97	\$ 8.98(0.58) \$ 9.25(0.99) \$ 9.36(0.72)
	2011	CVOA 58 CVOB/CPO/CDQ/ADAK 48 CVC/CPC 34	$79 \ \%$ $19 \ \%$ $2 \ \%$	$egin{array}{cccc} 78 \ \% \ 20 \ \% \ 2 \ \% \end{array}$	\$ 12.45 \$ 13.07 \$ 11.95	\$ 10.54(0.76)     \$ 10.16(2.64)     \$ 9.47(3.23)
	2012	CVOA 61 CVOB/CPO/CDQ/ADAK 47 CVC/CPC 33	$77 \ \% \ 21 \ \% \ 3 \ \%$	$egin{array}{ccc} 76 \ \% \ 21 \ \% \ 3 \ \% \end{array}$		
	2013	CVOA 58 CVOB/CPO/CDQ/ADAK 51 CVC/CPC 30	$egin{array}{cccc} 76 \ \% \ 21 \ \% \ 2 \ \% \end{array}$	$egin{array}{cccc} 76 \ \% \ 22 \ \% \ 3 \ \% \end{array}$	\$ 8.24 \$ 8.59 \$ 8.55	\$ 8.22(0.37) \$ 8.55(0.47) \$ 8.6(0.41)
BBR	2014	CVOA 59 CVOB/CPO/CDQ/ADAK 48 CVC/CPC 32	$egin{array}{cccc} 75 \ \% \ 23 \ \% \ 3 \ \% \end{array}$	$75 \ \% \ 22 \ \% \ 3 \ \%$	\$ 7.66 \$ 7.33 \$ 7.83	
	2015	CVOA 60 CVOB/CPO/CDQ/ADAK 47 CVC/CPC 33	$egin{array}{ccc} 76 \ \% \ 21 \ \% \ 3 \ \% \end{array}$	$75 \ \% \\ 22 \ \% \\ 3 \ \%$	\$ 8.96 \$ 9.33 \$ 9.43	8.94(0.42) 9.3(0.33) 9.41(0.23)
	2016	CVOA 59 CVOB/CPO/CDQ/ADAK 46 CVC/CPC 29	75 % 20 % 4 %	$75 \ \% \\ 21 \ \% \\ 4 \ \%$	\$ 12.11 \$ 12.35 \$ 12.44	\$ 11.62(0.33) \$ 11.62(0.18) \$ 11.18
	2017	CVOA 59 CVOB/CPO/CDQ/ADAK 50 CVC/CPC 33	$77 \ \% \\ 21 \ \% \\ 2 \ \%$	$77 \ \% 21 \ \% 22 \ \%$	\$ 10.06 \$ 10.18 \$ 10.23	\$ 10.04(0.2)     \$ 10.2(0.22)     \$ 10.24(0.19)
	2018	CVOA 52 CVOB/CPO/CDQ/ADAK 40 CVC/CPC 34	$77 \ \% \\ 20 \ \% \\ 3 \ \%$	$egin{array}{ccc} 76 \ \% \ 21 \ \% \ 3 \ \% \end{array}$	\$ 11.09 \$ 11.41 \$ 11.27	\$ 11.04(0.35) \$ 11.45(0.62) \$ 11.45(1.35)
	2019	CVOA 53 CVOB/CPO/CDQ/ADAK 47 CVC/CPC 31	$egin{array}{cccc} 74 \ \% \ 23 \ \% \ 3 \ \% \end{array}$	$74 \ \% \\ 24 \ \% \\ 3 \ \%$	\$ 12.41 \$ 12.83 \$ 13.04	\$ 10.17(0.95) \$ 10.43(1.32)
	2020	CVOA 45 CVOB/CPO/CDQ/ADAK 38 CVC/CPC 28	$egin{array}{ccc} 76 \ \% \ 22 \ \% \ 3 \ \% \end{array}$	$75 \ \% \\ 22 \ \% \\ 3 \ \%$	\$ 12.62 \$ 13.05 \$ 13.26	\$ 7.77 \$ 4.77
	2006	CVOA 73 CVOB/CPO/CDQ/ADAK 63 CVC/CPC 52	$\begin{array}{c} 80 \ \% \\ 18 \ \% \\ 3 \ \% \end{array}$	$79\ \%\ 18\ \%\ 3\ \%$	\$ 1.46 \$ 1.48 \$ 1.51	1.46(0.14) 1.48(0.28) 1.49(0.11)

Table 4.6: Ex-vessel price and share of fishery-year landings by quota type, catcher vessels, CR Program fisheries *(continued)* 

		Type Vessel	s Share of ex-vessel volume	Share of ex-vessel revenue	Weighted average price (\$/lb)	Mean(sd) price (\$/lb)
	2007	CVOA 62 CVOB/CPO/CDQ/ADAK 53 CVC/CPC 44	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{c} 80 \ \% \\ 18 \ \% \\ 3 \ \% \end{array}$	\$ 2.19 \$ 2.23 \$ 2.13	2.19(0.17) 2.18(0.3) 2.17(0.31)
	2008	CVOA 73 CVOB/CPO/CDQ/ADAK 63 CVC/CPC 42	$\begin{array}{cccc} 3 & & 75 \ \% \\ 2 & & 22 \ \% \\ 2 & & 3 \ \% \end{array}$	$75 \ \%$ $22 \ \%$ $3 \ \%$	\$ 2.16 \$ 2.10 \$ 2.33	2.13(0.25) 2.36(0.89) 2.31(0.06)
	2009	CVOA 73 CVOB/CPO/CDQ/ADAK 55 CVC/CPC 44	$\begin{array}{cccc} 3 & & 78 \ \% \\ 9 & & 19 \ \% \\ 0 & & 2 \ \% \end{array}$	$78 \ \% \\ 19 \ \% \\ 3 \ \%$	\$ 1.80 \$ 1.81 \$ 1.97	\$ 1.78(0.18) \$ 1.81(0.24) \$ 1.93(0.38)
	2010	CVOA 66 CVOB/CPO/CDQ/ADAK 5 CVC/CPC 34	$egin{array}{cccc} 5 & 73 \ \% \ 3 & 24 \ \% \ 8 & 3 \ \% \end{array}$	$egin{array}{cccc} 73 \ \% \ 24 \ \% \ 3 \ \% \end{array}$	\$ 1.59 \$ 1.59 \$ 1.47	\$ 1.6(0.25)      \$ 1.58(0.2)      \$ 1.6(0.27)
	2011	CVOA 63 CVOB/CPO/CDQ/ADAK 66 CVC/CPC 3'	3         75 %           0         23 %           7         2 %	$egin{array}{cccc} 74 \ \% \ 23 \ \% \ 2 \ \% \end{array}$	\$ 3.05 \$ 3.17 \$ 3.11	2.97(0.3) 3.2(0.43) 3.18(0.41)
	2012	CVOA 66 CVOB/CPO/CDQ/ADAK 66 CVC/CPC 4	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$egin{array}{cccc} 75 \ \% \ 22 \ \% \ 4 \ \% \end{array}$	\$ 2.54 \$ 2.71 \$ 2.78	2.54(0.12) 2.65(0.36) 2.75(0.2)
	2013	CVOA 66 CVOB/CPO/CDQ/ADAK 55 CVC/CPC 38	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$egin{array}{cccc} 73 \ \% \ 24 \ \% \ 3 \ \% \end{array}$	\$ 2.67 \$ 2.80 \$ 2.86	2.68(0.07) 2.84(0.12) 2.86(0.07)
	2014	CVOA 6 CVOB/CPO/CDQ/ADAK 5 CVC/CPC 44	$\begin{array}{cccc} 7 & 74 \ \% \\ 6 & 23 \ \% \\ 0 & 3 \ \% \end{array}$	$egin{array}{cccc} 73 \ \% \ 24 \ \% \ 3 \ \% \end{array}$	\$ 2.71 \$ 2.75 \$ 2.92	2.73(0.27) 2.99(0.7) 2.93(0.31)
BSS	2015	CVOA 66 CVOB/CPO/CDQ/ADAK 55 CVC/CPC 35	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$egin{array}{cccc} 74 \ \% \ 24 \ \% \ 3 \ \% \end{array}$	\$ 2.28 \$ 2.36 \$ 2.40	2.25(0.18) 2.36(0.11) 2.37(0.1)
	2016	CVOA 63 CVOB/CPO/CDQ/ADAK 57 CVC/CPC 33	5   73 %  724 %  73 %  3  3 %	$egin{array}{cccc} 72 \ \% \ 25 \ \% \ 3 \ \% \end{array}$	3.01 3.14 3.38	2.99(0.14) 3.15(0.13) 3.2(0.05)
	2017	CVOA 66 CVOB/CPO/CDQ/ADAK 49 CVC/CPC 33	$\begin{array}{cccc} 0 & 74 \ \% \\ 9 & 24 \ \% \\ 1 & 3 \ \% \end{array}$	$egin{array}{cccc} 74 \ \% \ 24 \ \% \ 3 \ \% \end{array}$		
	2018	CVOA 54 CVOB/CPO/CDQ/ADAK 44 CVC/CPC 35	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$egin{array}{cccc} 74 \ \% \ 24 \ \% \ 3 \ \% \end{array}$		
	2019	CVOA 59 CVOB/CPO/CDQ/ADAK 44 CVC/CPC 33	$\begin{array}{cccc} 9 & 76 \% \\ 5 & 22 \% \\ 1 & 3 \% \end{array}$	$egin{array}{cccc} 75 \ \% \ 22 \ \% \ 3 \ \% \end{array}$		
	2020	CVOA 5 CVOB/CPO/CDQ/ADAK 5 CVC/CPC 34	$\begin{array}{cccc} 7 & 73 \ \% \\ 3 & 24 \ \% \\ 4 & 3 \ \% \end{array}$	$egin{array}{cccc} 73 \ \% \ 24 \ \% \ 3 \ \% \end{array}$	\$ 4.09 \$ 4.10 \$ 4.22	\$ 4.08(0.19) \$ 4.23(0.35) \$ 4.26(0.36)
	2021	CVOA 66 CVOB/CPO/CDQ/ADAK 55 CVC/CPC 34	$\begin{array}{cccc} 0 & & 71 \ \% \\ 2 & & 25 \ \% \\ 4 & & 3 \ \% \end{array}$	$\begin{array}{c} 71 \ \% \\ 25 \ \% \\ 4 \ \% \end{array}$	\$ 4.92 \$ 5.05 \$ 5.21	\$ 4.97(0.46) \$ 5.23(0.33) \$ 5.23(0.31)
	2006	CVOA 39 CVOB/CPO/CDQ/ADAK 14 CVC/CPC 15	$\begin{array}{cccc} 9 & 75 \% \\ 4 & 23 \% \\ 2 & 2 \% \end{array}$	$egin{array}{cccc} 74 \ \% \ 24 \ \% \ 2 \ \% \end{array}$	\$ 2.00 \$ 2.12 \$ 1.90	\$ 1.9(0.55) \$ 2(0.18) \$ 1.93(0.33)

Table 4.6: Ex-vessel price and share of fishery-year landings by quota type, catcher vessels, CR Program fisheries *(continued)* 

		Type Vessels	Share of ex-vessel volume	Share of ex-vessel revenue	Weighted average price (\$/lb)	Mean(sd) price (\$/lb)
	2007	CVOA 28 CVOB/CPO/CDQ/ADAK 14 CVC/CPC 9	87 % 12 % 1 %	87 % 12 % 1 %	\$ 2.31 \$ 2.34 \$ 2.18	2.39(0.89) 2.29(0.38) 2.02(0.68)
	2008	CVOA 26 CVOB/CPO/CDQ/ADAK 12 CVC/CPC 5	$73 \ \% \\ 26 \ \% \\ 2 \ \%$	$72 \ \% \ 27 \ \% \ 2 \ \%$	\$ 2.33 \$ 2.45 \$ 2.43	2.31(0.3) 2.33(0.33) 2.43(0.08)
	2009	CVOA 17 CVOB/CPO/CDQ/ADAK 9 CVC/CPC 9	$75 \ \%$ $22 \ \%$ $3 \ \%$	$egin{array}{cccc} 74 \ \% \\ 23 \ \% \\ 3 \ \% \end{array}$	\$ 2.39 \$ 2.51 \$ 2.31	2.36(0.21) 2.48(0.24) 2.35(0.19)
	2010	CVOA 4 CVOB/CPO/CDQ/ADAK 2 CVC/CPC 2	84 % *	85 % *	\$ 2.23 * *	\$ 2.26(0.32) * *
	2013	CVOA17CVOB/CPO/CDQ/ADAK 15CVC/CPC11	$egin{array}{cccc} 76 \ \% \ 21 \ \% \ 3 \ \% \end{array}$	$egin{array}{cccc} 76 \ \% \ 20 \ \% \ 4 \ \% \end{array}$	\$ 2.90 \$ 2.75 \$ 3.15	2.71(0.8) 2.99(0.75) 2.97(0.86)
	2014	CVOA 36 CVOB/CPO/CDQ/ADAK 28 CVC/CPC 23	$egin{array}{cccc} 76 \ \% \ 21 \ \% \ 3 \ \% \end{array}$	$egin{array}{cccc} 76 & \% \ 22 & \% \ 3 & \% \end{array}$	\$ 2.72 \$ 2.76 \$ 2.91	2.74(0.25) 2.83(0.41) 2.86(0.47)
	2015	CVOA 52 CVOB/CPO/CDQ/ADAK 38 CVC/CPC 25	$75 \ \% \ 21 \ \% \ 3 \ \%$	$75 \ \% \ 22 \ \% \ 3 \ \%$	\$ 2.92 \$ 3.01 \$ 3.13	\$ 3(0.37) \$ 3.03(0.4) \$ 3.18(0.38)
BST	2016	CVOA 42 CVOB/CPO/CDQ/ADAK 36 CVC/CPC 24	$74 \ \%$ $21 \ \%$ $4 \ \%$	$73\ \%\ 22\ \%\ 5\ \%$	\$ 3.25 \$ 3.37 \$ 3.50	3.25(0.2) 3.37(0.23) 3.46(0.12)
	2017	CVOA 16 CVOB/CPO/CDQ/ADAK 14 CVC/CPC 13	$74 \ \%$ $24 \ \%$ $2 \ \%$	$74 \ \% \ 24 \ \% \ 2 \ \%$		
	2018	CVOA 28 CVOB/CPO/CDQ/ADAK 25 CVC/CPC 19	72 % 24 % 4 %	72 % 25 % 3 %	\$ 4.46 \$ 4.73 \$ 4.00	\$4.47(0.36) \$4.62(0.35) \$4.52(0.61)
	2019	CVOA     17       CVOB/CPO/CDQ/ADAK 12     CVC/CPC       CVC/CPC     12	$71 \% \\ 25 \% \\ 3 \%$	72% 25% 3%		\$4.65(0.33) \$4.72(0.12) \$4.75(0.08)
	2020	CVOA     23       CVOB/CPO/CDQ/ADAK     8       CVC/CPC     6	85 % 13 % 2 %	84 % 15 % 2 %		\$4.38(1.18) \$3.66(0.77) \$4.13(1.16)
	2021	CVOA 16 CVOB/CPO/CDQ/ADAK 14 CVC/CPC 9	$70\ \%\ 25\ \%\ 5\ \%$	$70\ \%\ 26\ \%\ 5\ \%$		\$5.36(0.57) \$5.59(0.49) \$5.66(0.58)
	2009	CVOA 7 CVOB/CPO/CDQ/ADAK 1 CVC/CPC 1	95 % * *	95 % *	\$ 3.62 * *	\$ 3.59(0.24) *
	2010	CVOA 10 CVOB/CPO/CDQ/ADAK 8 CVC/CPC 5	$79\ \%$ $19\ \%$ $2\ \%$	$egin{array}{cccc} 78 \ \% \ 20 \ \% \ 2 \ \% \end{array}$	\$ 5.93 \$ 6.17 \$ 6.03	
	2011	CVOA 18 CVOB/CPO/CDQ/ADAK 15 CVC/CPC 9	$79 \ \% \\ 17 \ \% \\ 4 \ \%$	78 % 19 % 4 %	\$ 6.21 \$ 6.94 \$ 6.66	

Table 4.6: Ex-vessel price and share of fishery-year landings by quota type, catcher vessels, CR Program fisheries *(continued)* 

		Туре	Vessels	Share of ex-vessel volume	Share of ex-vessel revenue	Weighted average price (\$/lb)	Mean(sd) price (\$/lb)
SMB	2012	CVOA CVOB/CPO/CDO/A	17 DAK 14	77 %	77 %	\$ 4.99 \$ 5.05	\$ 4.96(0.23) \$ 5.06(0.36)
	2012	CVC/CPC	12 12	$21 \ \%$	$21 \ \%$ 2 %	\$ 5.03	5.06(0.30) 5.06(0.32)
	2014	CVOA CVOB/CPO/CDQ/A CVC/CPC	4 DAK 4 1	${86\ \%}\atop{13\ \%}_{*}$	$85 \% \\ 13 \% \\ *$	\$ 4.88 \$ 5.04 *	
	2015	CVOA CVOB/CPO/CDQ/A CVC/CPC	3 DAK 2 1	88 % * *	88 % *	\$ 5.55 * *	\$ 5.55(0.09) * *

Table 4.6: Ex-vessel price and share of fishery-year landings by quota type, catcher vessels, CR Program fisheries *(continued)* 

Note 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. Asterisks indicate data suppressed due to confidentiality Excludes landings in the 2001 Western Aleutian Islands red king crab Petrel Bank test fishery. 1998 fishery data for WAI unavailable. 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. Mean and standard deviation prices are derived by calculating a weighted price for each vessel [total ex-vessel revenue / sold lbs], then calculating mean and standard deviation of vessel-level observations. All dollar values are adjusted for inflation to 2021-equivalent value.

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

		Processors	Finished	First	Weighted	Mean(sd)
			weight	wholesale	average price	price $(\$/lb)$
			$(million \ lbs)$	value	(hb)	
				(\$million)		
	1998	6	3.24	\$ 21.29	6.57	6.54(0.28)
	1999	8	3.02	\$ 31.25	\$ 10.35	10.07(2.44)
	2000	6	3.56	\$ 29.26	\$ 8.23	9.19(3.15)
	2001	5	3.93	\$ 41.25	10.49	10.44(0.26)
	2002	5	3.42	\$ 36.96	\$ 10.81	10.58(1.09)
	2003	5	3.59	\$ 39.80	11.07	11.18(0.48)
	2004	5	3.72	\$ 30.40	\$ 8.18	8.82(1.53)
	2005	6	2.74	\$ 21.66	\$ 7.91	7.8(0.49)
	2006	6	3.13	\$ 18.00	\$ 5.75	5.43(0.49)
	2007	6	3.42	\$ 23.22	6.79	6.73(0.66)
	2008	7	3.41	\$ 32.06	\$ 9.40	9.12(0.78)
AIG	2009	8	3.30	\$ 23.28	\$ 7.06	\$ 7.57(2.19)
	2010	8	3.17	\$ 29.99	\$ 9.47	10.02(1.69)
	2011	14	3.64	\$ 42.29	\$ 11.60	11.94(2.74)
	2012	13	3.76	\$ 34.06	\$ 9.06	\$ 9.97(2.94)
	2013	12	3.77	\$ 36.60	\$ 9.70	\$ 8.78(3.26)
	2014	10	3.85	\$ 35.10 © 40.05	\$ 9.11 © 11 10	38.26(3.56)
	2015	8	3.08 2.56	5 40.95 \$ 50.76	0 11.12 © 14.99	
	2010	10	0.00 9 59	\$ 30.70 \$ 42.07	\$ 14.20 \$ 12.20	
	2017	12	0.00 / 19	5 43.07 \$ 53.01	\$ 12.20 \$ 13.05	\$ 11.36(3.78) \$ 12.54(4.02)
	2018	9	4.13	\$ 50 55	\$ 13.05 \$ 13.84	\$ 12.34(4.02) \$ 13.17(4.7)
	2019		3.63	\$ 54 58		\$ 14 57(4.33)
	2020	8	3.75	\$ 76.48	\$ 20.42	\$ 19.9(5.97)
	1998	22	9.86	\$ 85.45	\$ 8.66	\$ 8.48(1.37)
	1999	21	7.73	\$ 134.89	\$ 17.44	17.37(2.09)
	2000	20	5.41	\$ 57.73	\$ 10.66	13.03(2.42)
	2001	20	5.56	\$ 72.35	\$ 13.00	13.64(1.76)
	2002	20	6.36	\$ 106.13	\$ 16.69	16.7(2.21)
	2003	25	10.32	\$ 144.19	\$ 13.97	13.73(1.39)
	2004	23	10.08	\$ 129.27	\$ 12.83	\$ 13.01(0.73)
	2005	16	12.17	\$ 139.27	\$ 11.45	\$ 11.63(1.01)
	2006	15	9.17	\$ 89.60	\$ 9.77	\$ 9.43(1.18)
	2007	17	13.09	\$ 138.88	\$ 10.61	10.51(0.89)
חחח	2008	16	13.31	\$ 161.19 © 117.05	\$ 12.11	\$ 11.51(3.11) © 10.01(1.20)
BBR	2009	10	10.40	\$ 117.85 \$ 160.28	0 11.33 © 15 00	5 10.91(1.39) 0 15 05(2.05)
	2010	10	10.05	\$ 100.38 \$ 191.04	Φ 10.99 Φ 00.90	
	2011	16	0.00 5.97	φ 121.04 Φ 00.25	Φ 22.02 © 17.15	
	2012	10	5.21	\$ 90.35	\$ 17.15 \$ 15.20	\$ 17.30(3.03) \$ 15.1(4.51)
	2013	17	6.66	\$ 93 15	\$ 13.23 \$ 13.98	\$ 13.87(4.01)
	2014 2015	17	6.60	\$ 107 19	\$ 16.24	\$ 16(3.69)
	2016	10	5.68	\$ 116.05	\$ 20.45	$\[ \] \] \[ \] \] \[ \] \] \[ \] \] \[ \] \] \[ \] \] \] \[ \] \] \] \[ \] \] \[ \] \] \[ \] \] \[ \] \] \[ \] \] \[ \] \] \] \[ \] \] \[ \] \] \[ \] \] \[ \] \] \[ \] \] \[ \] \] \[ \] \] \[ \] \] \[ \] \] \[ \] \] \[ \] \] \[ \] \] \[ \] \] \[ \] \] \[ \] \] \[ \] \] \[ \] \] \[ \] \] \] \[ \] \] \[ \] \] \[ \] \] \[ \] \] \[ \] \] \[ \] \] \] \[ \] \] \[ \] \] \[ \] \] \[ \] \] \] \[ \] \] \[ \] \] \[ \] \] \] \[ \] \] \[ \] \] \[ \] \] \] \[ \] \] \[ \] \] \[ \] \] \] \[ \] \] \[ \] \] \] \[ \] \] \[ \] \] \] \[ \] \] \] \[ \] \] \] \[ \] \] \[ \] \] \] \[ \] \] \[ \] \] \] \[ \] \] \[ \] \] \] \[ \] \] \] \[ \] \] \[ \] \] \] \[ \] \] \] \[ \] \] \] \[ \] \] \[ \] \] \] \[ \] \] \] \[ \] \] \[ \] \] \] \[\] \] \] \[\] \] \[\] \] \] \[\] \] \] \[\] \] \[\] \] \] \[\] \] \] \[\] \] \] \[\] \] \] \[\] \] \] \[\] \] \] \[\] \] \] \[\] \] \] \[\] \] \] \[\] \] \] \[\] \] \] \[\] \] \] \[\] \] \] \[\] \] \[\] \] \] \[\] \] \[\] \] \] \[\] \] \[\] \] \[\] \] \[\] \] \[\] \] \[\] \] \[\] \] \[\] \] \[\] \] \[\] \] \[\] \] \[\] \] \[\] \] \[\] \[\] \] \[\] \] \[\] \] \[\] \] \[\] \[\] \] \[\] \] \[\] \] \[\] \] \[\] \] \[\] \[\] \] \[\] \[\] \] \[\] \[\] \] \[\] \[\] \] \[\] \[\] \] \[\] \[\] \] \[\] \] \[\] \[\] \] \[\] \[\] \] \[\] \] \[\] \[\] \] \[\] \[\] \] \[\] \[\] \] \[\] \[\] \] \[\] \[\] \] \[\] \[\] \] \[\] \[\] \] \[\] \[\] \] \[\] \[\] \] \[\] \[\] \] \[\] \[\] \] \[\] \[\] \[\] \] \[\] \[\] \[\] \] \[\] \[\] \] \[\] \[\] \] \[\] \[\] \[\] \] \[\] \[\] \[\] \] \[\] \[\] \] \[\] \[\] \] \[\] \[\] \[\] \] \[\] \[\] \] \[\] \[\] \[\] \] \[\] \[\] \[\] \] \[\] \[\] \[\] \] \[\] \[\] \[\] \[\] \[\] \] \[\] \[\] \] \[\] \[\] \] \[\] \[\] \[\] \] \[\] \] \[\] \[\] \[\] \] \[\] \[\] \] \[\] \[\] \] \[\] \[\] \] \[\] $
	2010	17	4.42	\$ 78.98	\$ 17.86	17 31(4 01)
	2018	14	2.86	\$ 54.93	\$ 19.23	\$ 18.57(5.04)
	2019	13	2.55	\$ 54.25	\$ 21.29	20.21(5.44)
	2020	14	1.78	\$ 39.94	\$ 22.41	\$ 21.05(5.16)
	1998	33	163.74	\$ 521.44	\$ 3.18	\$ 3.1(0.44)
	1999	31	126.50	\$ 567.55	\$ 4.49	4.3(0.88)
	2000	24	21.57	\$ 114.15	\$ 5.29	6.06(1.46)
	2001	21	16.29	89.85	\$5.52	5.45(0.42)

Table 4.7: Estimated finished production, first wholesale value, and price, CR Program fisher	ies.
---	------

		Processors	Finished weight	First wholesale	Weighted average price	Mean(sd) price (\$/lb)
			(million lbs)	value (\$million)	(\$/lb)	<b>F</b> ( ( ) ( )
	2002	21	21.00	\$ 108.77	\$ 5.18	5.27(0.64)
	2003	19	18.09	\$ 113.88	\$ 6.30	6.29(0.33)
	2004	21	15.57	\$ 103.96	6.68	6.6(0.41)
	2005	20	16.35	85.08	\$ 5.20	4.95(0.67)
	2006	13	24.92	\$ 90.36	\$ 3.63	3.61(0.25)
	2007	18	22.66	\$ 114.45	5.05	5.19(0.44)
	2008	16	41.02	198.83	\$ 4.85	4.72(1.34)
DCC	2009	16	35.97	\$ 154.61	\$ 4.30	4.3(0.2)
B22	2010	12	31.41	\$ 126.99	\$ 4.04	4.14(0.36)
	2011	16	37.89	\$ 251.87	6.65	6.85(0.89)
	2012	15	57.79	319.52	5.53	5.23(1.8)
	2013	15	46.31	\$ 262.52	5.67	5.44(1.62)
	2014	13	36.17	\$ 207.45	\$ 5.74	5.43(1.74)
	2015	14	39.90	195.67	\$ 4.90	4.7(1.56)
	2016	12	25.92	\$ 172.27	6.65	6.33(2.02)
	2017	14	13.97	109.75	\$ 7.86	8.49(1.06)
	2018	12	12.34	\$ 94.24	\$ 7.64	8.3(1.14)
	2019	13	17.86	\$ 134.05	\$ 7.51	8.17(1.14)
	2020	11	22.01	183.50	\$ 8.34	8.5(0.53)
	2021	13	28.91	\$ 287.39	\$ 9.94	10.06(1.05)
	2005	4	0.18	\$ 0.94	\$ 5.33	4.83(0.74)
	2006	9	0.72	\$ 3.28	\$ 4.56	4.41(0.37)
	2007	9	1.46	\$ 8.14	5.58	5.55(0.38)
	2008	10	1.34	\$ 7.29	\$ 5.46	5.48(0.28)
	2009	10	1.39	6.52	\$ 4.70	4.68(0.86)
	2010	7	0.21	\$ 1.09	\$ 5.22	5.21(0.34)
	2013	12	0.86	\$ 6.30	\$ 7.37	7.85(1.59)
BST	2014	12	6.23	\$ 41.29	\$ 6.63	6.09(2.4)
	2015	13	10.26	61.87	6.03	5.4(1.77)
	2016	12	7.15	50.51	\$ 7.06	6.66(2.22)
	2017	11	0.96	\$ 8.80	\$ 9.14	8.94(0.95)
	2018	12	1.57	\$ 13.18	\$ 8.41	8.93(1.48)
	2019	10	0.81	\$ 7.69	\$ 9.51	9.77(1.12)
	2020	8	0.42	\$ 4.92	\$ 11.59	11.06(1.7)
	2021	11	0.65	\$ 7.74	\$ 11.91	11.72(2.02)
PIK	1998	12	0.68	\$ 5.95	\$ 8.73	8.58(1.03)
	1998	13	1.85	13.97	\$ 7.55	7.65(0.3)
	2009	6	*	*	*	*
	2010	8	0.91	13.58	\$ 14.85	12.86(3.59)
SMB	2011	11	1.33	\$ 22.75	\$ 17.09	16.59(3.29)
	2012	10	1.18	\$ 16.41	\$ 13.96	12.95(5.05)
	2014	6	0.22	\$ 2.45	10.97	9.29(3.13)
	2015	4	0.08	\$ 0.93	\$ 12.06	\$ 12.16(1.87)
	1998	1	*	*	*	*
WAI	2002	9	0.35	\$ 5.84	\$ 16.62	16.22(3.23)
	2003	9	0.33	\$ 4.65	\$ 13.98	13.73(0.56)

Table 4.7: Estimated finished production, first wholesale value, and price, CR Program fisheries. *(continued)* 

Note 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 volume for 2006-2011 is sourced from EDR data. Asterisks indicate data suppressed due to confidentiality Excludes estimates of production from landings made in the 2000/2001 and 2001/2002 Western Aleutian Islands red king crab Petrel Bank test fishery. Mean and standard deviation prices are derived by calculating a weighted price for each vessel [total ex-vessel revenue / sold lbs], then calculating mean and standard deviation of vessel-level observations. All dollar values are adjusted for inflation to 2021-equivalent value.

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.,

		Processors	Finished	First	Weighted	Mean(sd)
			weight	wholesale	average price	price $(\$/lb)$
			(million lbs)	value	(/lb)	
	1998	29	9.23	\$ 79.99	\$ 8.66	8.48(2.1)
	1999	31	7.05	\$ 122.86	\$ 17.43	16.01(4.35)
	2000	22	6.58	\$ 70.12	\$ 10.66	12.73(3.98)
	2001	30	6.35	\$ 82.56	\$ 13.01	\$ 12.08(4.19)
	2002	32	6.93	\$ 114.10	\$ 16.47	\$ 14.82(5.88)
	2003	38	10.50	\$ 145.92	\$ 13.90	12.59(4.48)
	2004	26	9.73	\$ 125.22	\$ 12.87	\$ 11.92(2.88)
	2005	23	12.50	\$ 142.37	\$ 11.39	\$ 11.08(4.49)
	2006	16	10.40	\$ 101.70	9.78	8.79(3.59)
	2007	19	13.32	\$ 145.40	\$ 10.92	9.5(2.93)
	2008	17	13.18	\$ 160.77	\$ 12.20	10.71(3.1)
D . 11.	2009	18	10.96	\$ 117.79	\$ 10.75	9.48(3.28)
Red king	2010	18	9.27	\$ 155.25	\$ 16.75	14.6(5.01)
	2011	25	6.03	\$ 128.31	\$ 21.28	20.04(7.44)
	2012	19	5.25	\$ 92.58	17.63	\$ 15.78(4.85)
	2013	22	6.50	\$ 95.32	\$ 14.66	\$ 14.82(3.57)
	2014	21	7.36	\$ 98.36	13.37	13.27(3.43)
	2015	19	7.26	\$ 111.20	\$ 15.32	15.15(3.27)
	2016	18	5.59	\$ 115.21	\$ 20.62	\$ 18.11(5.8)
	2017	23	5.05	\$ 82.74	16.38	15.88(5.31)
	2018	16	3.25	\$ 59.16	\$ 18.20	17.89(5.31)
	2019	15	2.74	\$ 54.64	\$ 19.91	16.9(7.21)
	2020	13	1.95	\$ 36.31	\$ 18.63	\$ 18.71(8.78)
	2021	2	*	*	*	*
	1998	34	157.20	\$ 501.09	\$ 3.19	2.93(0.9)
	1999	31	116.91	\$ 524.68	\$ 4.49	3.72(1.39)
	2000	23	22.78	\$ 120.68	\$ 5.30	5.42(2.09)
	2001	20	15.15	\$ 83.47	\$ 5.51	4.94(1.65)
	2002	25	20.84	\$ 107.30	\$ 5.15	4.62(1.37)
	2003	19	17.38	\$ 109.45	\$ 6.30	(5.36(2.82))
	2004	22	15.30	\$ 102.16	\$ 6.68	\$ 6.25(1.45)
	2005	20	16.29	\$ 84.77	\$ 5.20	\$ 4.8(1.1)
	2006	13	27.89	\$ 105.69	\$ 3.79	3.74(0.99)
	2007	16	20.38	\$ 102.35	\$ 5.02	\$ 5.1(1.21)
	2008	16	31.35	\$ 159.25	\$ 5.08	\$ 4.83(1.13)
a (	2009	16	35.89	\$ 153.03	\$ 4.26	4.13(0.56)
Snow (opilio)	2010	12	29.91	\$ 120.44	\$ 4.03	\$ 4.01(1.25)
	2011	16	35.58	\$ 229.75	\$ 6.46	(1.59)
	2012	15	59.05	\$ 329.97	\$ 5.59	\$ 5.3(1.31)
	2013	16	47.53	\$ 274.85	\$ 5.78	5.76(2.99)
	2014	14	37.28	\$ 222.53	\$ 5.97	(5.99)
	2015	14	40.18	\$ 198.00	\$ 4.93	\$ 4.85(1.33)
	2016	12	29.02	\$ 173.10	\$ 5.96	5.69(3.26)
	2017	14	17.37	\$ 122.24	\$ 7.04	37.48(3.77)
	2018	12	14.20	\$ 93.76	\$ 6.60	37.34(2.77)
	2019	13	22.21	\$ 147.51	\$ 6.64	37.12(2.67)
	2020	10	25.61	\$ 156.58	\$ 6.11	\$ 6.49(3.6)
	2021	$12^{-3}$	32.98	\$ 277.49	\$ 8.41	\$ 8.25(3.49)
	1998	16	1.65	\$ 11.59	\$ 7.02	\$ 6.78(3.5)

Table 4.8: Statewide crab production, first wholesale value and pricing for selected species

		Processors	Finished	First	Weighted	Mean(sd)
			weight	wholesale	average price	price $(\$/lb)$
			(million lbs)	value	(\$/lb)	
	1999	11	1.48	\$ 9.04	6.13	6.69(2.95)
	2000	10	1.00	\$ 8.82	8.79	7.95(1.94)
	2001	17	1.27	9.44	\$ 7.46	6.84(1.67)
	2002	12	0.74	\$ 5.65	\$ 7.63	6.49(2.14)
	2003	13	0.81	\$ 7.09	\$ 8.80	7.68(2.88)
	2004	12	0.94	\$ 8.65	\$ 9.21	8.8(1.77)
	2005	19	2.22	\$ 12.91	\$ 5.81	6.74(3.67)
	2006	21	2.94	\$ 15.15	\$ 5.15	4.91(1.57)
	2007	18	2.49	\$ 14.09	\$5.65	6.42(3.8)
	2008	22	2.44	\$ 14.49	\$5.95	5.84(2.1)
Tanner	2009	17	2.25	\$ 10.79	\$ 4.80	5.3(2.31)
(bairdi)	2010	17	1.90	\$ 9.03	\$ 4.74	5.09(1.25)
	2011	15	3.88	\$ 30.85	\$ 7.94	8.17(1.84)
	2012	15	3.08	\$ 22.62	\$ 7.34	8.07(3.1)
	2013	20	1.89	\$ 13.62	\$ 7.19	8.02(2.99)
	2014	17	6.86	\$ 44.05	\$ 6.42	7.66(3.49)
	2015	19	11.63	\$ 61.29	\$ 5.27	6.38(3.44)
	2016	20	8.66	\$ 55.06	\$ 6.36	7.21(3.25)
	2017	15	1.74	\$ 17.06	\$ 9.81	9.77(4.58)
	2018	23	2.92	\$ 22.99	\$ 7.88	8.87(3.49)
	2019	22	2.11	\$ 19.91	\$ 9.44	9.3(3.43)
	2020	17	1.41	\$ 14.38	\$ 10.20	10.42(3.58)
	2021	15	1.88	\$ 20.83	\$ 11.08	11.24(4.79)
	1998	13	2.92	\$ 19.58	\$ 6.71	\$ 8.62(2.2)
	1999	16	3.44	\$ 35.24	\$ 10.24	\$ 9.61(3.98)
	2000	16	4.92	\$ 42.47	\$ 8.64	\$ 10.26(3.57)
	2001	16	4.30	\$ 43.86	\$ 10.21	\$ 9.54(3.53)
	2002	16	3.82	\$ 41.22	\$ 10.80	\$ 12(4.67)
	2003	16	3.93	\$ 43.87	\$ 11.18	\$ 11.96(4.03)
	2004	13	4.65	\$ 39.08	\$ 8.40	\$ 10.27(3.67)
	2005	13	2.85	\$ 23.05	\$ 8.08	9.2(4.46)
	2006	14	3.65	\$ 22.25	\$ 6.10	\$ 8.09(4.3)
	2007	11	3.75	\$ 27.11	\$ 7.22	\$ 8.53(3.62)
	2008	13	3.89	\$ 33.60	\$ 8.63	\$ 9.18(3.17)
0.11	2009	15	4.09	\$ 27.81	\$ 6.80	\$ 8.11(3.88)
Golden	2010	17	5.13	\$ 48.06	\$ 9.37	\$ 9.72(3.33)
(brown) king	2011	20	4.16	\$ 55.18	\$ 13.26	\$ 13.48(5.07)
	2012	21	3.95	\$ 41.42	\$ 10.49	\$ 13.19(5.83)
	2013	19	4.20	\$ 42.41	\$ 10.10	\$ 12.09(5.57)
	2014	16	4.50	\$ 42.41	\$ 9.43	\$ 12.96(5.13)
	2015	12	3.36	\$ 38.78	\$ 11.54	\$ 13(3.05)
	2016	15	3.38	\$ 48.34	\$ 14.31	\$ 15.98(5.64)
	2017	17	3.45	\$ 44.68	\$ 12.95	\$ 14.43(4.08)
	2018	13	3.23	\$ 39.36	\$ 12.18	\$ 15 15(14 58)
	2019	14	4.13	\$ 55.22	\$ 13.38	\$ 13.91(4.44)
	2020	14	4.44	\$ 54.60	\$ 12.29	\$ 11.54(6.11)
	2021	13	3.85	\$ 93.78	\$ 24.35	\$
						19.31(10.15)

Table 4.8: Statewide crab production, first wholesale value and pricing for selected species *(continued)* 

		Processors	Finished weight (million lbs)	First wholesale value	Weighted average price (\$/lb)	Mean(sd) price (\$/lb)
	1998 1999	19 4	2.08 0.01	\$ 15.71 \$ 0.08	\$ 7.55 \$ 13.97	\$ 7.54(1) \$ 11.27
	$2000 \\ 2001$	2 1	*	*	*	*
	2002	1	*	*	*	*
Blue king	2003 2005	1	*	*	*	*
	$2009 \\ 2010$	4 7	$\begin{array}{c} 0.19 \\ 0.67 \end{array}$	1.54 9.62	\$ 8.09 \$ 14.44	7.23 12.76(3.66)
	$2011 \\ 2012$	12 11	$1.25 \\ 1.12$	\$ 20.55 \$ 16.45	\$ 16.50 \$ 14 75	15.34(5.9) 12.66(3.55)
	2014 2015	6 5	0.22 0.08	\$ 2.33 \$ 0.76		

Table 4.8: Statewide crab production, first wholesale value and pricing for selected species *(continued)* 

Note 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. Asterisks indicate data suppressed due to confidentiality All dollar values are adjusted for inflation to 2021-equivalent value.

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

		Product	Processors	Finished weight (million lbs)	First wholesale value (\$ million)	Weighted average price (\$/lb)	Mean(sd) price (\$/lb)
		Sections Whole	19 10	$\begin{array}{c} 12.86\\ 0.36\end{array}$	141.71 \$ 3.32	\$ 11.02 \$ 9.21	11.09(1.02) 9.41(2.22)
	2007	crab Other	8	0.10	\$ 0.37	\$ 3.81	\$ 3.88(1.38)
		Sections	17	12.58	\$ 154.49	\$ 12.28	\$ 12.14(1.41)
		Whole	8	0.44	\$ 5.47	\$ 12.34	\$ 10.74(2.75)
	2008	crab Other	7	0.16	\$ 0.82	\$ 5.18	\$ 4.95(1.7)
		Sections	17	10.34	\$ 115.54	\$ 11.18	\$ 10.96(2.34)
		Whole	11	0.51	\$ 1.74	\$ 3.42	\$ 9.17(2.8)
	2009	crab Other	8	0.12	\$ 0.50	\$ 4.35	\$ 4.59(1.95)
		Sections	17	8.91	\$ 151.24	\$ 16.97	\$ 17.31(3.18)
		Whole	11	0.22	\$ 3.30	\$ 15.05	\$ 14.19(3.79)
	2010	crab Other	8	0.14	\$ 0.71	\$ 5.07	6.9(3.08)
		Sections	23	5.72	\$ 123.15	\$ 21.52	\$ 23.2(3.82)
		Whole	15	0.23	\$ 4.59	\$ 20.35	\$ 18.42(4.92)
	2011	crab Other	11	0.08	\$ 0.57	\$ 7.14	\$ 13.5(12.43)
		Sections	18	4.93	\$ 87 51	\$ 17 76	\$ 18 38(3)
		Whole	10	0.29	\$ 4.84	\$ 16.39	\$ 14.49(3.88)
	2012	crab Other	6	0.03	\$ 0.24	\$ 8.10	\$ 7.74(2.76)
		Sections	10	6.15	\$ 00.48	¢ 14 71	\$ 16.23(2.75)
		Whole	13	0.31	\$ 4.37	\$ 14.05	\$ 13.49(3.95)
	2013	crab	7	0.04	¢ 0.47	¢ 11 771	¢ 11.00/2.25)
		Other	1	0.04	\$ 0.47	\$ 11.71 \$ 10.07	\$ 11.99(3.23)
		Sections Whole	19 13	6.95 0.35		\$ 13.37 \$ 13.98	14.11(3.06) 13.46(2.56)
	2014	crab	_	0.05	<b>\$ 0.10</b>	<b>A A A</b>	<b>0</b> 10 10(1 00)
		Other	7	0.05	\$ 0.48	\$ 9.39	\$ 10.19(4.62)
		Sections	17 10	6.87 0.30	\$ 105.54 \$ 4.56	\$ 15.37 \$ 15.10	\$ 15.61(3.43) \$ 15.81(2.9)
	2015	crab	10	0.00	÷ 100	\$ 10110	¢ 10101(210)
		Other	8	0.09	\$ 1.10	\$ 12.78	\$ 12.81(2.4)
		Sections	18	5.36	\$ 112.21	\$ 20.92	\$ 20.54(3.33) \$ 10.54(4.88)
Red	2016	whole	6	0.14	\$ 1.92	\$ 13.87	\$ 19.74(4.33)
king		Other	8	0.08	\$ 1.08	\$ 12.75	\$ 10.87(5.84)
		Sections	21	4.74	\$ 78.03	\$ 16.47	16.93(4.89)
	2017	Whole	11	0.26	\$ 3.95	\$ 15.06	14.59(3.84)
	2017	Other	11	0.05	\$ 0.76	\$ 15.01	\$ 14.71(7.15)
		Sections	16	3.08	\$ 56.31	\$ 18.27	\$ 18.36(6.05)
	0019	Whole	5	0.13	\$ 2.31	\$ 17.25	\$ 18.88(4.34)
	2018	Other	6	0.03	\$ 0.53	\$ 15.83	\$ 15.35(1.67)
		Sections	14	2.64	\$ 52.92	\$ 20.02	\$ 18.7(7.12)
		Whole	5	0.06	\$ 1.15	\$ 19.89	\$ 18.12(4.77)
	2019	crab Other	8	0.04	\$ 0.57	\$ 13.32	\$ 12.68(7.09)
		Sections	13	1.91	\$ 35 76	\$ 18 75	\$ 20.18(8.64)
	2022	Whole	1	*	* 55.10	* 10.10	*
	2020	crab Other	6	0.02	\$ 0.18	\$ 8.52	\$ 13.68(8.88)
		Sections	2	*	*	*	*
	2021	Other	2	*	*	*	*

		Product	Processors	Finished weight (million lbs)	First wholesale value (\$ million)	Weighted average price (\$/lb)	Mean(sd) price (\$/lb)
		Sections Whole	16 1	20.19 *	\$ 101.73 *	\$ 5.04 *	\$ 5.14(0.25) *
	2007	crab Other	2	*	*	*	*
		Sections Whole	16 1	29.60 *	\$ 150.80 *	\$ 5.09 *	\$ 5.18(0.33) *
	2008	$\frac{crab}{Other}$	3	*	*	*	*
	2009	Sections Other	16 1	35.60 *	\$ 152.31 *	\$ 4.28 *	\$ 4.28(0.22) *
		Sections Whole	12 1	29.80 *	\$ 120.06 *	\$ 4.03 *	\$ 4.11(1.25) *
	2010	crab Other	1	*	*	*	*
		Sections Whole	16 1	35.30 *	\$ 228.17 *	\$ 6.46 *	6.11(1.65)
	2011	$\frac{crab}{Other}$	1	*	*	*	*
	2010	Sections Whole	15 2	58.86 *	\$ 329.67 *	\$ 5.60 *	\$ 5.43(1.03) *
	2012	Crab Other	1	*	*	*	*
	2012	Sections Whole	16 1	47.50 *	\$ 274.85 *	\$ 5.79 *	\$ 5.56(1.91) *
	2013	Crab Other	1	*	*	*	*
	2014	Sections Whole	14 2	36.98 *	\$ 221.08 *	\$ 5.98 *	\$ 6.72(6.07) *
	2014	Other	1	*	*	*	*
	2015	Sections Whole	14 1	39.83 *	\$ 196.50 *	\$ 4.93 *	\$ 4.8(1.3) *
	2015	Other	1	*	*	*	*
Snow (opilio)	2016	Sections Whole	12 1	28.65 *	\$ 171.88 *	\$ 6.00 *	\$ 5.84(1.42) *
	2010	Other	3	*	*	*	*
	2017	Sections Other	14 3	17.22 *	\$ 121.94 *	\$ 7.08 *	\$ 8.17(3.36) *
	2018	Sections Whole crab	12 3	14.20 *	\$ 93.76 *	\$ 6.60 *	\$ 7.15(2.94) *
	2019	Sections Other	13 1	22.15 *	\$ 147.08 *	\$ 6.64 *	\$ 7.1(2.73) *
		Sections Whole	10 1	25.58 *	\$ 156.51 *	\$ 6.12 *	6.72(3.43)
	2020	crab Other	1	*	*	*	*
	2021	Sections Whole	12 1	32.69 *	\$ 276.64 *	\$ 8.46 *	\$ 8.58(3.27)
	2021	crab Other	2	*	*	*	*
	2007	Sections Whole	18 4	$\begin{array}{c} 2.46 \\ 0.01 \end{array}$	13.95 0.02	\$ 5.68 \$ 4.11	
	2007	Crab Other	1	*	*	*	*

		Product	Processors	Finished weight (million lbs)	First wholesale value (\$ million)	Weighted average price (\$/lb)	Mean(sd) price (\$/lb)
		Sections 2 Whole	22 4	$2.39 \\ 0.00$	14.29 \$ 0.01	\$ 5.98 \$ 4.06	6.16(1.39) 3.41
	2008	crab Other 4	4	0.04	\$ 0.19	\$ 4.37	\$ 6.43
		Sections	16	2.20	\$ 10.67	\$ 4.86	\$ 5.36(1.51)
	2009	Whole 3 crab	3	*	*	*	*
		Other	4	0.02	\$ 0.08	\$ 3.40	\$ 6.63
		Whole 6	16 6	$\begin{array}{c} 1.45 \\ 0.44 \end{array}$		\$ 5.14 \$ 3.44	\$5.43(0.99) \$4.07(1.61)
	2010	crab Other :	1	*	*	*	*
		Sections	14	3.49	\$ 27.41	\$ 7.86	\$ 8.31(1.35)
	2011	Whole S	5	0.30	\$ 2.76	\$ 9.15	6.66(2.41)
	2011	Other 4	4	0.10	\$ 0.68	\$ 7.10	\$ 9.29
		Sections	13	2.73	\$ 19.34	\$ 7.09	\$ 7.75(1.59)
	2012	Whole of	6	0.35	\$ 3.27	\$ 9.27	\$ 7.22(2.4)
	2012	Other 3	1	*	*	*	*
		Sections	19	1.60	\$ 11.16	\$ 6.97	\$ 7.26(1.22)
	2013	Whole 4	4	0.29	\$ 2.39	\$ 8.32	\$ 7.57
	2015	Other 4	4	0.00	\$ 0.07	\$ 15.26	\$ 12.82
		Sections	15	6.78	\$ 43.30	\$ 6.39	\$ 7.06(1.75)
	2014	Whole 4	4	0.08	\$ 0.68	\$ 8.26	\$ 6.8
	2014	Other 2	2	*	*	*	*
		Sections	17	10.73	\$ 58.79	\$ 5.48	\$ 5.86(1.47)
	2015	Whole 6	6	0.84	\$ 2.15	\$ 2.57	5.12(2.62)
	2015	Other 3	5	0.06	\$ 0.34	\$ 5.91	11.03(7.69)
		Sections	18	8.38	\$ 53.13	\$ 6.34	\$ 6.94(1.86)
	2016	Whole 6	6	0.17	\$ 1.38	\$ 7.94	6.47(1.97)
Tanner	2010	Other 3	5	0.10	\$ 0.55	\$ 5.37	\$ 9.95(8.03)
(bairdi)		Sections : Whole	15	1.73 *	\$ 16.97 *		\$ 8.84(2.87) *
	2017	crab	1				
		Other 3	3	*	*	*	*
		Sections 2 Whole	22 5	2.91 0.00	22.86	\$ 7.86 \$ 7.00	8.54(2.67) 7.42(2.89)
	2018	crab		0.00	0.02	• 1100	• ••••••••••
		Other	4	0.01	\$ 0.12	\$ 14.63	\$ 14.13
		Sections 1 Whole 6	17 6	1.75 0.04	\$ 16.17 \$ 0.35	\$ 9.22 \$ 8.33	\$ 9.05(2.57) \$ 6.75(1.57)
	2019	crab	-		<b>.</b>		• • • • • ( • • • )
		Other (	6	0.31	\$ 3.39	\$ 10.80	\$ 11.92(4.93)
		Sections 1 Whole	15 5	1.31 0.08		$     $ 10.29 \\     $ 8.86 $	
	2020	crab Other :	3	*	*	*	*
		Sections	14	1.80	\$ 19.99	\$ 11.14	\$ 10.94(3.85)
	0021	Whole	1	*	*	*	*
	2021	Crab Other	4	0.08	\$ 0.78	\$ 10.09	\$ 13.69
		Sections	7	2.96	\$ 21.02	\$ 7.11	\$ 8.05(2.66)
		Whole 6 crab	6	0.46	\$ 3.74	\$ 8.17	\$ 8.2(1.31)

	2007	Product	Processors	Finished weight (million lbs)	First wholesale value (\$ million)	Weighted average price (\$/lb)	Mean(sd) price (\$/lb)
	2007	Other	4	0.34	\$ 2.34	\$ 6.93	\$ 9.97
		Sections Whole	8 8	$2.96 \\ 0.51$	\$ 25.84 \$ 4.25	\$ 8.73 \$ 8.27	9.87(2.2) 7.83(1.37)
	2008	$_{\rm Crab}$	4	0.42	\$ 3.51	\$ 8.40	\$ 10.08
	2000	Sections Whole	10 8	3.31 0.78	\$ 22.13 \$ 5.61	\$ 6.69 \$ 7.20	8.46(3.29) 6.89(1.78)
	2009	Other	3	*	*	*	*
	2010	Sections Whole	11 12	4.04 1.08	\$ 40.21 \$ 7.77	\$ 9.96 \$ 7.17	11.12(1.56) 8.19(1.68)
	2010	Other	3	*	*	*	*
	2011	Sections Whole crab	14 10	3.40 0.76	\$ 46.04 \$ 9.08	\$ 13.56 \$ 11.93	\$ 14.4(5.14) \$ 11.73(1.37)
		Other	3	*	*	*	*
	0010	Sections Whole	15 11	3.32 0.62	\$ 33.43 \$ 7.93	\$ 10.08 \$ 12.72	13.24(5.55) 12.51(3.21)
	2012	Other	4	0.01	\$ 0.06	\$ 10.87	\$ 14.76
	2012	Sections Whole	14 10	$3.51 \\ 0.69$	\$ 35.27 \$ 7.09	\$ 10.06 \$ 10.34	\$ 11.98(5.51) \$ 12.06(4.09)
	2013	Other	6	0.01	\$ 0.05	\$ 9.11	\$ 12.4(8.19)
		Sections Whole	12 8	$4.33 \\ 0.16$	\$ 39.56 \$ 2.83	\$ 9.13 \$ 17.37	10.52(4.26) 15.76(4.05)
	2014	crab Other	2	*	*	*	*
	2015	Sections	6 7	2.94 0.41	\$ 33.64 \$ 5.07	\$ 11.44 \$ 12.32	\$ 11.84(1.11) \$ 14 83(3 46)
		crab Other	2	*	* 0.01	*	*
		Sections Whole	12 6	$3.31 \\ 0.07$	\$ 47.15 \$ 1.13	\$ 14.26 \$ 16.91	\$ 16.21(5.42) \$ 17.83(3.3)
Golden	2016	crab Other	2	*	*	*	*
(brown) king		Sections Whole	13	3.31 0.13	\$ 42.72 \$ 1.90	\$ 12.89 \$ 14.36	13.05(3.77)
	2017	crab	0	*	*	*	* 11.00(2.01)
		Sections	9	2.98	\$ 37 18	\$ 12 47	\$ 10 85(5 95)
	2018	Whole crab	5	0.25	\$ 2.13	\$ 8.67	\$ 22.26(25.07)
		Other	2	*	*	*	*
	2019	Sections Whole crab	9 9	3.85 0.27	\$ 52.88 \$ 2.30	\$ 13.73 \$ 8.45	\$ 14.42(5) \$ 13.28(4.09)
		Other	1	*	*	* • 10 50	*
	2020	Sections Whole crab	10 6	$4.30 \\ 0.14$	\$ 53.72 \$ 0.88	\$ 12.50 \$ 6.24	<pre>\$ 13.28(5.99) \$ 11(3.29)</pre>
		Other	2	*	*	*	*
	2021	Sections Whole	11 4	$3.82 \\ 0.02$	93.45 0.31	\$ 24.44 \$ 14.44	21.9(10.3) 17.46
	2021	Other	2	*	*	*	*
		Sections	4	0.19	\$ 1.53	\$ 8.22	\$ 8.44

		Product	Processors	Finished weight (million lbs)	First wholesale value (\$ million)	Weighted average price (\$/lb)	Mean(sd) price (\$/lb)
	2009	Whole crab	1	*	*	*	*
		Other	1	*	*	*	*
		Sections Whole	7 1	0.65	\$9.49	14.64	\$ 13.97(2.78) *
	2010	crab Other	1	*	*	*	*
-	2011	Sections Whole crab	12 2	1.22 *	\$ 20.36 *	\$ 16.65 *	\$ 16.34(6.17) *
	2011	Other	2	*	*	*	*
	2012	Sections Whole crab	10 2	1.10 *	\$ 16.24 *	\$ 14.80 *	\$ 13.2(4.03) *
Blue		Other	2	*	*	*	*
king	2014	Sections Whole crab	6 1	0.21 *	\$ 2.26 *	\$ 10.71 *	\$ 11.09(3.17) *
		Other	2	*	*	*	*
	2015	Sections Whole crab	5 1	0.07 *	\$ 0.72 *	\$ 9.98 *	\$ 10.77(2.76) *
		Other	1	*	*	*	*

Note 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. Asterisks indicate data suppressed due to confidentiality All dollar values are adjusted for inflation to 2021-equivalent value.

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

			Processors		Processing labor ho	ours	Labor Paymen	ts (\$1,000)	Processing wag	es, median (\$)
				$ \begin{array}{c} {\rm Total} \\ (1,000) \end{array} $	Median per plant (1,000)	Median per 1000 pounds (raw)	Total	Median per plant	per hour	per 1000 pounds (raw)
	CP	98/01/04	24(11)	-	-	-	\$ 1,518.00	\$ 193.00	-	*
All CR		2005	8	-	-	-	\$ 1,055.00	\$ 88.00	-	*
		2006	5	-	-	-	\$ 1,309.00	\$ 216.00	-	*
		2007	5	-	-	-	\$ 1,555.00	\$ 269.00	-	*
		2008	5	-	-	-	\$ 2,187.00	\$ 426.00	-	*
	$\mathbf{SF}$	98/01/04	62(32)	1,357	33.21	12.83	\$ 18,353.00	\$ 474.00	\$ 13.70	\$ 178.34
		2005	17	551	23.68	12.87	\$ 7,095.00	\$ 319.00	\$ 12.88	\$ 159.20
		2006	13	687	58.59	13.48	\$ 8,569.00	\$ 690.00	\$ 12.66	\$ 172.35
		2007	14	810	47.46	13.13	\$ 10,476.00	\$ 644.00	\$ 13.27	\$ 172.80
		2008	13	1,022	48.64	12.93	\$ 15,015.00	\$ 1,062.00	\$ 13.63	\$ 191.31
	$_{\rm SF+CP}$	2009	17	884	69.15	14.62	\$ 12,189.00	\$ 530.00	\$ 12.45	\$ 163.16
		2010	15	832	53.59	14.03	\$ 11,209.00	\$ 661.00	\$ 11.90	\$ 161.62
		2011	16	725	46.45	13.47	10,144.00	\$549.00	\$ 12.34	\$ 160.00
		2012	16	1,262	71.66	15.84	\$ 16,877.00	\$ 705.00	\$ 12.10	\$ 172.71
		2013	14	956	53.70	12.75	\$ 11,532.00	\$ 649.00	\$ 11.78	\$ 145.11
		2014	11	905	103.11	11.06	\$ 10,941.00	\$ 693.00	\$ 11.45	\$ 139.48
		2015	11	1,179	112.90	15.88	\$ 15,135.00	\$ 1,216.00	\$ 11.95	\$ 184.07
		2016	10	788	95.46	14.17	\$ 11,006.00	\$ 809.00	\$ 13.59	\$ 210.14
		2017	11	426	31.95	13.41	\$ 5,661.00	\$ 336.00	\$ 13.09	\$ 173.43
		2018	10	382	29.90	11.01	\$ 5,080.00	\$ 200.00	\$ 12.73	\$ 155.97
		2019	9	452	51.95	12.07	\$ 6,556.00	\$ 385.00	\$ 13.51	\$ 170.21
		2020	9	452	56.43	12.96	\$ 7,555.00	\$ 440.00	\$ 15.59	\$ 206.05
		2021	8	534	74.54	10.91	\$ 9,332.00	\$ 921.00	\$ 16.04	\$ 167.20
	CP	98/01/04	4(2)	-	-	-	*	*	-	*
AIG		2005	2	-	-	-	*	*	-	*
		2006	1	-	-	-	*	*	-	*
		2007	1	-	-	-	*	*	-	*
		2008	1	-	-	-	*	*	-	*
	SF	98/01/04	13(7)	54	13.99	13.51	\$ 802.00	\$ 165.00	\$ 13.19	\$ 196.53
		2005	4	39	6.39	8.31	\$ 457.00	\$ 82.00	\$ 12.32	\$ 115.29
		2006	6	47	0.97	8.98	\$ 586.00	\$ 22.00	\$ 12.44	\$ 112.17
		2007	5	72	4.28	11.26	\$ 880.00	\$ 70.00	\$ 12.12	\$ 126.78
		2008	6	38	2.76	9.81	\$ 653.00	\$ 112.00	\$ 13.83	\$ 160.05
	SF+CP	2009	5	44	9.27	9.90	\$ 1,022.00	\$ 160.00	\$ 12.25	\$ 100.80
		2010	4	61	23.20	12.90	\$ 1,538.00	\$ 318.00	\$ 11.80	\$ 139.05
		2011	7	49	4.79	10.37	\$ 1,326.00	\$ 90.00	\$ 11.95	\$ 124.19
		2012	8	53	2.60	6.89	\$ 1,291.00	\$ 69.00	\$ 11.89	\$ 86.86
		2013	6	61	5.96	9.19	\$ 707.00	\$ 71.00	\$ 11.56	\$ 122.15
		2014	4	61	16.95	10.93	\$ 653.00	\$ 182.00	\$ 10.52	\$ 118.11
		2015	3	74	30.27	11.92	\$ 844.00	\$ 336.00	\$ 11.09	\$ 131.03
		2016	4	67	12.10	13.04	\$ 855.00	\$ 157.00	\$ 13.10	\$ 167.85
		2017	5	58	9.67	12.70	\$ 739.00	\$ 113.00	\$ 12.85	\$ 166.25
		2018	5	65	8.23	11.54	\$ 846.00	\$ 133.00	\$ 12.72	\$ 151.06
		2019	3	57	18.39	10.48	\$ 769.00	\$ 259.00	\$ 13.33	\$ 147.71
		2020	4	62	12.29	10.52	\$ 912.00	\$ 193.00	\$ 15.63	\$ 159.71
		2021	4	56	11.79	9.61	\$ 834.00	\$ 198.00	\$ 16.22	\$ 144.24

Table 4.10: Processing labor hours and pay, CR Program fisheries

			Processors		Processing labor ho	ours	Labor Payment	ts (\$1,000)	Processing wag	es, 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)	-	_	-	\$ 315.00	\$ 49.00	-	*
BBB		2005	4	-	-	-	\$ 491.00	\$ 131.00	-	*
DDIt		2006	3	-	-	-	\$ 181.00	\$ 59.00	-	*
		2007	3	-	-	-	\$ 198.00	\$ 56.00	-	*
		2008	3	-	-	-	\$ 372.00	\$ 83.00	-	*
	$\mathbf{SF}$	98/01/04	40(20)	142	9.96	12.47	\$ 1,852.00	\$ 119.00	\$ 14.28	\$ 164.98
		2005	11	202	12.12	12.61	2,643.00	\$ 237.00	\$ 12.91	\$ 151.65
		2006	11	180	10.76	13.73	2,368.00	\$ 190.00	\$ 12.65	\$ 173.62
		2007	11	261	25.22	13.17	3,276.00	\$ 269.00	\$ 13.24	\$ 174.36
		2008	11	245	12.58	16.04	\$ 3,311.00	\$ 336.00	\$ 13.28	\$ 187.16
	$_{\rm SF+CP}$	2009	12	199	16.06	14.23	\$ 2,621.00	\$ 151.00	\$ 12.29	\$ 171.67
		2010	13	212	20.09	15.36	\$ 2,807.00	\$ 227.00	\$ 11.62	\$ 172.78
		2011	14	104	6.71	13.97	1,452.00	\$ 88.00	\$ 12.16	\$ 165.79
		2012	12	100	6.51	13.74	\$ 1,370.00	\$ 79.00	\$ 12.59	\$ 156.46
		2013	10	104	10.00	14.95	\$ 1,375.00	\$ 109.00	\$ 11.61	\$ 163.99
		2014	9	130	21.07	12.11	\$ 1,607.00	\$ 87.00	\$ 10.83	\$ 160.93
		2015	10	127	14.80	14.92	\$ 1,727.00	\$ 135.00	\$ 11.92	\$ 180.24
		2016	10	130	8.93	11.20	\$ 1,900.00	\$ 98.00	\$ 13.59	\$ 154.05
		2017	10	81	8.06	13.47	1,137.00	\$ 69.00	\$ 13.16	\$ 175.25
		2018	9	55	5.38	11.50	\$ 798.00	\$ 51.00	\$ 13.09	\$ 158.48
		2019	8	47	6.21	12.72	\$ 748.00	\$ 77.00	\$ 13.24	\$ 173.91
		2020	8	31	3.75	15.71	\$ 569.00	\$ 54.00	\$ 15.58	\$ 232.76
	CP	98/01/04	17(8)	-	-	-	\$ 825.00	\$ 128.00	-	*
BSS		2005	6	-	-	-	\$ 323.00	\$ 40.00	-	*
		2006	4	-	-	-	\$ 985.00	\$ 184.00	-	*
		2007	4	-	-	-	\$ 833.00	\$ 209.00	-	*
		2008	4	-	-	-	\$ 1,204.00	\$ 314.00	-	*
	$\mathbf{SF}$	98/01/04	50(24)	1,134	36.21	12.80	\$ 15,373.00	\$ 489.00	\$ 13.67	\$ 182.48
		2005	13	302	23.68	13.36	3,893.00	\$ 319.00	\$ 12.83	\$ 172.25
		2006	10	445	49.45	13.76	5,445.00	\$ 617.00	\$ 12.50	\$ 171.01
		2007	10	442	41.29	13.58	5,903.00	\$ 542.00	\$ 12.95	\$ 201.18
		2008	12	712	30.52	13.17	\$ 10,533.00	\$ 603.00	\$ 12.91	\$ 176.66
	SF+CP	2009	14	600	58.41	13.44	\$ 8,058.00	\$ 370.00	\$ 12.38	\$ 153.08
		2010	11	534	50.90	13.92	\$ 6,589.00	\$ 436.00	\$ 11.85	\$ 154.17
		2011	14	555	45.69	13.90	\$ 7,190.00	\$ 417.00	\$ 12.34	\$ 168.83
		2012	13	1,087	77.94	16.00	\$ 13,934.00	\$ 711.00	\$ 12.09	\$ 187.15
		2013	12	774	63.55	12.84	\$ 9,262.00	\$ 559.00	\$ 11.64	\$ 146.88
		2014	10	590	76.01	12.08	\$ 7,258.00	\$ 525.00	\$ 12.16	\$ 140.05
		2015	10	747	95.42	15.45	\$ 9,760.00	\$ 908.00	\$ 12.24	\$ 179.28
		2016	8	447	69.40	12.96	\$ 6,339.00	\$ 601.00	\$ 13.37	\$ 174.68
		2017	8	266	34.61	11.98	3,544.00	\$ 231.00	\$ 13.07	\$ 161.03
		2018	8	232	30.48	12.39	\$ 3,065.00	\$ 176.00	\$ 12.95	\$ 160.49
		2019	8	333	45.70	13.36	\$ 4,827.00	\$ 323.00	\$ 13.63	\$ 184.63
		2020	8	351	50.53	13.87	\$ 5,960.00	\$ 418.00	\$ 15.52	\$ 211.35
		2021	8	469	61.83	11.51	\$ 8,256.00	\$ 683.00	\$ 16.10	\$ 177.45

# Table 4.10: Processing labor hours and pay, CR Program fisheries (continued)

			Processors		Processing labor ho	ours	Labor Paymen	ts (\$1,000)	Processing wag	ges, 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	-	-	-	*	*	_	*
BST		2007	1	-	-	-	*	*	-	*
0.01		2008	1	-	-	-	*	*	-	*
	SF	2005	7	8	0.40	17.54	\$ 102.00	\$ 6.00	\$ 12.51	\$ 199.19
		2006	8	14	1.25	12.57	\$ 170.00	\$ 16.00	\$ 12.47	\$ 140.30
		2007	7	35	4.97	13.85	\$ 418.00	\$ 53.00	\$ 12.13	\$ 168.73
		2008	8	27	2.93	15.81	\$ 518.00	\$ 55.00	\$ 12.97	\$ 218.60
	SF+CP	2009	8	29	4.27	14.34	\$ 342.00	\$ 39.00	\$ 11.85	\$ 158.99
		2010	5	6	0.70	23.87	\$ 75.00	\$ 8.00	\$ 11.86	\$ 283.14
		2013	7	17	1.86	13.77	\$ 188.00	\$ 18.00	\$ 11.16	\$ 152.42
		2014	8	122	8.51	11.96	\$ 1,406.00	\$ 91.00	\$ 11.01	\$ 134.08
		2015	8	230	21.84	13.06	\$ 2,796.00	\$ 235.00	\$ 11.85	\$ 152.02
		2016	7	145	18.44	11.56	\$ 1,912.00	\$ 223.00	\$ 13.19	\$ 152.76
		2017	5	20	3.25	12.40	\$ 241.00	\$ 37.00	\$ 11.72	\$ 154.27
		2018	7	29	2.01	10.37	\$ 371.00	\$ 24.00	\$ 12.33	\$ 132.10
		2019	7	14	1.61	12.18	\$ 213.00	\$ 23.00	\$ 13.54	\$ 156.72
		2020	5	8	0.89	11.09	\$ 115.00	\$ 14.00	\$ 15.83	\$ 161.67
		2021	6	9	1.01	7.04	\$ 169.00	\$ 18.00	\$ 15.30	\$ 151.11
PIK	SF	98/01/04	13(13)	25	1.03	14.27	\$ 282.00	\$ 19.00	\$ 12.89	\$ 190.15
	CP	98/01/04	1(1)	-	-	-	*	*	-	*
SMB	SF	98/01/04	10(10)	55	3.08	13.64	\$ 690.00	\$ 38.00	\$ 12.27	\$ 198.03
	SF+CP	2009	2	*	*	*	*	*	*	*
		2010	5	19	0.40	14.48	\$ 200.00	\$ 5.00	\$ 11.56	\$ 156.37
		2011	6	17	0.84	15.10	\$ 175.00	\$ 9.00	\$ 11.01	\$ 173.86
		2012	6	21	0.76	11.09	\$ 282.00	\$ 8.00	\$ 11.36	\$ 145.78
		2014	1	*	*	*	*	*	*	*
		2015	1	*	*	*	*	*	*	*
WAI	CP	98/01/04	2(1)	-	-	-	*	*	-	*
WAI	SF	98/01/04	1(1)	*	*	*	*	*	*	*

### Table 4.10: Processing labor hours and pay, CR Program fisheries (continued)

Note Data shown for all CR program crab fisheries by calendar year. All dollar values are adjusted for inflation to 2021-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 3.11). Processing labor payments exclude benefits and indirect expenses paid on behalf of processing workers and payments to salaried workers employed by processors (see Table 3.11). Where applicable, these figures include bounses and deductions to labor payments for shared expenses such as food and provisions. Median pay per hour values are inclusive of, and 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 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 arnual 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.

		Processors	Salaried e	mployees		Salary cost	
			Total	Per plant, median	Total (\$1,000)	Per plant, median (\$1,000)	Cost per employee, median (\$1000)
	98/01/04	17(9)	17	2	\$ 387.00	\$ 45.00	\$ 19.00
	2005	8	44	3	1,176.00	\$ 50.00	\$ 12.00
	2006	4	24	3	\$ 690.00	179.00	\$ 24.00
CD	2007	4	25	3	\$ 286.00	\$ 63.00	\$ 14.00
Οr	2008	4	16	3	1,188.00	137.00	25.00
	2009	5	13	3	978.00	\$ 117.00	17.00
	2010	3	*	*	*	*	*
	2011	3	3	1	\$ 922.00	\$ 96.00	\$ 437.00
	98/01/04	65(32)	1,096	17	\$ 9,243.00	\$ 188.00	\$ 10.00
	2005	17	1,592	20	11,619.00	\$ 79.00	5.00
	2006	13	2,031	20	14,630.00	395.00	5.00
	2007	14	691	15	6,329.00	\$ 269.00	\$ 9.00
	2008	13	1,056	16	\$ 13,093.00	\$ 330.00	\$ 12.00
	2009	17	900	29	8,900.00	\$599.00	\$ 11.00
	2010	17	786	22	7,162.00	\$ 123.00	\$ 7.00
	2011	17	$1,\!148$	25	8,062.00	451.00	\$ 7.00
SE	2012	13	$1,\!428$	33	61,351.00	1,181.00	\$ 47.00
ы	2013	12	$1,\!459$	28	65,537.00	1,434.00	\$ 46.00
	2014	9	1,300	84	66,716.00	\$ 3,602.00	57.00
	2015	9	1,572	170	67,562.00	5,429.00	\$ 36.00
	2016	8	$1,\!473$	174	67,483.00	8,773.00	\$ 44.00
	2017	9	1,553	170	62,114.00	6,694.00	\$ 32.00
	2018	8	$1,\!397$	136	56,749.00	6,715.00	\$ 45.00
	2019	7	$1,\!488$	215	67,896.00	\$ 8,822.00	\$ 52.00
	2020	7	1,522	228	\$ 70,013.00	\$ 10,121.00	\$ 46.00
	2021	6	$1,\!139$	180	59,273.00	11,084.00	\$ 51.00

Table 4.11: Processing sector employment and wages for non-processing employees, CR Program fisheries

Note Data shown for all CR program crab fisheries by calendar year. All dollar values are adjusted for inflation to 2021-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, 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. Asterisks indicate data suppressed due to confidentiality All dollar values are adjusted for inflation to 2021-equivalent value.

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

	Processors	Total Employees	Alaska	Washington-Oregon-Idaho	U.S. Other	Non-U.S.
2005	17	2872	605 (21%)	987 (34%)	1243 (43%)	37 (1%)
2006	13	2660	898 (34%)	882 (33%)	878 (33%)	2 (< 1%)
2007	14	3192	738~(23%)	970~(30%)	1477~(46%)	7 (<1%)
2008	13	3909	927 (24%)	960~(25%)	2018 (52%)	4 (<1%)
2009	12	3112	800~(26%)	774 (25%)	1515~(49%)	23~(1%)
2010	12	3323	767 (23%)	868~(26%)	1321 (40%)	367~(11%)
2011	13	2816	800 (28%)	815 (29%)	1193~(42%)	8 (<1%)
2012	13	3291	647 (20%)	1087 (33%)	1545 (47%)	12 (<1%)
2013	15	3133	932 (30%)	938~(30%)	1259~(40%)	4 (<1%)
2014	9	2370	780 (33%)	708(30%)	876 (37%)	6 (<1%)
2015	9	2600	688~(26%)	833 (32%)	1076 (41%)	3 (< 1%)
2016	8	2809	731 (26%)	722 (26%)	1356 (48%)	0 (<1%)
2017	9	2405	671 (28%)	380~(16%)	1354~(56%)	0 (<1%)
2018	9	2512	515 (21%)	317 (13%)	1675 (67%)	5 (<1%)
2019	7	2561	636~(25%)	346(14%)	1551 (61%)	28 (1%)
2020	7	2907	609 (21%)	358 (12%)	1554 (53%)	386~(13%)
2021	6	2562	608 (24%)	469 (18%)	1273 (50%)	212 (8%)

Table 4.12: Shore-based crab processing employee counts by state/region of employee residence, CR Program fisheries

**Note** Processing employee counts reported above reflect the number of distinct individuals employed as crab processing line workers during the calendar year by shoreside and floating processor sectors only, excluding the catcher-processor sector, and excluding salaried workers employed in all crab processing sectors (see Table 3.11). Percentage values shown in parentheses report the proportion of total crab processing employees ("Total employees") identified as resident of the respective state/region. **Source** NMFS AFSC BSAI Crab Economic Data Report (EDR) database.
			Vessels		Crew positions	
				Total	Mean per vessel (sd)	Median per vessel
		98/01/04	4(2)	_	-	-
		2005	1	*	*	*
	CP	2006	1	*	*	*
		2007	1	*	*	*
		2008	1	*	*	*
		98/01/04	52(22)	115	6.65(0.99)	6.50
		2005	10	58	5.8(1.14)	6
	CV	2006	6	38	6.33(0.52)	6
		2007	6	38	6.33(0.52)	6
		2008	4	26	6.5(0.58)	6.50
		2009	5	35	7(1.22)	7
AIG		2010	5	35	7(1.22)	7
		2011	5	36	7.2(1.1)	7
		2012	6	46	7.67(1.21)	7.50
		2013	6	44	7.33(1.03)	7
		2014	5	35	7(0.71)	7
	CVCP	2015	5	35	7(0.71)	7
		2016	5	36	7.2(0.84)	7
		2017	5	36	7.2(1.1)	7
		2018	5	37	7.4(1.14)	7
		2019	5	37	7.4(1.14)	7
		2020	5	35	7(0.71)	7
		2021	5	37	7.3(0.67)	7
		98/01/04	20(9)	-	-	-
		2005	3	54	18(5)	18
	CP	2006	3	64	21.33(4.51)	21
		2007	3	69	23(5.57)	24
		2008	3	64	21.33(4.73)	23
		98/01/04	633(250)	1,233	5.85(0.92)	6
		2005	84	472	5.61(0.82)	6
	$_{\rm CV}$	2006	79	445	5.63(0.83)	6
		2007	70	407	5.81(0.79)	6
		2008	76	452	5.95(0.91)	6
RRR		2009	70	443	6.33(2.41)	6
DDI		2010	65	422	6.48(2.93)	6
		2011	62	413	6.66(3.23)	6
		2012	64	428	6.68(2.69)	6
		2013	63	418	6.63(2.53)	6
	CVCP	2014	63	422	6.7(2.49)	6
	0,01	2015	64	441	6.89(3.26)	6
		2016	63	423	6.71(2.52)	6
		2017	61	419	6.86(2.98)	6
		2018	55	365	6.64(3.26)	6
		2019	56 47	370	6.61(3.33)	6
		2020	41	333	1.09(3.83)	6
		98/01/04 2005	18(8)	- 60	- 11 5(4 81)	- 10
	CD	2009 2008	4	09	24 63(4.61)	12 26 50
	Ur	2000	4± Λ	99 102	24.03(4.40) 25.63(4.42)	20.00 97 75
		2007	4	103	26(5.66)	21.10
			T04(010)	1.0.40	20(0.00)	
		98/01/04	524(210)	1,049	0.01(0.89)	6

Table 4.13: Harvesting sector employment, CR Program fisheries	Table 4.13:	Harvesting	$\operatorname{sector}$	employment,	CR	Program	fisheries
--	-------------	------------	-------------------------	-------------	----	---------	-----------

			Vessels	(	Crew positions	
				Total	Mean per vessel (sd)	Median per vessel
		2005	150	857	5.71(0.73)	6
	CV	2006	74	418	5.65(0.78)	6
		2007	65	377	5.79(0.79)	6
		2008	74	447	6.03(0.79)	6
		2009	77	536	6.96(4.12)	6
BSS		2010	68	444	6.53(2.61)	6
		2011	68	453	6.66(2.87)	6
		2012	72	502	6.97(3.61)	6
		2013	71	481	6.77(3.11)	6
		2014	70	480	6.86(2.92)	6
	CVCP	2015	70	491	7.01(3.5)	6
		2016	68	463	6.81(2.49)	6
		2017	63	441	7(3.52)	6
		2018	63	436	6.92(3.21)	6
		2019	61	428	7.02(3.58)	6
		2020	59	417	7.07(3.56)	6
		2021	62	448	7.22(3.64)	6
		2006	1	*	*	*
	CP	2007	1	*	*	*
		2008	1	*	*	*
		2005	4	23	5.75(0.5)	6
	CV	2006	25	140	5.6(1)	5
	Οv	2007	22	118	5.36(0.66)	5
		2008	26	146	5.62(0.75)	6
		2009	14	102	7.29(5.2)	6
BST		2010	4	21	5.25(0.96)	5.50
0.01		2013	22	156	7.09(3.52)	6
		2014	41	279	6.8(2.62)	6
		2015	55	365	6.63(2.19)	6
	CVCP	2016	46	296	6.42(1.14)	6
		2017	16	100	6.25(1)	6
		2018	30	211	7.03(3.72)	6
		2019	18	139	7.69(5.12)	6
		2020	25	163	6.52(1.19)	6
		2021	20	149	7.45(3.99)	6.50
PIK	CV	98/01/04	43(43)	207	4.81(0.88)	5
	CP	98/01/04	2(2)	-	-	-
		98/01/04	94(94)	489	5.2(0.8)	5
		2009	7	39	5.57(0.79)	6
SMP		2010	11	63	5.73(0.65)	6
SMD	CV	2011	17	112	6.56(1.12)	6
		2012	17	106	6.24(0.97)	6
		2014	4	24	6	6
		2015	3	17	5.67(0.58)	6
	CP	98/01/04	2(1)	-	-	-
WAI	CV	98/01/04	3(3)	18	6	6

Table 4.13: Harvesting sector employment, CR Program fisheries (continued)

Note 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 2013 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. No catcher/processor operations reported fishing activity in the SMB fishery from 2009 to 2012. Excludes 2001 Western Aleutian Islands red king crab Petrel Bank test fishery. 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. Asterisks indicate data suppressed due to confidentiality

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

		Crew licens	e holders		(	Gear operators		Crew and gear operators
	Alaska	Non-resident	Unknown	Total	Alaska	Non-resident	Total	Total
	resident				resident			
1998	-	-	-	-	108	240	348	-
1999	-	-	-	-	104	247	351	-
2000	-	-	-	-	90	208	298	-
2001	-	-	-	-	78	210	288	-
2002	-	-	-	-	79	202	281	-
2003	-	-	-	-	80	201	281	-
2004	-	-	-	-	81	197	278	-
2005	-	-	-	-	52	141	193	-
2006	189	328	9	526	34	98	132	658
2007	191	339	2	532	27	73	100	632
2008	213	420	3	636	29	90	119	755
2009	187	382	0	569	26	84	110	679
2010	167	346	4	517	28	71	99	616
2011	184	347	0	531	26	67	93	624
2012	204	402	2	608	31	81	112	720
2013	193	381	3	577	26	69	95	672
2014	201	387	0	588	23	72	95	683
2015	232	493	10	735	30	78	108	843
2016	192	425	17	634	28	72	100	734
2017	156	353	10	519	21	64	85	604
2018	165	320	6	491	23	60	83	574
2019	162	354	6	522	23	60	83	605
2020	227	327	1	555	23	59	82	637
2021	143	286	8	437	21	54	75	512

Table 4.14: Alaska residency of participating licensed crew members and gear operators, CR Program fisheries

Note Data shown by calendar year. A commercial crew member 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. 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 4.15: Active CFEC Gear Operator Permit holders: count of permit holders reported on crab fishery landings, and share of CR fishery ex-vessel value landed on associated vessels, by state of residence

		Alaska 1	residents	Non-re	sidents
	_	Permit holders	Associated share of landed ex-vessel value	Permit holders	Associated share of landed ex-vessel value
	1998	2	*	23	* 80 %
	2000	3	*	21 23	*
	2000		3 %	23	97 %
	2001	3	*	24 25	*
	2003	3	6~%	19	94~%
	2004	3	*	21	*
	2005	0	0 %	10	$100 \ \%$
	2006	1	*	9	*
	2007	1	*	5	*
	2008	1	*	6	*
AIG	2009	0	0~%	7	$100 \ \%$
mo	2010	2	*	6	*
	2011	2	*	5	*
	2012	1	*	7	*
	2013	1	*	7	*
	2014	1	*	5	*
	2015	1	*	6	*
	2010	1	*	6 F	*
	2017	2	*	5 F	*
	2018	2	*	5	*
	2019	2	*	6	*
	2020	2	*	8	*
	1008	87	24 %	186	76 %
	1998	72	24 70 26 %	180	70 %
	2000	72	20 70	174	73 %
	2000	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~%
BBR	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 % 76 %
	2010	15	24 %	48	70 % 76 %
	2017	10	24 % 22 07	45	(0 %) 77 0%
	2010	10	23 70 97 %	40 71	1170 720%
	2013	10	33%	33	67 %
	1998	72	23 %	183	77 %
	1999	81	25%	194	75%
	2000	74	28 %	151	72%
	2001	54	19%	154	81 %
	2002	56	23 %	138	77%
	2003	56	24~%	136	76~%

Table 4.15: 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 *(continued)* 

		Alaska r	residents	Non-re	sidents
	_	Permit holders	Associated share of landed ex-vessel value	Permit holders	Associated share of landed ex-vessel value
	2004	53	22~%	137	78 %
	2005	45	$22 \ \%$	126	78~%
	2006	18	16~%	74	84 %
	2007	19	24 %	58	76~%
	2008	21	18 %	72	$82 \ \%$
DCC	2009	19	$17 \ \%$	69	83 %
660	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 %
	2019	15	18 %	50	82 %
	2020	17	$27 \ \%$	48	73 %
	2021	17	17~%	51	83 %
	2005	0	0 %	4	$100 \ \%$
	2006	10	11 %	38	$89 \ \%$
	2007	9	$21 \ \%$	25	79~%
	2008	6	$17 \ \%$	28	$83 \ \%$
	2009	3	14 %	17	86~%
	2010	2	*	2	*
	2013	7	31 %	15	69 %
BST	2014	13	19 %	31	81 %
	2015	20	33 %	46	67 %
	2016	15	32 %	37	68 %
	2017	3	$25 \ \%$	13	75 %
	2018	8	34 %	21	66 %
	2019	6	39 %	12	61 %
	2020	9	41 %	16	59 %
	2021	5	26 %	16	74 %
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 %

**Note** Data shown by calendar year. Information suppressed for confidentiality where indicated by '\*', and data not available where indicated by'-'. Count of unique holders of CFEC Gear Operator permits recorded on ADF&G fish tickets for BSAI crab landings. 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. Excludes 2001 Western Aleutian Islands red king crab Petrel Bank test fishery.

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

			Vessels	Crew share p	payment	Captain share	e payment	CV Crew payment,crab eq	uivalent (1000 lbs)
				Per vessel, median (\$1000)	Total (\$million)	Per vessel, median (\$1000)	Total (\$million)	Per vessel, median	Total
		98/01/04	4(2)	*	*	*	*	-	-
		2005	1	*	*	*	*	-	-
	CP	2006	1	*	*	*	*	-	-
		2007	1	*	*	*	*	-	-
		2008	1	*	*	*	*	-	-
		98/01/04	50(21)	150.59	4.20	73.95	2.03	40.24	1,002.58
		2005	10	176.82	2.07	74.22	1.12	46.18	583.75
	CV	2006	6	129.78	0.99	74.07	0.55	58.24	386.17
		2007	6	202.76	1.30	95.42	0.64	66.47	466.01
		2008	4	521.63	2.16	179.82	0.90	134.06	522.30
	-	2009	5	445.58	2.21	240.32	1.30	154.52	544.24
AIG		2010	5	750.34	3.72	323.68	2.12	169.42	645.94
		2011	5	787.41	4.65	418.86	2.53	192.04	703.81
		2012	6	737.79	4.05	369.62	2.09	175.67	739.97
		2013	6	621.57	3.86	317.23	1.75	137.26	821.72
		2014	5	802.72	3.72	333.94	1.61	167.09	807.83
	CV +	2015	5	811 47	4 10	392.16	1.88	151.04	845.68
	CP	2016	5	1 106 48	5.02	404 71	2 29	177 92	848 56
		2017	5	853.27	5.12	398.48	2.26	132.78	842.63
		2018	5	1 072 72	5.61	413.05	2.10	164.57	846.04
		2010	5	1,072.72	5.01 6.01	413.05	2.02	186.20	1 016 20
		2019	5	1,204.75	0.51	550.69	2.02	154.07	1,010.83
		2020	5	1,178.70	0.10 10.50	761 33	2.75	154.97	1,072.20
		2021		1,715.57	10.00	101.55	4.00	104.01	000.00
	~~~	2006	1	*	*	*	*	-	-
	CP	2007	1	*	*	*	*	-	-
		2008	1	*	*	*	*	-	-
		2005	4	16.27	0.06	8.66	0.02	8.17	30.42
	CV	2006	25	4.36	0.27	2.73	0.14	2.46	135.42
		2007	21	21.86	0.71	13.82	0.37	9.22	308.06
		2008	26	16.70	0.62	9.10	0.36	6.73	259.61
		2009	14	32.66	0.63	18.41	0.39	13.71	256.98
BST		2010	4	40.68	0.15	22.46	0.09	19.32	70.17
<b>D</b> 01		2013	19	16.82	0.51	8.65	0.24	6.92	198.93
		2014	38	79.23	3.53	35.50	1.64	27.32	1,268.04
	CV +	2015	52	128.05	6.73	53.25	3.13	40.40	2,233.97
	CV +	2016	45	87.77	5.45	43.86	2.49	27.34	1,631.68
	UP	2017	16	70.65	1.06	27.86	0.48	15.48	239.62
		2018	31	40.74	1.50	19.79	0.64	9.64	326.13
		2019	18	41.99	0.97	16.69	0.43	10.61	201.69
		2020	20	13.47	0.40	6.31	0.17	2.47	92.92
		2021	18	31.89	0.87	14.42	0.88	6.15	144.47
		98/01/04	18(8)	288.45	1.85	95.60	0.59	-	-
		2005	6	79.91	0.65	36.81	0.22	-	-

Table 4.16: Captain and crew share payments, and crab-equivalent crew pay, CR Program fisheries

			Vessels	Crew shar	e payment	Captain sha	are payment	CV Crew payment,cra	b equivalent (1000 lbs)
				Per vessel, median (\$1000)	Total (\$million)	Per vessel, median (\$1000)	Total (\$million)	Per vessel, median	Total
	CP	2006	4	326.31	1.43	127.96	0.53	-	-
		2007	4	331.66	1.37	94.26	0.36	-	-
		2008	4	437.66	1.74	151.38	0.61	-	-
		98/01/04	517(210)	87.03	21.65	43.99	10.44	33.92	18,059.94
		2005	150	77.29	12.30	42.59	6.32	31.02	5,335.74
	CV	2006	74	81.39	6.97	42.38	3.48	56.65	4,787.81
		2007	65	135.62	10.29	70.61	4.89	63.39	4,701.20
		2008	74	235.01	18.92	119.92	9.00	108.04	8,833.86
		2009	77	172.59	15.12	85.37	6.70	97.27	7,687.66
BSS		2010	68	144.30	10.90	69.04	4.89	88.79	6,625.45
		2011	68	328.65	23.30	152.51	10.43	104.28	7,350.30
		2012	72	433.48	31.50	203.52	14.18	164.03	11,961.77
		2013	71	328.48	25.53	163.89	11.62	119.71	9,132.92
	CV I	2014	69	270.85	20.26	125.53	9.09	97.45	7,255.43
	CV +	2015	70	268.84	19.20	127.40	8.69	116.01	7,952.72
	Ur	2016	68	211.94	16.38	104.95	7.32	71.78	5,243.28
		2017	63	181.23	13.60	84.29	5.77	41.41	2,953.51
		2018	62	148.88	10.86	69.81	4.66	34.77	2,483.14
		2019	61	210.89	15.48	102.74	6.69	49.63	3,577.19
		2020	59	281.60	18.83	128.66	8.28	67.67	4,433.53
		2021	62	433.03	30.05	182.62	12.57	84.69	5,816.92
		98/01/04	20(9)	99.63	0.76	33.53	0.24	-	-
		2005	3	260.70	0.73	95.89	0.28	-	-
	CP	2006	3	123.56	0.34	28.64	0.11	-	-
		2007	3	171.91	0.63	84.28	0.24	-	-
		2008	3	190.03	0.65	93.30	0.27	-	-
		98/01/04	626(249)	62.77	14.97	31.92	7.23	10.88	2,551.38
		2005	84	135.20	13.72	73.09	7.21	22.81	2,261.70
	CV	2006	79	116.49	10.06	61.59	5.10	23.45	2,002.05
		2007	70	165.53	13.61	87.31	6.78	27.60	2,391.78
		2008	76	189.76	16.66	91.62	7.53	29.74	2,568.73
BBB		2009	70	141.93	11.09	74.48	5.25	24.50	1,848.95
BBR		2010	65	226.80	15.30	117.29	7.29	24.96	1,630.31
		2011	62	181.26	12.49	98.59	5.79	14.07	942.64
		2012	66	118.34	9.31	62.99	4.19	13.55	958.50
		2013	63	108.73	8.69	61.22	4.13	13.13	1,021.99
	CV +	2014	63	121.52	8.83	60.00	4.07	15.64	1,113.14
	CP	2015	65	154.89	10.41	71.43	4.88	16.97	1,114.42
		2016	64	176.42	12.66	77.94	5.48	14.77	1,015.18
		2017	61	114.56	7.78	52.53	3.53	11.87	761.56
		2018	55	86.74	5.35	42.51	2.46	7.64	470.63
		2019	56	83.70	5.20	38.49	2.39	6.81	407.23
		2020	47	72.68	3.68	34.67	1.70	5.70	280.95

Table 4.16: Captain and crew share payments, and crab-equivalent crew pay, CR Program fisheries (continued)

			Vessels	Crew share p	payment	Captain share payment		CV Crew payment,crab	equivalent (1000 lbs)
				Per vessel, median (\$1000)	Total (\$million)	Per vessel, median (\$1000)	Total (\$million)	Per vessel, median	Total
PIK	$_{\rm CV}$	98/01/04	42(42)	12.03	0.61	5.60	0.31	3.22	163.87
	CP	98/01/04	2(2)	*	*	*	*	-	-
SMB	CV	98/01/04 2009 2010 2011	92(92) 7 11 17	12.48 20.86 83.83 69.28	$1.35 \\ 0.18 \\ 1.07 \\ 1.48$	7.11 8.99 50.12 37.53	0.74 0.08 0.56 0.69	4.09 5.97 13.60 10.69	429.84 49.67 163.26 232.83
	01	2011 2012 2014 2015	17 17 4 3	$51.09 \\ 50.54 \\ 21.22$	0.99 0.20 0.08	26.04 21.98 10.31	$0.45 \\ 0.09 \\ 0.03$	10.05 10.16 10.27 3.90	
	CP	98/01/04	2(1)	*	*	*	*	-	-
WAI	CV	98/01/04	3(3)	37.91	0.21	23.33	0.10	5.54	29.47

Table 4.16: Captain and crew share payments, and crab-equivalent crew pay, CR Program fisheries (continued)

Note Data shown for all CR program crab fisheries by calendar year. All dollar values are adjusted for inflation to 2021-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 (ex-vessel revenue/landed pounds). No catcher/processor operations reported fishing activity in the SMB fishery from 2009 to 2012. Excludes 2001 Western Aleutian Islands red king crab Petrel Bank test fishery. All dollar values are adjusted for inflation to 2021-equivalent value.

		Obs (vessels)	Net	share, me	dian	Gross	share, me	edian
			Labor total	Crew	Captain	Labor total	Crew	Captain
	98/01/04	660 (257)	_	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 %
All CR	2012	78	-	-	-	20 %	14 %	6 %
Fisheries	2013	78	-	-	-	20 %	13 %	6 %
	2014	74	_	-	_	20 %	13 %	7 %
	2015	79	_	_	_	20 %	13 %	7 %
	2016	75	_	_	_	20 %	13 %	7%
	2010	70	_	_		20 %	14 %	6 %
	2017	70 65	-	-	-	20 70	14 70	6 07
	2018	05 65	-	-	-	20 70	14 70	0 70 C 07
	2019	05	-	-	-	10 70	12 70	0 70 C 07
	2020	61	-	-	-	20 %	14 %	6 %
	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	37~%	$27 \ \%$	$12 \ \%$	$13 \ \%$	$10 \ \%$	4 %
	2009	4	39~%	27~%	$12 \ \%$	18 %	$12 \ \%$	$5 \ \%$
	2010	4	38~%	27 %	$12 \ \%$	16 %	$11 \ \%$	5 %
	2011	4	38~%	27~%	$11 \ \%$	16 %	$12 \ \%$	5 %
AIG	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 %
	2019	5	_	_	_	21 %	15 %	6 %
	2020	5	-	-	-	23 %	16%	6%
	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 %
BBB	2011	60	-	21 70	12 /0	20 %	14 %	6%
BBR	2012	60 60				18 %	19 %	6%
	2013	60	-	-	-	10 70	12 70	6 %
	2014	60	-	-	-	10 /0	12 /0	6 07
	2010	02	-	-	-	10.07	10 07	0 70 c 07
	2010	00 E0	-	-	-	19 % 19 %	10 07	0 % c 07
	2017	59	-	-	-	18 %	12 %	б % - С
	2018	53	-	-	-	17 %	12 %	5%
	2019	54	-	-	-	15 %	10 %	5 %
	2020	44	-	-	-	15 %	10 %	5 %
	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 %

Table 4.17: Harvest labor net and gross revenue share percentages, vessel-level median, CR Program fisheries

		Obs (vessels)	Net	share, mee	dian	Gross	share, m	edian
			Labor total	Crew	Captain	Labor total	Crew	Captain
	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~%
BSS	2012	69	-	-	-	$21 \ \%$	$14 \ \%$	7 %
	2013	68	-	-	-	20 %	13~%	6 %
	2014	67	-	-	-	20 %	13~%	6 %
	2015	68	-	-	-	$20 \ \%$	$13 \ \%$	6 %
	2016	64	-	-	-	$20 \ \%$	$13 \ \%$	6 %
	2017	61	-	-	-	$20 \ \%$	$14 \ \%$	7 %
	2018	60	-	-	-	$20 \ \%$	$14 \ \%$	7 %
	2019	59	-	-	-	$20 \ \%$	$13 \ \%$	7 %
	2020	57	-	-	-	21~%	14~%	7~%
	2005	4	$38 \ \%$	$27 \ \%$	$10 \ \%$	$15 \ \%$	$10 \ \%$	5 %
	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	40 %	26~%	$14 \ \%$	28 %	$18 \ \%$	10 %
DCT	2013	18	-	-	-	24 %	17~%	8 %
BS1	2014	37	-	-	-	$21 \ \%$	$15 \ \%$	7 %
	2015	50	-	-	-	$23 \ \%$	$15 \ \%$	7 %
	2016	41	-	-	-	24 %	17~%	8 %
	2017	16	-	-	-	$22 \ \%$	$15 \ \%$	7 %
	2018	29	-	-	-	22 %	$15 \ \%$	7 %
	2019	16	-	-	-	$23 \ \%$	16~%	7 %
	2020	19	-	-	-	22~%	15~%	7 %
	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	-	-	-	22~%	15~%	7~%
	2015	3	-	-	-	19 %	$14 \ \%$	5 %

Table 4.17: Harvest labor net and gross revenue share percentages, vessel-level median, CR Program fisheries *(continued)* 

Note 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 over 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.

		Days act total,(med	ive lian)	Days fish total,(med	ing lian)
	Year	EDR	CIF	EDR	CIF
	98/01/04	1464(46)	-	-	_
	2005	684(54)	-	481(38)	-
	2006	709(125)	-	516(89)	-
	2007	601(76)	613(80)	435(64)	420(48)
	2008	695(124)	702(116)	494(83)	474(76)
	2009	666(105)	645(109)	460(68)	439(69)
	2010	719(105)	725(146)	486(77)	466(80)
	2011	617(107)	582(131)	398(76)	400(82)
110	2012	-	641(104)	-	427(74)
AIG	2013	-	662(104)	-	430(68)
	2014	-	676(84)	-	449(53)
	2015	-	673(74)	-	437(48)
	2016	-	758(109)	-	493(60)
	2017	-	748(163)	-	469(89)
	2018	-	657(125)	-	405(83)
	2019	-	650(118)	-	423(75)
	2020	-	751(121)	-	487(83)
	2021	-	815(118)	-	533(77)
	98/01/04	2669(10)	-	_	_
	2005	2415(24)	-	1472(13)	-
	2006	1810(21)	-	1096(12)	-
	2007	2374(30)	2019(26)	1516(19)	1291(16)
	2008	2556(29)	2410(28)	1780(20)	1635(19)
	2009	2126(29)	1936(27)	1408(19)	1306(18)
	2010	2321(34)	2023(30)	1604(22)	1429(22)
	2011	1150(17)	910(14)	701(10)	538(8)
BBR	2012	-	843(13)	-	499(8)
	2013	-	947(14)	-	587(9)
	2014	-	1056(15)	-	660(10)
	2015	-	954(15)	-	539(8)
	2016	-	774(12)	-	422(6)
	2017	-	944(14)	-	605(9)
	2018	-	626(11)	-	396(7)
	2019	-	723(12)	-	462(7)
	2020	-	474(9)	-	283(6)
	98/01/04	6570(25)	-		-
	2005	2898(10)	-	1355(7)	-
	2000	3270(34)	-	2210(22)	1170(15)
	2007	2400(50)	2107(51) 2492(41)	1000(21)	1172(10) 1041(20)
	2008	3070(49)	3403(41)	2010(32)	1941(22) 2111(26)
	2009	3009(49)	3002(44)	2000(32)	2111(20) 1718(24)
	2010	3032(42) 2202(46)	2812(40) 2878(40)	2110(29) 2217(20)	1710(24) 1724(24)
	2011	5505(40)	2070(40)	2217(30)	1734(24) 2201(48)
BSS	2012	-	0000(79) A591(59)	-	3391(48) 2002(20)
	2013	-	4001(00) 3809(54)	-	2990(90) 9690(9⊑)
	2014	-	0002(04) 4004(69)	-	2029(33) 2047(41)
	2010	-	4294(02) 2842(20)	-	2947(41) 1040(97)
	2010	-	2042(39) 9155(99)	-	1949(27) 1475(99)
	2017 2018	-	2100(00) 200/(08)	-	1407(22)
	2010	-	2034(20) 2714(42)	-	1404(19) 1704(97)
	2019 2029	-	2714(43) 3750(63)	-	2654(45)
	2020	-	4769(83)	-	2759(46)
	2005	86(12)		30(7)	()
	2005	430(14)	-	297(10)	-
	2007	582(23)	472(18)	428(16)	316(12)

Table 4.18:	Harvesting	$\operatorname{sector}$	activity	days,	CR	Program	fisheries
-------------	------------	-------------------------	----------	-------	----	---------	-----------

		Days act total,(med	ive lian)	Days fishing total,(median)			
	Year	EDR	$\operatorname{CIF}$	EDR	CIF		
	2008	592(18)	568(19)	422(11)	405(13)		
	2009	467(22)	350(17)	321(15)	238(12)		
	2010	57(14)	59(14)	41(10)	33(8)		
	2013	-	279(12)	-	200(9)		
BST	2014	-	1245(28)	-	905(22)		
	2015	-	2728(38)	-	1928(27)		
	2016	-	1529(28)	-	1130(21)		
	2017	-	213(11)	-	132(7)		
	2018	-	504(15)	-	331(10)		
	2019	-	244(14)	-	149(8)		
	2020	-	389(15)	-	248(9)		
	2021	-	393(20)	-	295(14)		
PIK	98/01/04	762(15)	-	-	-		
	98/01/04	1672(17)	-	-	-		
	2009	184(19)	166(16)	133(10)	112(11)		
	2010	485(36)	429(36)	365(23)	313(27)		
SMB	2011	663(33)	710(36)	473(26)	468(24)		
	2012	-	542(33)	-	363(19)		
	2014	-	164(41)	-	115(28)		
	2015	-	96(33)	-	56(18)		
WAI	98/01/04	32(14)	-	-	-		

Table 4.18: Harvesting sector activity days, CR Program fisheries (continued)

Note 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. 2001 WAI data reflect activity in Petrel Bank test fishery.

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

		Vessels	Total Costs (\$1,000)	Median Costs (\$1,000)
	08/01/04	647(258)	\$ 3,007,00	<u> </u>
	2005	156	\$ 1,703.00	\$ 6.00
	2006	70	\$ 1,061.00	\$ 9.00
	2000	61	\$ 955.00	\$ 11.00
	2008	69	\$ 1.768.00	\$ 17.00
	2009	60	\$ 1.050.00	\$ 13.00
	2010	49	\$ 1,233.00	\$ 16.00
	2011	52	\$ 985.00	\$ 14.00
All CR	2012	81	\$ 2,122.00	\$ 9.00
Fisheries	2013	76	\$ 1,474.00	\$ 8.00
	2014	72	\$ 1,786.00	\$ 7.00
	2015	77	\$ 2,187.00	\$ 9.00
	2016	75	\$ 1,640.00	\$ 7.00
	2017	69	\$ 1,045.00	\$ 5.00
	2018	64	\$ 1,025.00	\$ 4.00
	2019	63	\$ 1,105.00	\$ 5.00
	2020	60	\$ 1,435.00	\$ 7.00
	2021	64	\$ 1,374.00	\$ 13.00
	2012	6	\$ 168.00	\$ 20.00
	2013	6	\$ 166.00	\$ 22.00
	2014	5	\$ 213.00	\$ 40.00
	2015	5	\$ 269.00	\$ 44.00
ALC	2016	5	\$ 333.00	\$ 72.00
AIG	2017	5	\$ 275.00	\$ 37.00
	2018	5	\$ 259.00	\$ 43.00
	2019	5	\$ 268.00	\$ 43.00
	2020	5	\$ 273.00	\$ 42.00
	2021	5	\$ 296.00	\$ 53.00
	2012	62	\$ 404.00	\$ 5.00
	2013	59	\$ 374.00	\$ 5.00
	2014	59	\$ 461.00	\$ 6.00
	2015	60	\$ 452.00	\$ 6.00
BBR	2016	61	\$ 363.00	\$ 5.00
	2017	59	\$ 317.00	\$ 4.00
	2018	52	\$ 239.00	\$ 4.00
	2019	53	\$ 251.00	\$ 3.00
	2020	44	\$ 229.00	\$ 3.00
	2012	70	\$ 1,413.00	\$ 16.00
	2013	68	\$ 862.00	\$ 12.00
	2014	63	\$ 851.00	\$ 10.00
	2015	65	\$ 913.00	\$ 13.00
BSS	2016	62	\$ 626.00	\$ 8.00
200	2017	60	\$ 412.00	\$ 7.00
	2018	57	\$ 444.00	\$ 7.00
	2019	57	\$ 544.00	\$ 9.00
	2020	55	\$ 863.00	\$ 12.00
	2021	60	\$ 1,005.00	\$ 15.00
	2013	16	\$ 73.00	\$ 4.00
	2014	35	\$ 252.00	\$ 4.00
	2015	47	\$ 552.00	\$ 6.00
	2016	37	\$ 318.00	\$ 7.00
BST	2017	14	\$ 42.00	\$ 2.00
	2018	27	\$ 83.00	\$ 3.00
	2019	16	\$ 41.00	\$ 2.00
	2020	18	\$ 70.00	\$ 3.00
	2021	16	\$ 69.00	\$ 3.00
	2012	16	\$ 137.00	\$ 7.00

Table 4.19: Fishery expenditures - food and provisions costs, CR Program fisheries

Table 4.19: Fishery expenditures - food and provisions costs, CR Program fisheries (continued)

		Vessels	Total Costs (\$1,000)	Median Costs (\$1,000)
SMB	2014 2015	2	*	*

Note 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. Asterisks indicate data suppressed due to confidentiality All dollar values are adjusted for inflation to 2021-equivalent value. 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.

		۲	Vessels	Bait cost	s (\$1000)	Bait usage (1	000  lbs)	Price (\$/lb)
		_		Per vessel, median	Total	Per vessel, median	Total	Weighted average
		98/01/04 6	310(246)	\$ 14 47	\$ 5 262 00		7 980	\$ 0.66
		2005	169	\$ 10.58	\$ 2,869.00	17	4,300	\$ 0.60 \$ 0.64
		2006	99	\$ 14.63	\$ 2,206.00	24	3.659	\$ 0.60
		2007	86	\$ 18.16	\$ 2,166.00	30	3.676	\$0.59
		2008	96	\$ 22.68	\$ 2,958.00	33	4,474	\$ 0.66
		2009	89	\$ 26.84	\$ 3,179.00	38	4,719	\$ 0.67
		2010	79	\$ 29.78	3,171.00	43	4,614	0.69
		2011	76	\$ 28.32	\$ 2,897.00	36	4,086	0.71
All		2012	83	\$ 13.23	\$ 3,402.00	-	-	-
$\mathbf{CR}$	CV+CP	2013	81	\$ 14.09	3,380.00	-	-	-
		2014	76	\$ 13.06	\$ 4,032.00	-	-	-
		2015	82	\$ 14.05	5,087.00	-	-	-
		2016	80	\$ 14.01	3,729.00	-	-	-
		2017	72	9.25	2,522.00	-	-	-
		2018	67	9.27	2,451.00	-	-	-
		2019	67	\$ 10.02	3,194.00	-	-	-
		2020	64	11.46	3,081.00	-	-	-
		2021	66	\$ 18.13	\$ 2,982.00	-	-	-
		98/01/04	4(2)	*	*	*	*	*
		2005	1	*	*	*	*	*
	CP	2006	1	*	*	*	*	*
		2007	1	*	*	*	*	*
		2008	1	*	*	*	*	*
		98/01/04	50(21)	\$ 37.81	\$ 1,136.00	60	1,825	\$ 0.62
		2005	9	\$ 49.50	\$ 514.00	79	863	\$ 0.60
	CV	2006	6	85.33	\$ 448.00	142	778	0.58
		2007	6	\$ 44.91	\$ 333.00	84	741	0.45
		2008	4	\$ 97.60	\$ 433.00	209	816	0.53
		2009	7	\$ 81.51	\$ 717.00	169	1,137	\$ 0.63
AIG		2010	6	\$ 121.29	\$ 793.00	215	1,259	0.63
		2011	5	\$ 182.00	\$ 737.00	291	$1,\!172$	0.63
		2012	6	89.98	\$ 638.00	-	-	-
		2013	6	126.71	\$ 778.00	-	-	-
		2014	5	131.48	\$ 877.00	-	-	-
	CV+CP	2015	5	109.71	1,101.00	-	-	-
		2016	5	\$ 92.39	\$ 862.00	-	-	-
		2017	5	144.29	\$ 887.00	-	-	-
		2018	5	136.78	\$ 834.00	-	-	-
		2019	5	177.98	1,125.00	-	-	-
		2020	5	209.77	1,195.00	-	-	-
		2021	5	\$ 307.35	\$ 1,305.00	-	-	-
		98/01/04	15(8)	\$ 8.42	\$ 50.00	15	90	\$ 0.55
		2005	4	16.79	\$ 71.00	28	131	0.54
	CP	2006	3	\$ 7.95	\$ 28.00	21	67	0.42
		2007	2	*	*	*	*	*
		2008	3	\$ 7.42	\$ 38.00	15	61	\$ 0.62
		98/01/04 5	546(227)	\$ 5.57	\$ 1,191.00	8	1,742	\$ 0.68
		2005	82	\$ 7.42	\$ 948.00	13	1,380	\$ 0.69

Table 4.20: Fishery expenditures - bait usage and costs, CR Program fisheries

			٦	Vessels	s Bait costs ( $\$1000$ )		Bait usage (1	.000 lbs)	Price (\$/lb)
BBR         CV         2006         73         \$ \$ \$.16         \$ 714.00         13         1.162         \$ 0.61           2007         70         \$ \$ 12.41         \$ \$ 0.53.00         19         1.488         \$ 5.061           2009         68         \$ 14.69         \$ 1.146.00         20         1.666         \$ 0.69           2010         61         \$ 15.63         \$ 1.157.00         23         1.625         \$ 0.71           2011         63         \$ 8.66         \$ 679.00         -         -         -         -           2014         63         \$ 8.63         \$ \$ 747.00         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         - <td></td> <td></td> <td>_</td> <td></td> <td>Per vessel, median</td> <td>Total</td> <td>Per vessel, median</td> <td>Total</td> <td>Weighted average</td>			_		Per vessel, median	Total	Per vessel, median	Total	Weighted average
BBR         2007         70         \$ 12.41         \$ 953.00         19         1.488         \$ 0.64           2008         76         \$ 13.34         \$ 1.46.00         20         1.666         \$ 0.69           2010         61         \$ 15.63         \$ 1.157.00         23         1.625         \$ 0.71           2011         61         \$ 9.70         \$ 753.00         -         -         -           2012         64         \$ 7.29         \$ 535.00         -         -         -           2013         63         \$ 8.66         \$ 679.00         -         -         -         -           2016         64         \$ 9.33         \$ 674.00         -         -         -         -           2018         53         \$ 7.59         \$ 435.00         -         -         -         -           2018         53         \$ 8.7.9         \$ 435.00         -         -         -         -           2018         53         \$ 8.11         \$ 542.00         -         -         -         -           2017         3         \$ 5.56         23         102         \$ 0.57          5.56         -         -		CV	2006	73	\$ 8.16	\$ 714.00	13	1,162	\$ 0.61
BBR         2008         76         \$ 1.3.34         \$ 1,230.00         19         1,683         \$ 0.73           BBR         2009         68         \$ 14.69         \$ 1,146.00         20         1,666         \$ 0.69           2011         61         \$ 9.70         \$ 753.00         10         961         \$ 0.78           2012         64         \$ 7.29         \$ 535.00         -         -         -           2016         64         \$ 11.03         \$ 744.00         -         -         -           2018         53         \$ 7.59         \$ 435.00         -         -         -         -           2018         53         \$ 7.59         \$ 435.00         -         -         -         -           2019         53         \$ 7.59         \$ 435.00         -         -         -         -           2019         53         \$ 7.59         \$ 843.00         -         -         -         -           2019         53         \$ 8.73         \$ 856.0         23         102         \$ 0.51           2020         46         \$ 3.0.44         \$ 124.00         48         229         \$ 0.51           2007			2007	70	\$ 12.41	953.00	19	$1,\!488$	0.64
BBR         2009         68         \$ 14.69         \$ 1,146.00         20         1,666         \$ 0.69           2010         61         \$ 15.63         \$ 1,157.00         23         1,625         \$ 0.71           2011         61         \$ 9.70         \$ 753.00         10         961         \$ 0.78           2012         64         \$ 7.29         \$ \$535.00         -         -         -           2013         63         \$ 8.66         \$ 679.00         -         -         -           2014         63         \$ 10.29         \$ 747.00         -         -         -           2017         61         \$ 8.73         \$ \$ 530.00         -         -         -           2017         61         \$ 8.73         \$ \$ 850.00         -         -         -           2018         53         \$ 8.15.3         \$ \$ 88.00         28         14.7         \$ 0.60           2019         53         \$ 8.12.2         \$ \$ 8.00         28         14.7         \$ 0.60           2005         5         \$ 12.52         \$ \$ 8.00         28         14.7         \$ 0.60           2007         3         \$ 5.06         \$ \$ 35.00			2008	76	\$ 13.34	\$ 1,230.00	19	$1,\!683$	\$ 0.73
BBR         2010         61         \$ 15.63         \$ 1,157.00         23         1,625         \$ 0.71           2011         61         \$ 9.70         \$ 753.00         10         961         \$ 0.78           2013         63         \$ 8.66         \$ 679.00         -         -         -           2013         63         \$ 8.66         \$ 679.00         -         -         -           2014         63         \$ 10.29         \$ 747.00         -         -         -           2016         64         \$ 11.03         \$ 744.00         -         -         -           2018         53         \$ 7.59         \$ 435.00         -         -         -           2019         53         \$ 8.11         \$ 542.00         -         -         -           2019         55         \$ 12.52         \$ 58.00         28         147         \$ 0.60           2005         5         \$ 12.52         \$ 58.00         28         147         \$ 0.60           2006         4         \$ 30.44         \$ 12.400         48         \$ 0.52         \$ 0.51           2006         14         \$ 1.727         \$ 667.00         16	DDD		2009	68	\$ 14.69	\$ 1,146.00	20	1,666	\$ 0.69
CV+CP         2011         61         \$ 9.70         \$ 753.00         10         961         \$ 0.78           2012         64         \$ 7.29         \$ \$ 535.00         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -	BBK		2010	61	\$ 15.63	\$ 1,157.00	23	$1,\!625$	\$ 0.71
$ {\rm Free Pick result of the set of the set$			2011	61	9.70	\$ 753.00	10	961	0.78
CV+CP         2013         63         \$\$ 8.66         \$\$ 679.00         -         -         -           2015         64         \$\$ 10.29         \$\$ 744.00         -         -         -           2016         64         \$\$ 9.38         \$\$ 674.00         -         -         -           2017         61         \$\$ 8.73         \$\$ 553.00         -         -         -           2018         53         \$\$ 7.59         \$\$ 435.00         -         -         -           2019         53         \$\$ 8.11         \$\$ 542.00         -         -         -           2020         46         \$\$ 0.63         \$\$ 88.00         23         102         \$\$ 0.60           2020         46         \$\$ 0.61         \$\$ \$\$ 88.00         23         102         \$\$ 0.60           2005         5         \$\$ 12.20         \$\$ 463.00         14         3.270         \$\$ 0.60           2007         3         \$\$ 0.96         \$\$ 35.00         13         1.041         \$\$ 0.66           2007         148         \$\$ 0.63         \$\$ 1.162.00         10         1.758         \$\$ 0.66           2007         148         \$\$ 0.61         \$\$ 1.62.			2012	64	\$ 7.29	\$ 535.00	-	-	-
CV+CP         2014         63         \$ 10.29         \$ 747.00         -         -         -           2015         64         \$ 11.03         \$ 744.00         -         -         -         -           2016         64         \$ 9.38         \$ 674.00         -         -         -         -           2017         61         \$ 8.73         \$ 553.00         -         -         -         -           2019         53         \$ 8.11         \$ 542.00         -         -         -         -           2020         46         \$ 5.69         \$ 463.00         -         -         -         -           2020         46         \$ 5.69         \$ 88.00         28         147         \$ 0.60           2005         5         \$ 12.52         \$ \$ 8.00         23         102         \$ 0.57           2006         4         \$ 30.44         \$ 124.00         48         2.29         \$ 0.51           2007         14         \$ 8.5.3         \$ 667.00         15         6.64         \$ 0.52           2006         74         \$ 8.5.3         \$ 669.00         13         1.041         \$ 0.61           2006			2013	63	\$ 8.66	\$ 679.00	-	-	-
$ BSS = \begin{bmatrix} 0.1+01 \\ 2015 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1+01 \\ 0.1$		$CV \perp CP$	2014	63	\$ 10.29	\$ 747.00	-	-	-
$BSS = \begin{bmatrix} 2016 & 64 & \$ 9.38 & \$ 674.00 & - & - & - \\ 2017 & 61 & \$ 8.73 & \$ 553.00 & - & - & - \\ 2018 & 53 & \$ 7.59 & \$ 435.00 & - & - & - \\ 2019 & 53 & \$ 8.11 & \$ 542.00 & - & - & - \\ 2020 & 46 & \$ 5.69 & \$ 433.00 & - & - & - \\ 2020 & 46 & \$ 5.69 & \$ 430.00 & - & - & - \\ 2020 & 46 & \$ 5.69 & \$ 430.00 & - & - & - \\ 2020 & 46 & \$ 30.44 & \$ 124.00 & 48 & 229 & \$ 0.54 \\ 2007 & 3 & \$ 5.96 & \$ 35.00 & 15 & 666 & \$ 0.52 \\ 2008 & 4 & \$ 17.27 & \$ 67.00 & 26 & 103 & \$ 0.65 \\ 2007 & 3 & \$ 5.96 & \$ 35.00 & 15 & 666 & \$ 0.52 \\ 2008 & 4 & \$ 17.27 & \$ 67.00 & 26 & 103 & \$ 0.65 \\ CV & 2006 & 74 & \$ 8.53 & \$ 669.00 & 13 & 1.041 & \$ 0.64 \\ 2007 & 64 & \$ 7.87 & \$ 535.00 & 12 & 869 & \$ 0.62 \\ 2008 & 72 & \$ 9.73 & \$ 844.00 & 16 & 1.288 & \$ 0.65 \\ CV & 2008 & 72 & \$ 9.73 & \$ 844.00 & 16 & 1.288 & \$ 0.65 \\ 2009 & 75 & \$ 12.44 & \$ 1.096.00 & 18 & 1.616 & \$ 0.68 \\ BSS & 2009 & 75 & \$ 12.41 & \$ 1.058.00 & 19 & 1.504 & \$ 0.70 \\ 2011 & 67 & \$ 14.81 & \$ 1.058.00 & 19 & 1.504 & \$ 0.70 \\ 2012 & 72 & \$ 25.42 & \$ 1.747.00 & - & - \\ 2014 & 69 & \$ 24.20 & \$ 1.747.00 & - & - \\ 2014 & 69 & \$ 24.20 & \$ 1.747.00 & - & - \\ 2014 & 69 & \$ 24.20 & \$ 1.747.00 & - & - \\ 2016 & 67 & \$ 19.09 & \$ 1.424.00 & - & - \\ 2017 & 63 & \$ 13.06 & \$ 1.001.00 & - & - \\ 2018 & 62 & \$ 13.08 & \$ 1.000.00 & - & - \\ 2019 & 61 & \$ 13.07 & \$ 1.466.00 & - & - \\ 2019 & 61 & \$ 13.07 & \$ 1.466.00 & - & - \\ 2019 & 61 & \$ 13.07 & \$ 1.466.00 & - & - \\ 2019 & 61 & \$ 13.07 & \$ 1.466.00 & - & - \\ 2019 & 61 & \$ 13.07 & \$ 1.466.00 & - & - \\ CV + CP & 2006 & 1 & \$ 13.07 & \$ 1.466.00 & - & - \\ CV + CP & 2006 & 1 & \$ 13.07 & \$ 1.466.00 & - & - \\ CV + CP & 2006 & 1 & \$ 13.07 & \$ 1.466.00 & - & - \\ CV + CP & 2006 & 1 & \$ 13.07 & \$ 1.466.00 & - & - \\ CV + CP & 2007 & 1 & \ast * & * & * & * \\ CP & 2007 & 1 & * & * & * & * & * \\ CP & 2007 & 1 & * & * & * & * & * \\ CP & 2008 & 1 & * 1.522.00 & - & - \\ CV + CP & 2006 & 1 & \$ 1.307 & \$ 1.466.00 & - & - \\ CV + 2006 & 1 & \$ 1.307 & \$ 1.466.00 & - & - \\ CV + 2006 & 1 & \$ 1.307 & \$ 1.466.00 & - & - \\ CV + 2006 & 1 & \$ 1.307 & \$ 1.466.00 & - & - \\ CV + 20$		$0.1\pm01$	2015	64	11.03	\$ 744.00	-	-	-
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$			2016	64	9.38	\$ 674.00	-	-	-
$BSS = \begin{bmatrix} 2018 & 53 & \$7.59 & \$435.00 & - & - & - \\ 2019 & 53 & \$8.11 & \$542.00 & - & - & - \\ 2020 & 46 & \$5.69 & \$463.00 & - & - & - \\ 2005 & 5 & \$12.52 & \$58.00 & 28 & 147 & \$0.60 \\ 2005 & 5 & \$12.52 & \$58.00 & 23 & 102 & \$0.57 \\ 2006 & 4 & \$30.44 & \$124.00 & 48 & 229 & \$0.54 \\ 2007 & 3 & \$5.96 & \$35.00 & 15 & 66 & \$0.52 \\ 2008 & 4 & \$17.27 & \$67.00 & 26 & 103 & \$0.65 \\ \hline 98/01/04  448(190) & \$9.94 & \$2.319.00 & 14 & 3.270 & \$0.71 \\ 2005 & 148 & \$6.93 & \$1,162.00 & 10 & 1.758 & \$0.66 \\ CV & 2006 & 74 & \$8.53 & \$669.00 & 13 & 1,041 & \$0.64 \\ 2007 & 64 & \$7.87 & \$535.00 & 12 & 869 & \$0.62 \\ 2008 & 72 & \$9.73 & \$44.00 & 16 & 1,288 & \$0.65 \\ 2009 & 75 & \$12.44 & \$1,096.00 & 18 & 1,616 & \$0.68 \\ 2010 & 67 & \$12.62 & \$971.00 & 18 & 1,374 & \$0.71 \\ 2011 & 67 & \$14.81 & \$1,058.00 & 19 & 1,504 & \$0.70 \\ 2012 & 72 & \$25.42 & \$1,949.00 & - & - & - \\ 2013 & 72 & \$20.43 & \$1,760.00 & - & - & - \\ 2014 & 69 & \$24.20 & \$1,747.00 & - & - & - \\ 2014 & 69 & \$24.20 & \$1,747.00 & - & - & - \\ 2014 & 69 & \$24.20 & \$1,747.00 & - & - & - \\ 2017 & 63 & \$13.06 & \$1,001.00 & - & - & - \\ 2018 & 62 & \$13.08 & \$1,000.00 & - & - & - \\ CV+CP & 2015 & 69 & \$28.88 & \$2,173.00 & - & - & - \\ 2018 & 62 & \$13.08 & \$1,000.00 & - & - & - \\ 2019 & 61 & \$13.07 & \$1,466.00 & - & - & - \\ CP & 2007 & 1 & * & * & * & * & * & * \\ CP & 2007 & 1 & * & * & * & * & * & * \\ CP & 2007 & 1 & * & * & * & * & * & * \\ CP & 2007 & 1 & * & * & * & * & * & * & * \\ CP & 2007 & 1 & * & * & * & * & * & * & * & * \\ CP & 2007 & 1 & * & * & * & * & * & * & * & * & *$			2017	61	8.73	\$ 553.00	-	-	-
$BSS = \begin{bmatrix} 2019 & 53 & \$ 8.11 & \$ 542.00 & - & - & - \\ 2020 & 46 & \$ 5.69 & \$ 463.00 & - & - & - \\ 98/01/04 & 13(7) & \$ 16.53 & \$ 88.00 & 28 & 147 & \$ 0.60 \\ 2005 & 5 & \$ 12.52 & \$ 58.00 & 23 & 102 & \$ 0.57 \\ CP & 2006 & 4 & \$ 30.44 & \$ 124.00 & 48 & 229 & \$ 0.54 \\ 2007 & 3 & \$ 5.96 & \$ 35.00 & 15 & 666 & \$ 0.52 \\ 2008 & 4 & \$ 17.27 & \$ 67.00 & 26 & 103 & \$ 0.65 \\ 98/01/04 448(190) & \$ 9.94 & \$ 2,319.00 & 14 & 3,270 & \$ 0.71 \\ 2005 & 148 & \$ 6.93 & \$ 1,162.00 & 10 & 1,758 & \$ 0.66 \\ CV & 2006 & 74 & \$ 8.53 & \$ 669.00 & 13 & 1,041 & \$ 0.64 \\ 2007 & 64 & \$ 7.87 & \$ 535.00 & 12 & 869 & \$ 0.62 \\ 2008 & 72 & \$ 9.73 & \$ 844.00 & 16 & 1,288 & \$ 0.65 \\ 2008 & 72 & \$ 9.73 & \$ 844.00 & 16 & 1,288 & \$ 0.65 \\ 2008 & 72 & \$ 9.73 & \$ 844.00 & 18 & 1,616 & \$ 0.68 \\ 2010 & 67 & \$ 12.62 & \$ 971.00 & 18 & 1,374 & \$ 0.71 \\ 2011 & 67 & \$ 14.81 & \$ 1,058.00 & 19 & 1,504 & \$ 0.70 \\ 2012 & 72 & \$ 25.42 & \$ 1,949.00 & - & - & - \\ 2013 & 72 & \$ 20.43 & \$ 1,760.00 & - & - & - \\ 2014 & 69 & \$ 24.20 & \$ 1,747.00 & - & - & - \\ 2016 & 67 & \$ 19.09 & \$ 1,424.00 & - & - & - \\ 2016 & 67 & \$ 19.09 & \$ 1,424.00 & - & - & - \\ 2016 & 67 & \$ 13.06 & \$ 1,001.00 & - & - & - \\ 2017 & 63 & \$ 13.06 & \$ 1,001.00 & - & - & - \\ 2018 & 62 & \$ 13.08 & \$ 1,000.00 & - & - & - \\ 2018 & 62 & \$ 13.08 & \$ 1,000.00 & - & - & - \\ 2019 & 61 & \$ 13.77 & \$ 1,466.00 & - & - & - \\ 2020 & 59 & \$ 19.58 & \$ 1,300.00 & - & - & - \\ 2021 & 62 & \$ 19.91 & \$ 1,522.00 & - & - & - \\ 2021 & 62 & \$ 19.91 & \$ 1,522.00 & - & - & - \\ CP & 2007 & 1 & * & * & * & * & * \\ CP & 2007 & 1 & * & * & * & * & * \\ CP & 2006 & 1 & * & * & * & * & * & * \\ 2008 & 1 & * & * & * & * & * \\ 2008 & 1 & * & * & * & * & * \\ 2008 & 1 & * & * & * & * & * \\ 2008 & 1 & * & * & * & * & * \\ 2008 & 1 & * & * & * & * & * \\ CP & 2007 & 15 & \$ 1.12 & \$ 28.00 & 2 & 41 & \$ 0.668 \\ CV & 2006 & 15 & \$ 1.12 & \$ 28.00 & 2 & 41 & \$ 0.668 \\ CV & 2006 & 15 & \$ 1.12 & \$ 28.00 & 2 & 41 & \$ 0.668 \\ CV & 2008 & 1 & * & * & * & * & * \\ CP & 2005 & 4 & \$ 3.57 & \$ 17.00 & 100 & 38 & \$ 0.466 \\ CV & 2008 & 1 & * & * & * & * & * \\ CP $			2018	53	\$ 7.59	\$ 435.00	-	-	-
$BSS = \begin{bmatrix} 2020 & 46 & \$ 5.69 & \$ 463.00 & - & - & - \\ & 98/01/04 & 13(7) & \$ 16.53 & \$ 88.00 & 28 & 147 & \$ 0.60 \\ & 2005 & 5 & \$ 12.52 & \$ 58.00 & 23 & 102 & \$ 0.57 \\ & 2007 & 3 & \$ 5.96 & \$ 35.00 & 15 & 66 & \$ 0.52 \\ & 2008 & 4 & \$ 17.27 & \$ 67.00 & 26 & 103 & \$ 0.65 \\ & 98/01/04 & 44\$(190) & \$ 9.94 & \$ 2.319.00 & 14 & 3.270 & \$ 0.71 \\ & 2005 & 148 & \$ 6.93 & \$ 1.162.00 & 10 & 1.758 & \$ 0.66 \\ & 2007 & 64 & \$ 7.87 & \$ 535.00 & 13 & 1.041 & \$ 0.66 \\ & 2007 & 64 & \$ 7.87 & \$ 535.00 & 12 & 869 & \$ 0.62 \\ & 2008 & 72 & \$ 9.73 & \$ 844.00 & 16 & 1.288 & \$ 0.65 \\ & 2009 & 75 & \$ 12.44 & \$ 1.096.00 & 18 & 1.616 & \$ 0.68 \\ & 2010 & 67 & \$ 12.62 & \$ 971.00 & 18 & 1.374 & \$ 0.71 \\ & 2011 & 67 & \$ 12.62 & \$ 971.00 & 18 & 1.374 & \$ 0.70 \\ & 2012 & 72 & \$ 20.43 & \$ 1.760.00 & - & - \\ & 2013 & 72 & \$ 20.43 & \$ 1.760.00 & - & - \\ & CV + CP & 2015 & 69 & \$ 28.88 & \$ 1.098.00 & 19 & 1.504 & \$ 0.70 \\ & 2017 & 63 & \$ 13.06 & \$ 1.001.00 & - & - \\ & 2018 & 62 & \$ 13.08 & \$ 1.000.00 & - & - \\ & 2018 & 62 & \$ 13.08 & \$ 1.000.00 & - & - \\ & 2018 & 62 & \$ 13.08 & \$ 1.000.00 & - & - \\ & 2018 & 62 & \$ 13.08 & \$ 1.000.00 & - & - \\ & CP & 2006 & 1 & \ast 1.376 & \ast 1.8 & * \\ & CP & 2007 & 1 & \ast & \ast$			2019	53	\$ 8.11	\$ 542.00	-	-	-
$BSS = \begin{bmatrix} 98/01/04 & 13(7) & \$ 16.53 & \$ 88.00 & 28 & 147 & \$ 0.60 \\ 2005 & 5 & \$ 12.52 & \$ 58.00 & 23 & 102 & \$ 0.57 \\ CP & 2006 & 4 & \$ 30.44 & \$ 124.00 & 48 & 229 & \$ 0.54 \\ 2007 & 3 & \$ 5.96 & \$ 35.00 & 15 & 66 & \$ 0.52 \\ 2008 & 4 & \$ 17.27 & \$ 67.00 & 26 & 103 & \$ 0.65 \\ \hline 98/01/04 & 448(190) & \$ 9.94 & \$ 2,319.00 & 14 & 3,270 & \$ 0.71 \\ 2005 & 148 & \$ 6.93 & \$ 1,162.00 & 10 & 1,758 & \$ 0.66 \\ CV & 2006 & 74 & \$ 8.53 & \$ 669.00 & 13 & 1,041 & \$ 0.64 \\ 2007 & 64 & \$ 7.87 & \$ 535.00 & 12 & 869 & \$ 0.62 \\ 2008 & 72 & \$ 9.73 & \$ 844.00 & 16 & 1,288 & \$ 0.66 \\ 2007 & 64 & \$ 7.87 & \$ 535.00 & 12 & 869 & \$ 0.62 \\ 2008 & 72 & \$ 9.73 & \$ 44.00 & 18 & 1,374 & \$ 0.71 \\ 2010 & 67 & \$ 12.62 & \$ 971.00 & 18 & 1,374 & \$ 0.71 \\ 2011 & 67 & \$ 14.81 & \$ 1,058.00 & 19 & 1,504 & \$ 0.70 \\ 2012 & 72 & \$ 2.043 & \$ 1,760.00 & - & - & - \\ 2013 & 72 & \$ 2.043 & \$ 1,760.00 & - & - & - \\ 2013 & 72 & \$ 2.043 & \$ 1,760.00 & - & - & - \\ 2014 & 69 & \$ 24.20 & \$ 1,747.00 & - & - & - \\ CV+CP & 2015 & 69 & \$ 24.88 & \$ 2,173.00 & - & - & - \\ 2016 & 67 & \$ 19.09 & \$ 1,424.00 & - & - & - \\ 2017 & 63 & \$ 13.06 & \$ 1,001.00 & - & - & - \\ 2019 & 61 & \$ 13.07 & \$ 1,466.00 & - & - & - \\ 2019 & 61 & \$ 13.07 & \$ 1,466.00 & - & - & - \\ 2019 & 61 & \$ 13.07 & \$ 1,466.00 & - & - & - \\ 2019 & 61 & \$ 13.07 & \$ 1,466.00 & - & - & - \\ CP & 2007 & 1 & * & * & * & * & * \\ CP & 2007 & 1 & * & * & * & * & * \\ CP & 2007 & 1 & * & * & * & * & * \\ CP & 2007 & 1 & * & * & * & * & * \\ CP & 2007 & 1 & * & * & * & * & * & * \\ CP & 2007 & 1 & * & * & * & * & * & * \\ CP & 2007 & 1 & * & * & * & * & * & * & * \\ CP & 2007 & 1 & * & * & * & * & * & * & * & * \\ CP & 2007 & 1 & * & * & * & * & * & * & * & * & *$			2020	46	\$ 5.69	\$ 463.00	-	-	-
CP         2005         5         \$ 12.52         \$ 58.00         23         102         \$ 0.57           2007         3         \$ 5.96         \$ 35.00         15         66         \$ 0.52           2008         4         \$ 17.27         \$ 67.00         26         103         \$ 0.65           2007         3         \$ 5.96         \$ 35.00         14         3.270         \$ 0.71           2008         4         \$ 17.27         \$ 67.00         26         103         \$ 0.65           2005         148         \$ 6.93         \$ 1,162.00         10         1,758         \$ 0.66           2007         64         \$ 7.87         \$ 535.00         12         869         \$ 0.62           2008         72         \$ 9.73         \$ 844.00         16         1.288         \$ 0.65           2010         67         \$ 12.62         \$ 971.00         18         1,616         \$ 0.68           2011         67         \$ 14.81         \$ 1,058.00         19         1,504         \$ 0.71           2012         72         \$ 2.54.2         \$ 1,940.00         -         -         -           2013         72         \$ 2.04.3			98/01/04	13(7)	16.53	\$ 88.00	28	147	\$ 0.60
CP         2006         4         \$ 30.44         \$ 124.00         48         229         \$ 0.54           2007         3         \$ 5.96         \$ 35.00         15         66         \$ 0.52           2008         4         \$ 17.27         \$ 67.00         26         103         \$ 0.65           98/01/04 448(190)         \$ 9.94         \$ 2,319.00         14         3,270         \$ 0.71           2005         148         \$ 6.93         \$ 1,162.00         10         1,758         \$ 0.66           CV         2006         74         \$ 8.53         \$ 66,00         13         1,041         \$ 0.64           2007         64         \$ 7.87         \$ 535.00         12         869         \$ 0.62           2008         72         \$ 9.73         \$ 844.00         16         1,288         \$ 0.65           2010         67         \$ 12.42         \$ 971.00         18         1,374         \$ 0.71           2011         67         \$ 12.42         \$ 971.00         18         1,374         \$ 0.70           2012         72         \$ 25.42         \$ 1,494.00         -         -         -           2013         72         \$ 2			2005	5	12.52	58.00	23	102	0.57
$BSS = \begin{bmatrix} 2007 & 3 & \$ 5.96 & \$ 35.00 & 15 & 66 & \$ 0.52 \\ 2008 & 4 & \$ 17.27 & \$ 67.00 & 26 & 103 & \$ 0.65 \\ 98/01/04448(190) & \$ 9.94 & \$ 2,319.00 & 14 & 3,270 & \$ 0.71 \\ 2005 & 148 & \$ 6.93 & \$ 1,162.00 & 10 & 1,758 & \$ 0.66 \\ CV & 2006 & 74 & \$ 8.53 & \$ 669.00 & 13 & 1,041 & \$ 0.64 \\ 2007 & 64 & \$ 7.87 & \$ 535.00 & 12 & 869 & \$ 0.62 \\ 2008 & 72 & \$ 7.3 & \$ 44.00 & 16 & 1,288 & \$ 0.65 \\ 2008 & 72 & \$ 9.73 & \$ 44.00 & 18 & 1,616 & \$ 0.68 \\ 2009 & 75 & \$ 12.44 & \$ 1,096.00 & 18 & 1,616 & \$ 0.68 \\ 2010 & 67 & \$ 12.62 & \$ 971.00 & 18 & 1,374 & \$ 0.71 \\ 2011 & 67 & \$ 14.81 & \$ 1,058.00 & 19 & 1,504 & \$ 0.70 \\ 2012 & 72 & \$ 25.42 & \$ 1,949.00 & - & - & - \\ 2013 & 72 & \$ 20.43 & \$ 1,760.00 & - & - & - \\ 2013 & 72 & \$ 20.43 & \$ 1,760.00 & - & - & - \\ 2014 & 69 & \$ 24.20 & \$ 1,747.00 & - & - & - \\ 2016 & 67 & \$ 19.09 & \$ 1,424.00 & - & - & - \\ 2016 & 67 & \$ 19.09 & \$ 1,424.00 & - & - & - \\ 2017 & 63 & \$ 13.06 & \$ 1,001.00 & - & - & - \\ 2018 & 62 & \$ 13.08 & \$ 1,000.00 & - & - & - \\ 2019 & 61 & \$ 13.07 & \$ 1,466.00 & - & - & - \\ 2019 & 61 & \$ 13.07 & \$ 1,466.00 & - & - & - \\ 2019 & 61 & \$ 13.07 & \$ 1,466.00 & - & - & - \\ CP & 2007 & 1 & * & * & * & * & * \\ CP & 2007 & 1 & * & * & * & * & * \\ CP & 2007 & 1 & * & * & * & * & * \\ 2008 & 1 & * & * & * & * & * & * \\ CP & 2007 & 1 & * & * & * & * & * & * \\ 2008 & 1 & * & * & * & * & * & * \\ CP & 2007 & 1 & * & * & * & * & * & * & * \\ CP & 2007 & 1 & * & * & * & * & * & * & * & * & *$		CP	2006	4	30.44	\$ 124.00	48	229	0.54
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $			2007	3	5.96	35.00	15	66	0.52
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $			2008	4	\$ 17.27	\$ 67.00	26	103	0.65
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $			98/01/04 4	448(190)	\$ 9.94	\$ 2,319.00	14	3,270	\$ 0.71
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $			2005	148	6.93	\$ 1,162.00	10	1,758	\$ 0.66
$BSS = \begin{bmatrix} 2007 & 64 & \$ 7.87 & \$ 535.00 & 12 & 869 & \$ 0.62 \\ 2008 & 72 & \$ 9.73 & \$ 844.00 & 16 & 1,288 & \$ 0.65 \\ \end{bmatrix}$ $BSS = \begin{bmatrix} 2009 & 75 & \$ 12.44 & \$ 1,096.00 & 18 & 1,616 & \$ 0.68 \\ 2010 & 67 & \$ 12.62 & \$ 971.00 & 18 & 1,374 & \$ 0.71 \\ 2011 & 67 & \$ 14.81 & \$ 1,058.00 & 19 & 1,504 & \$ 0.70 \\ 2012 & 72 & \$ 25.42 & \$ 1,949.00 & - & - & - \\ 2013 & 72 & \$ 20.43 & \$ 1,760.00 & - & - & - \\ 2014 & 69 & \$ 24.20 & \$ 1,747.00 & - & - & - \\ 2016 & 67 & \$ 19.09 & \$ 1,424.00 & - & - & - \\ 2016 & 67 & \$ 19.09 & \$ 1,424.00 & - & - & - \\ 2017 & 63 & \$ 13.06 & \$ 1,001.00 & - & - & - \\ 2018 & 62 & \$ 13.08 & \$ 1,000.00 & - & - & - \\ 2019 & 61 & \$ 13.07 & \$ 1,466.00 & - & - & - \\ 2020 & 59 & \$ 19.58 & \$ 1,300.00 & - & - & - \\ 2021 & 62 & \$ 19.91 & \$ 1,522.00 & - & - & - \\ 2021 & 62 & \$ 19.91 & \$ 1,522.00 & - & - & - \\ CP & 2007 & 1 & * & * & * & * & * & * \\ CP & 2007 & 1 & * & * & * & * & * & * & * \\ 2008 & 1 & * & * & * & * & * & * & * & * \\ CP & 2007 & 1 & * & * & * & * & * & * & * & * \\ 2008 & 1 & * & * & * & * & * & * & * & * & *$		CV	2006	74	8.53	\$ 669.00	13	1,041	0.64
$BSS = \begin{bmatrix} 2008 & 72 & \$ 9.73 & \$ 844.00 & 16 & 1,288 & \$ 0.65 \\ 2009 & 75 & \$ 12.44 & \$ 1,096.00 & 18 & 1,616 & \$ 0.68 \\ 2010 & 67 & \$ 12.62 & \$ 971.00 & 18 & 1,374 & \$ 0.71 \\ 2011 & 67 & \$ 14.81 & \$ 1,058.00 & 19 & 1,504 & \$ 0.70 \\ 2012 & 72 & \$ 25.42 & \$ 1,949.00 & - & - & - \\ 2013 & 72 & \$ 20.43 & \$ 1,760.00 & - & - & - \\ 2014 & 69 & \$ 24.20 & \$ 1,747.00 & - & - & - \\ 2016 & 67 & \$ 19.09 & \$ 1,424.00 & - & - & - \\ 2016 & 67 & \$ 19.09 & \$ 1,424.00 & - & - & - \\ 2018 & 62 & \$ 13.06 & \$ 1,001.00 & - & - & - \\ 2019 & 61 & \$ 13.07 & \$ 1,466.00 & - & - & - \\ 2020 & 59 & \$ 19.58 & \$ 1,300.00 & - & - & - \\ 2021 & 62 & \$ 19.91 & \$ 1,522.00 & - & - & - \\ 2020 & 1 & * & * & * & * & * \\ CP & 2007 & 1 & * & * & * & * & * & * \\ CP & 2007 & 1 & * & * & * & * & * & * \\ 2008 & 1 & * & * & * & * & * & * \\ CP & 2007 & 1 & * & * & * & * & * & * & * \\ 2008 & 1 & * & * & * & * & * & * & * & * \\ CP & 2007 & 1 & * & * & * & * & * & * & * & * & *$			2007	64	\$ 7.87	\$ 535.00	12	869	\$ 0.62
BSS         2009         75         \$ 12.44         \$ 1,096.00         18         1,616         \$ 0.68           BSS         2010         67         \$ 12.62         \$ 971.00         18         1,374         \$ 0.71           2011         67         \$ 14.81         \$ 1,058.00         19         1,504         \$ 0.70           2012         72         \$ 25.42         \$ 1,949.00         -         -         -           2013         72         \$ 20.43         \$ 1,760.00         -         -         -           2014         69         \$ 24.20         \$ 1,747.00         -         -         -           2016         67         \$ 19.09         \$ 1,424.00         -         -         -           2017         63         \$ 13.06         \$ 1,001.00         -         -         -           2018         62         \$ 13.08         \$ 1,000.00         -         -         -           2019         61         \$ 13.07         \$ 1,466.00         -         -         -           2020         59         \$ 19.91         \$ 1,522.00         -         -         -           2021         62         \$ 19.91         \$ 1,5			2008	72	\$ 9.73	\$ 844.00	16	1,288	\$ 0.65
$\begin{array}{c c c c c c c c c c c c c c c c c c c $			2009	75	\$ 12.44	\$ 1,096.00	18	$1,\!616$	0.68
$\frac{2011}{2012}  \begin{array}{c} 67 \\ 2012 \\ 2012 \\ 72 \\ 2013 \\ 72 \\ 2013 \\ 72 \\ 2014 \\ 69 \\ 2014 \\ 69 \\ 2014 \\ 69 \\ 2015 \\ 2016 \\ 67 \\ 2016 \\ 67 \\ 2016 \\ 67 \\ 2016 \\ 67 \\ 2016 \\ 67 \\ 2016 \\ 67 \\ 2016 \\ 67 \\ 2016 \\ 67 \\ 2017 \\ 63 \\ 21308 \\ 21,73.00 \\ - \\ - \\ - \\ - \\ 2017 \\ 63 \\ 21,747.00 \\ - \\ - \\ - \\ - \\ - \\ - \\ - \\ - \\ - \\$	BSS		2010	67	\$ 12.62	\$ 971.00	18	$1,\!374$	0.71
$\begin{array}{c c c c c c c c c c c c c c c c c c c $			2011	67	\$ 14.81	1,058.00	19	1,504	\$ 0.70
$\frac{2013}{2014}  \begin{array}{c} 72 \\ 9 \\ 2014 \\ 69 \\ 2014 \\ 69 \\ 2015 \\ 69 \\ 2015 \\ 69 \\ 2015 \\ 69 \\ 2016 \\ 67 \\ 9 \\ 2016 \\ 67 \\ 9 \\ 2016 \\ 67 \\ 9 \\ 2017 \\ 63 \\ 9 \\ 13.06 \\ 9 \\ 1424.00 \\ - \\ - \\ - \\ - \\ 2017 \\ 2017 \\ 63 \\ 9 \\ 13.06 \\ 9 \\ 1424.00 \\ - \\ - \\ - \\ - \\ 2017 \\ 2018 \\ 62 \\ 9 \\ 13.06 \\ 9 \\ 1424.00 \\ - \\ - \\ - \\ - \\ - \\ - \\ 2018 \\ 2018 \\ 62 \\ 9 \\ 13.07 \\ 9 \\ 1,466.00 \\ - \\ - \\ - \\ - \\ - \\ - \\ 2020 \\ 59 \\ 9 \\ 19.58 \\ 9 \\ 1,300.00 \\ - \\ - \\ - \\ - \\ - \\ - \\ - \\ - \\ - \\$			2012	72	25.42	1,949.00	-	-	-
$\frac{2014}{CV+CP} \begin{array}{cccccccccccccccccccccccccccccccccccc$			2013	72	\$ 20.43	1,760.00	-	-	-
$\frac{\text{CV+CP}}{2016} = 2015 & 69 & \$ 28.88 & \$ 2,173.00 & - & - & - \\ 2016 & 67 & \$ 19.09 & \$ 1,424.00 & - & - & - \\ 2017 & 63 & \$ 13.06 & \$ 1,001.00 & - & - & - \\ 2018 & 62 & \$ 13.08 & \$ 1,000.00 & - & - & - \\ 2019 & 61 & \$ 13.07 & \$ 1,466.00 & - & - & - \\ 2020 & 59 & \$ 19.58 & \$ 1,300.00 & - & - & - \\ 2021 & 62 & \$ 19.91 & \$ 1,522.00 & - & - & - \\ 2021 & 62 & \$ 19.91 & \$ 1,522.00 & - & - & - \\ \frac{2026 & 1 & * & * & * & * & * \\ \text{CP} & 2007 & 1 & * & * & * & * & * \\ 2008 & 1 & * & * & * & * & * & * \\ 2008 & 1 & * & * & * & * & * & * \\ \frac{2005 & 4 & \$ 3.57 & \$ 17.00 & 10 & 38 & \$ 0.46}{2 & 2006 & 15 & \$ 1.12 & \$ 28.00 & 2 & 41 & \$ 0.68}$			2014	69	\$ 24.20	\$ 1,747.00	-	-	-
$\frac{2016}{2017}  \begin{array}{c} 67  \$ 19.09  \$ 1,424.00  -  -  -  - \\ 2017  63  \$ 13.06  \$ 1,001.00  -  -  - \\ 2018  62  \$ 13.08  \$ 1,000.00  -  -  - \\ 2019  61  \$ 13.07  \$ 1,466.00  -  -  - \\ 2020  59  \$ 19.58  \$ 1,300.00  -  -  - \\ 2021  62  \$ 19.91  \$ 1,522.00  -  -  - \\ 2021  62  \$ 19.91  \$ 1,522.00  -  -  - \\ \hline \\ \frac{2006  1  *  *  *  *  *  * \\ 2008  1  *  *  *  *  *  * \\ 2008  1  *  *  *  *  * \\ 2008  1  *  *  *  *  * \\ \hline \\ \frac{2005  4  \$ 3.57  \$ 17.00  10  38  \$ 0.46}{2006  15  \$ 1.12  \$ 28.00  2  41  \$ 0.68} \\ \end{array}$		CV+CP	2015	69	\$ 28.88	\$ 2,173.00	-	-	-
$\frac{2017}{2018}  \begin{array}{c} 63 \\ 62 \\ 2018 \\ 2019 \\ 61 \\ 2019 \\ 61 \\ 2019 \\ 61 \\ 2019 \\ 61 \\ 2020 \\ 59 \\ 519 \\ 513.07 \\ 51,466.00 \\ - \\ - \\ - \\ - \\ 2020 \\ 59 \\ 519.58 \\ 51,300.00 \\ - \\ - \\ - \\ - \\ - \\ - \\ - \\ - \\ - \\$			2016	67	\$ 19.09	\$ 1,424.00	-	-	-
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$			2017	63	\$ 13.06 © 12.00	\$ 1,001.00	-	-	-
$\frac{2019}{2020} \begin{array}{c} 61 \\ 513.07 \\ 51,406.00 \\ - \\ - \\ - \\ - \\ - \\ - \\ - \\ - \\ - \\$			2018	62 C1	\$ 13.08 © 12.07	\$ 1,000.00	-	-	-
$\frac{2020}{2021}  \begin{array}{c} 59 & 5 & 19.58 & 5 & 1,300.00 & - & - & - \\ 2021 & 62 & \$ & 19.91 & \$ & 1,522.00 & - & - & - \\ \\ \hline \\ CP & 2006 & 1 & * & * & * & * & * & * \\ 2008 & 1 & * & * & * & * & * & * \\ \hline \\ \hline \\ CV & 2006 & 15 & \$ & 1.12 & \$ & 28.00 & 2 & 41 & \$ & 0.68 \end{array}$			2019	01 50	5 13.07 © 10 59	\$ 1,400.00 \$ 1,200.00	-	-	-
$\frac{2021}{CV} \begin{array}{c} 02 \\ 02 \\ 02 \\ 02 \\ 02 \\ 02 \\ 02 \\ 02 $			2020	09 62	5 19.00 \$ 10.01	\$ 1,500.00 \$ 1,522.00	-	-	-
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$			2021	02	0 19.91	\$ 1,522.00			
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$			2006	1	*	*	*	*	*
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		CP	2007	1	*	*	*	*	*
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$			2008	1	*	*	*	*	*
$CV = 2006 = 15 \qquad \$ \ 1.12 \qquad \$ \ 28.00 \qquad 2 \qquad 41 \qquad \$ \ 0.68$			2005	4	3.57	\$ 17.00	10	38	\$ 0.46
		CU	2006	15	\$ 1.12	\$ 28.00	2	41	0.68
2007 16 $$4.89$ $$97.00$ 8 191 $$0.51$		υv	2007	16	\$ 4.89	\$ 97.00	8	191	0.51
2008 21 \$ 5.40 \$ 149.00 8 230 \$ 0.65			2008	21	5.40	\$ 149.00	8	230	0.65
2009 12 \$ 6.63 \$ 149.00 10 204 \$ 0.73			2009	12	\$ 6.63	\$ 149.00	10	204	\$ 0.73
2010			2010	4	\$ 4.89	\$ 19.00	7	26	0.71

Table 4.20: Fishery expenditures - bait usage and costs, CR Program fisheries (continued)

			Vessels	Bait costs (\$1000)		Bait usage (1	1000  lbs	Price (\$/lb)
		-		Per vessel, median	Total	Per vessel, median	Total	Weighted average
BST		2013	17	\$ 6.83	\$ 163.00	-	-	-
		2014	37	9.92	\$ 574.00	-	-	-
		2015	51	\$ 10.66	\$ 1,042.00	-	-	-
	CV+CP	2016	44	14.97	\$ 769.00	-	-	-
		2017	13	\$ 4.96	\$ 82.00	-	-	-
		2018	27	5.63	\$ 182.00	-	-	-
		2019	13	3.95	\$ 61.00	-	-	-
		2020	19	3.67	\$ 123.00	-	-	-
		2021	18	\$ 8.06	\$ 145.00	-	-	-
PIK	CV	98/01/04	35(35)	\$ 5.25	\$ 187.00	7	249	\$ 0.75
		98/01/04	72(72)	6.68	\$ 482.00	9	668	\$ 0.72
		2009	7	\$ 5.40	\$ 72.00	8	96	0.74
		2010	13	13.19	\$ 231.00	22	329	\$ 0.70
SMB	CV	2011	18	14.41	349.00	17	448	0.78
		2012	17	14.38	\$ 280.00	-	-	-
		2014	4	17.64	\$ 87.00	-	-	-
		2015	3	\$ 12.66	\$ 28.00	-	-	-
	CP	98/01/04	2(1)	*	*	*	*	*
WAI	CV	98/01/04	3(3)	\$ 4.72	\$ 15.00	7	22	\$ 0.68

Table 4.20: Fishery expenditures - bait usage and costs, CR Program fisheries (continued)

Note Data shown by calendar year. Asterisks indicate data suppressed due to confidentiality All dollar values are adjusted for inflation to 2021-equivalent value. 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. No catcher/processor operations reported fishing activity in the SMB fishery from 2009 to 2012.

Source NMFS AFSC BSAI Crab Economic Data.

		Fuel expenses (\$1,000)		Gallons purch	nased (1,000)	Fuel price ( $\$/gal$ )
		Total	Median	Total	Median	Average
	2012	\$ 1,451	\$ 273	355	70	\$ 4.09
	2013	\$ 1,933	\$ 351	455	85	4.25
	2014	\$ 1,583	\$ 319	386	75	\$ 4.10
	2015	3,472	\$ 250	431	78	\$ 8.06
ATC	2016	\$ 1,303	\$ 240	531	101	\$ 2.45
AIG	2017	\$ 1,169	\$ 241	469	100	\$ 2.49
	2018	\$ 1,327	235	445	91	\$ 2.98
	2019	\$ 1,667	252	613	87	\$ 2.72
	2020	\$1,479	\$ 225	557	106	\$ 2.66
	2021	\$ 1,308	\$ 258	493	92	\$ 2.65
	2012	\$ 3,542	\$ 39	731	8	\$ 4.85
	2013	3,877	\$ 43	813	9	4.77
	2014	2,919	35	681	8	\$ 4.29
	2015	\$ 2,251	\$ 28	670	8	\$ 3.36
BBR	2016	\$ 1,528	\$ 21	573	8	\$ 2.67
	2017	1,739	\$ 22	602	8	\$ 2.89
	2018	\$ 1,386	\$ 21	447	7	\$ 3.10
	2019	\$ 1,392	\$ 24	458	8	3.04
	2020	\$ 919	\$17	346	6	\$ 2.65
	2012	\$ 16,465	\$ 187	3,431	38	\$ 4.80
	2013	12,717	134	2,645	28	4.81
	2014	9,345	\$ 113	2,172	27	\$ 4.30
	2015	10,315	\$ 101	2,398	30	\$ 4.30
DCC	2016	\$ 4,490	\$ 60	$1,\!667$	20	\$ 2.69
000	2017	3,479	\$ 46	1,241	16	\$ 2.80
	2018	\$ 3,644	\$ 49	1,200	16	\$ 3.04
	2019	\$ 4,318	\$ 60	1,420	19	\$ 3.04
	2020	5,362	\$ 74	2,023	29	2.65
	2021	\$ 26,013	\$ 110	2,792	45	\$ 9.32
	2013	\$ 604	\$ 26	137	6	\$ 4.40
	2014	\$ 2,345	\$52	546	12	\$ 4.30
	2015	\$ 4,252	\$53	1,208	16	\$ 3.52
	2016	\$ 2,164	\$ 42	790	16	\$ 2.74
BST	2017	\$ 297	\$15	106	5	\$ 2.80
	2018	\$ 772	\$ 20	235	6	\$ 3.28
	2019	\$ 375	\$ 20	123	6	3.05
	2020	\$ 373	\$14	148	5	\$ 2.52
	2021	\$ 596	\$ 25	248	9	\$ 2.41
	2012	\$ 1,461	\$ 96	296	19	\$ 4.93
SMB	2014	\$ 212	\$50	47	11	4.54
	2015	\$ 93	\$ 36	26	10	\$ 3.62

Table 4.21: Fishery expenditures - vessel fuel costs, CR Program fisheries

 ${\bf Note}$  All dollar values are adjusted for inflation to 2021-equivalent value.

	Port	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	$\operatorname{Sep}$	Oct	Nov	Dec
	Dutch	-	\$ 1.46	\$ 1.47	\$ 1.62	\$ 1.69	\$ 1.70	\$ 1.67	\$ 1.67	\$ 1.66	\$ 1.35	\$ 1.29	\$ 1.51
	Harbor												
1999	Kodiak	-	1.54	1.54	1.65	1.65	1.68	1.68	1.70	1.71	\$ 1.21	\$ 1.20	1.44
	Seattle	0.83	0.99	\$ 1.19	1.38	\$ 1.21	1.39	\$ 1.33	1.27	1.32	0.91	0.82	\$ 1.31
	Dutch	\$ 1.65	\$ 1.96	-	\$ 1.99	\$ 2.01	\$ 2.13	\$ 2.34	\$ 2.41	\$ 2.42	\$ 1.80	\$ 2.19	\$ 2.19
	Harbor												
2000	Kodiak	1.67	2.06	\$ 2.00	2.07	2.07	2.18	\$ 2.30	\$ 2.43	2.43	\$ 1.81	2.12	\$ 2.12
	Seattle	\$ 1.45	1.44	\$ 1.45	\$ 1.66	\$ 1.50	\$ 2.10	\$ 2.11	\$ 2.00	\$ 2.16	\$ 1.49	1.65	1.65
	Adak	-	\$ 2.14	\$ 2.06	\$ 2.14	\$ 1.96	\$ 1.96	\$ 2.06	-	\$ 1.89	-	\$ 2.29	\$ 2.14
	Dutch	2.37	2.07	\$ 2.06	2.07	1.94	\$ 2.03	\$ 2.04	1.94	1.82	\$ 2.23	\$ 2.23	\$ 2.09
2001	Harbor												
2001	Kodiak	2.38	\$ 2.02	\$ 2.03	\$ 2.03	1.99	\$ 2.03	\$ 1.92	1.86	1.67	\$ 2.29	2.17	\$ 2.03
	Seattle	\$ 1.94	\$ 1.61	\$ 1.56	\$ 1.44	\$ 1.38	\$ 1.67	\$ 1.28	\$ 1.27	\$ 1.00	\$ 1.64	\$ 1.55	\$ 1.61
	Adak	\$ 1.86	\$ 1.99	-	-	\$ 1.86	\$ 1.97	\$ 2.12	-	-	\$ 1.86	\$ 1.86	\$ 1.86
	Dutch	1.69	1.66	\$ 1.66	\$ 1.66	\$ 1.66	1.74	\$ 1.81	1.85	1.88	1.45	1.44	1.59
2002	Harbor												
2002	Kodiak	1.62	1.61	\$ 1.61	1.86	1.59	1.68	\$ 1.73	1.73	1.73	1.52	1.51	1.55
	Seattle	\$ 1.11	1.45	\$ 1.44	\$ 1.46	\$ 1.43	1.65	\$ 1.47	\$ 1.62	1.45	\$ 1.01	\$ 1.25	\$ 1.38
	Adak	\$ 2.08	\$ 2.30	\$ 2.30	\$ 2.22	\$ 2.22	\$ 2.22	\$ 2.22	\$ 2.22	\$ 2.22	\$ 2.08	-	\$ 2.40
	Dutch	1.85	2.11	2.07	2.07	2.07	2.15	2.15	2.15	2.15	1.93	\$ 2.09	\$ 2.22
2003	Harbor												
2000	Kodiak	1.71	\$ 2.02	\$ 1.96	1.96	1.97	1.94	\$ 2.13	1.94	1.94	1.77	1.98	2.17
	Seattle	\$ 1.64	\$ 1.70	\$ 1.65	\$ 1.80	\$ 1.78	\$ 1.77	\$ 1.68	\$ 1.71	\$ 1.74	\$ 1.66	\$ 2.41	\$ 1.98
	Adak	\$ 2.24	2.45	\$ 2.73	\$ 2.73	\$ 2.73	-	2.87	2.94	2.94	\$ 2.24	\$ 2.24	-
	Dutch	2.09	\$ 2.30	2.48	2.48	2.58	2.59	\$ 2.72	\$ 2.80	2.80	\$ 2.09	\$ 2.29	\$ 2.23
2004	Harbor												
2001	Kodiak	\$ 1.89	\$ 2.28	\$ 2.46	\$ 2.49	\$ 2.49	\$ 2.49	\$ 2.56	\$ 2.75	2.77	\$ 1.92	\$ 2.07	\$ 2.10
	Seattle	\$ 1.79	\$ 2.46	\$ 2.38	\$ 2.32	\$ 2.34	\$ 2.36	\$ 2.77	\$ 2.80	\$ 2.35	\$ 1.97	\$ 2.07	\$ 2.12
	Adak	\$ 2.85	-	3.59	3.12	3.19	3.40	3.59	3.59	3.59	2.85	2.91	3.00
	Dutch	2.71	2.98	2.98	2.98	\$ 3.12	3.40	3.43	3.51	3.48	2.71	\$ 2.82	\$ 2.91
2005	Harbor												
2000	Kodiak	\$ 2.60	\$ 3.02	\$ 3.02	\$ 3.02	\$ 3.02	\$ 3.36	\$ 3.63	3.57	\$ 3.52	\$ 2.60	\$ 2.66	\$ 2.86
	Seattle	\$ 2.25	\$ 3.03	\$ 2.82	\$ 3.02	\$ 3.21	\$ 3.89	\$ 3.82	\$ 3.43	\$ 3.00	\$ 2.49	\$ 3.03	\$ 3.09
	Adak	-	4.47	\$ 3.71	\$ 3.71	\$ 3.71	\$ 3.93	\$ 3.93	3.87	3.87	\$ 3.37	\$ 3.37	-

Table 4.22: Average monthly fuel prices for selected ports

	Port	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	$\operatorname{Sep}$	Oct	Nov	Dec
	Dutch	\$ 3.25	\$ 3.48	\$ 3.56	\$ 3.55	\$ 3.64	\$ 3.75	\$ 3.57	\$ 3.39	\$ 3.36	\$ 3.24	\$ 3.24	\$ 3.24
2000	Harbor												
2006	Kodiak	3.27	3.53	3.54	3.54	\$ 3.61	3.80	\$ 3.61	\$ 3.34	3.41	\$ 3.28	\$ 3.28	\$ 3.31
	Seattle	3.05	\$ 3.71	\$ 3.81	3.65	3.89	3.97	\$ 3.23	\$ 3.25	3.55	\$ 2.88	\$ 3.32	\$ 3.20
	Adak	\$ 3.83	\$ 3.66	\$ 3.66	\$ 3.66	\$ 3.66	\$ 3.66	\$ 3.75	\$ 3.83	\$ 4.10	\$ 3.83	\$ 3.54	\$ 3.41
	Dutch	\$ 3.28	\$ 3.36	\$ 3.48	\$ 3.48	\$ 3.50	\$ 3.60	\$ 3.62	\$ 3.83	\$ 4.08	\$ 3.22	\$ 3.18	\$ 3.20
	Harbor	+ 0.20				+ 0.00				+	* •	+	+ 0.20
2007	Kodiak	\$ 3.25	\$ 3.32	\$ 3.45	\$ 3.45	\$ 3.45	\$ 3.64	\$ 3.58	\$ 3.77	\$ 3.85	\$ 3.22	\$ 3.19	\$ 3.18
	Seattle	\$ 3.41	\$ 3.56	\$ 3.56	\$ 3.64	\$ 3.71	\$ 3.55	\$ 3.82	\$ 4.37	\$ 4.14	\$ 3.33	\$ 3.18	\$ 3.47
	Adak	\$ 4.02		\$ 5 22	\$ 5 66	\$ 5.85	\$ 5.85	\$ 5.85	\$ 5.85	\$ 5.85	\$ 4 02	\$ 4 11	\$ 1 53
	Dutch	\$3.76	_	0.22 \$ 5.44	\$5.00 \$5.62	\$ 5.80	\$ 5.60	\$ 5.00	\$ 4.05	\$ 4.84	\$ 3.78	\$ 4 04	\$ 4.69
	Harbor	ψ 0.10		ψ 0.11	Ψ 0.0 <u>2</u>	φ 0.00	ψ 0.00	ψ 0.11	ψ 1.00	ψ 1.01	ψ 0.10	ψ 1.01	ψ 1.05
2008	Kodiak	\$ 3 79	-	\$ 5 34	\$ 5 52	\$ 5.83	\$ 5 64	\$ 5.32	\$ 5.00	\$ 4 14	\$ 3 85	\$ 3 98	\$ 4 76
	Seattle	\$ 4.19	-	\$5.58	\$ 5.55	\$ 5.42	\$ 5.12	\$ 3.94	\$3.70	\$ 3.06	\$ 3.99	\$ 4.44	\$ 4.72
		0 F 00	<b>A B O D</b>	0.00	0.00	0.12	0.11	0.070	0.70	0.00	0.00	Ф 1.01	Φ 0.00
	Adak	\$ 5.80	\$ 3.92	\$ 3.60	\$ 3.60	\$ 3.60	- 0.0.47	\$ 3.73	\$ 3.73	\$ 3.73	\$ 4.17	\$ 4.04	\$ 3.92
	Dutch	\$ 3.81	\$ 3.19	\$ 3.19	\$ 3.47	\$ 3.43	\$ 3.47	\$ 3.62	\$ 3.62	\$ 3.68	\$ 3.38	\$ 3.19	\$ 3.19
2009	Harbor	<b>A A C A</b>	Ф. <b>р.</b> 1.1	Ф. О. О.О.	<b>A A A C</b>	<b>A A A C</b>	<b>0 0 10</b>	<b>0.0.</b>	Ф. О. 1 <b>г</b>	<b>0</b> 0 10	<b>0</b> 0 40	ф. о. оо	0.0.11
	Kodiak	\$ 3.60	\$ 3.11	\$ 3.23	\$ 3.36	\$ 3.36	\$ 3.40	\$ 3.60	\$ 3.45	\$ 3.48	\$ 3.42	\$ 3.23	\$ 3.11
	Seattle	\$ 2.85	\$ 2.83	\$ 2.99	\$ 2.99	\$ 3.04	\$ 3.38	\$ 3.23	\$ 3.37	\$ 3.36	\$ 2.69	\$ 2.50	\$ 2.61
	Adak	3.69	3.85	3.85	3.85	3.85	3.93	3.93	\$ 4.12	\$ 4.12	\$ 3.69	-	3.69
	Dutch	3.58	3.76	3.74	3.85	3.76	3.76	3.76	3.95	3.95	3.63	3.58	3.66
2010	Harbor												
2010	Kodiak	3.44	3.87	3.81	3.69	3.69	3.69	\$ 3.72	3.88	3.87	3.63	3.56	3.69
	Seattle	3.48	3.88	3.59	3.42	3.56	3.69	3.57	3.85	3.78	\$ 3.30	3.39	3.64
	Adak	\$ 4.03	\$ 5.18	\$ 5.00	-	\$ 5.06	\$ 4.94	\$ 4.94	5.08	\$ 5.30	\$ 4.24	\$ 4.46	\$ 4.82
	Dutch	3.86	\$ 4.62	4.65	4.65	4.65	\$4.65	\$4.65	4.65	4.65	3.99	\$ 4.11	4.53
0011	Harbor												
2011	Kodiak	3.79	\$ 4.62	\$ 4.72	4.67	\$ 4.69	\$ 4.61	\$ 4.69	\$ 4.66	4.68	3.91	\$ 3.96	\$ 4.52
	Seattle	3.81	4.88	4.76	4.41	4.53	4.78	\$ 4.42	4.53	4.44	\$ 4.02	4.52	4.78
	Adak	\$ 5.20	\$ 5.15	\$ 5.15	\$ 5.15	\$ 5.15	\$ 5.15	\$ 5.15	\$ 5.15	\$ 5.15	_	_	_
	Dutch	\$4.56	\$ 4.91	\$ 4.88	\$ 4.68	\$ 4.56	\$4.68	\$ 4.74	\$ 4.74	\$ 4.74	\$4.56	\$ 4.80	\$ 4.80
2012	Harbor												
2012	Kodiak	\$ 4.45	\$ 4.91	\$ 4.85	\$ 4.66	\$ 4.48	\$ 4.62	\$ 4.79	\$ 4.72	\$ 4.72	\$ 4.50	\$ 4.59	\$ 4.81
	Seattle	\$ 4.20	\$ 4.84	\$ 4.24	\$ 3.90	\$ 4.46	\$ 4.86	\$ 4.52	\$ 4.49	\$ 4.37	\$ 4.33	\$ 4.72	\$ 4.89
	Adak	_	\$ 5.11	\$ 5.11	-	\$ 5.11	\$ 5.11	\$ 5.11	\$ 5.11	\$ 5.11	\$ 5.06	\$ 5.06	_

Table 4.22: Average monthly fuel prices for selected ports (continued)

	Port	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	Dutch	\$ 4.66	\$ 4.65	\$ 4.65	\$ 4.65	\$ 4.67	\$ 4.69	\$ 4.66	\$ 4.65	\$ 4.58	\$ 4.60	\$ 4.67	\$ 4.65
2013	Harbor												
2013	Kodiak	4.59	4.65	\$ 4.66	\$ 4.62	\$ 4.66	\$ 4.69	\$ 4.69	\$ 4.61	4.59	4.58	4.65	4.64
	Seattle	4.17	\$ 4.13	4.17	\$ 4.12	\$ 4.32	\$ 4.35	\$ 4.21	\$ 4.19	4.27	\$ 4.32	\$ 4.33	\$ 4.32
	Adak	-	-	\$ 5.02	\$ 5.02	\$ 5.02	\$ 5.02	-	-	-	\$ 5.02	\$ 5.02	\$ 5.02
	Dutch	\$ 4.49	4.40	4.40	4.53	\$ 4.51	4.54	4.51	\$ 4.36	4.29	\$ 4.40	4.43	4.42
2014	Harbor												
2014	Kodiak	4.51	4.45	4.51	4.57	\$ 4.43	4.45	\$ 4.39	\$ 4.31	\$ 4.15	4.55	4.45	4.45
	Seattle	\$ 4.10	\$ 4.13	\$ 4.21	\$ 4.22	\$ 4.17	\$ 4.49	\$ 4.07	\$ 3.77	\$ 3.64	\$ 4.20	\$ 4.21	\$ 4.22
	Adak	\$ 4.97	\$ 4.95	\$ 4.97	\$ 4.97	-	\$ 4.48	-	\$ 4.24	-	4.97	4.97	4.97
	Dutch	3.98	3.68	3.68	3.77	3.68	3.39	\$ 3.39	3.39	3.39	3.85	3.79	3.69
2015	Harbor												
2010	Kodiak	3.90	3.39	3.44	3.55	3.57	3.49	3.25	\$ 3.24	3.08	3.37	3.36	3.38
	Seattle	\$ 3.02	\$ 3.07	\$ 3.33	\$ 3.21	\$ 2.91	\$ 2.73	\$ 2.72	\$ 2.62	\$ 2.41	\$ 2.72	\$ 3.06	\$ 2.74
	Adak	\$ 4.20	3.64	\$ 3.64	3.64	\$ 3.41	\$ 3.41	\$ 3.41	\$ 3.41	\$ 3.41	3.64	3.64	-
	Dutch	\$ 2.91	2.57	2.69	\$ 2.72	2.80	2.80	\$ 2.80	\$ 2.80	2.80	2.74	\$ 2.82	\$ 2.70
2016	Harbor												
2010	Kodiak	2.87	2.51	2.67	\$ 2.80	\$ 2.82	2.79	\$ 2.79	\$ 2.90	\$ 2.90	2.67	\$ 2.49	\$ 2.59
	Seattle	\$ 2.20	\$ 2.41	\$ 2.66	\$ 2.72	\$ 2.38	\$ 2.55	\$ 2.51	\$ 2.84	\$ 2.59	\$ 2.02	\$ 2.03	\$ 2.11
	Adak	\$ 3.36	-	3.55	3.55	3.55	3.51	-	3.55	\$ 3.34	\$ 3.36	3.35	-
	Dutch	2.78	2.91	2.85	2.85	\$ 2.70	2.87	3.07	3.07	\$ 3.23	2.91	2.87	2.87
2017	Harbor												
2017	Kodiak	\$ 2.90	\$ 2.90	2.90	\$ 2.90	2.90	\$ 2.93	\$ 3.06	\$ 3.00	\$ 3.12	\$ 2.90	\$ 2.90	\$ 2.90
	Seattle	\$ 2.84	\$ 2.53	\$ 2.70	\$ 2.55	\$ 2.68	\$ 2.99	\$ 2.82	\$ 3.14	\$ 3.11	\$ 2.68	\$ 2.69	\$ 2.70
	Adak	\$ 3.26	3.50	-	\$ 3.50	\$ 3.50	\$ 3.86	\$ 3.86	3.86	3.86	3.51	3.49	3.49
	Dutch	\$ 3.11	\$ 3.01	\$ 3.22	\$ 3.22	\$ 3.62	\$ 3.33	\$ 3.33	3.44	3.44	3.09	\$ 3.06	\$ 3.09
2018	Harbor												
2010	Kodiak	\$ 3.00	2.97	\$ 3.20	3.37	3.38	\$ 3.47	\$ 3.39	\$ 3.44	\$ 3.32	\$ 2.99	\$ 3.06	\$ 3.00
	Seattle	\$ 3.00	\$ 3.33	\$ 3.50	\$ 3.48	\$ 3.34	\$ 3.29	\$ 3.46	\$ 3.44	\$ 3.15	\$ 3.08	\$ 2.81	\$ 3.23
	Adak	\$ 3.79	\$ 3.83	\$ 3.83	\$ 3.83	3.82	\$ 3.82	\$ 3.82	3.82	\$ 3.82	3.79	-	3.79
	Dutch	3.48	3.27	3.38	3.38	3.38	3.32	\$ 3.32	3.31	3.38	3.16	3.43	3.16
2019	Harbor												
2010	Kodiak	\$ 3.28	3.08	\$ 3.14	\$ 3.23	3.17	\$ 3.20	\$ 3.20	\$ 3.29	\$ 3.31	\$ 3.11	\$ 3.10	\$ 3.09
	Seattle	\$ 2.82	\$ 3.32	\$ 3.17	\$ 2.89	\$ 3.12	\$ 2.94	\$ 2.88	\$ 3.45	\$ 3.14	\$ 2.84	\$ 3.17	\$ 3.44
	Adak	3.78	\$ 3.02	\$ 3.02	\$ 3.01	\$ 3.02	\$ 3.02	\$ 3.02	\$ 3.02	\$ 3.02	3.78	3.78	3.78

Table 4.22: Average monthly fuel prices for selected ports (continued)

	Port	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	Dutch Harbor	\$ 3.34	\$ 2.64	\$ 2.55	\$ 2.59	\$ 2.55	\$ 2.66	\$ 2.66	\$ 2.66	\$ 2.66	\$ 3.44	\$ 3.44	\$ 2.19
2020	Kodiak Seattle		2.39 1.97	2.26 2.08	\$ 2.23 \$ 2.31	2.23 2.30	\$ 2.23 \$ 2.09	2.22 2.51	\$ 2.23 \$ 2.42	2.23 2.65		$   \begin{array}{l}       \$ 3.28 \\       \$ 2.56   \end{array} $	\$ 3.18 \$ 2.23
	Adak Dutch	\$ 2.89 \$ 2.55	\$ 2.89 \$ 2.85	2.89 3.21	\$ 2.89 \$ 3.20		\$ 3.72 \$ 3.40	\$ 3.72 \$ 3.40	\$ 3.72 \$ 3.68	- -	\$ 2.89 \$ 2.56	\$ 2.89 \$ 2.50	\$ 2.89 \$ 2.70
2021	Harbor Kodiak Seattle	\$ 2.24 \$ 2.40	\$ 2.69 \$ 3.23	\$ 2.74 \$ 3.71	\$ 2.99 \$ 3.41	\$ 2.94 \$ 3.53	\$ 3.14 \$ 3.30	\$ 3.14 \$ 3.58	\$ 3.23 \$ 3.42	-	\$ 2.28 \$ 2.26	\$ 2.44 \$ 2.63	2.65 3.22

Table 4.22: Average monthly fuel prices for selected ports (continued)

Note All dollar values are adjusted for inflation to 2021-equivalent value.

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

Table 4.23: Vessel-level mean operating costs and revenue residuals, BBR, BSS, and all CR Program fisheries in aggregate, 2017 to 2021.

	2012-2016	2017	2018	2019	2020	2021
All						
Number of active vessels	81	72	67	67	64	65
Pounds landed, millions	1,053	482	451	574	667	762
Quota pounds leased, thousands (% of landed)	753: (72%)	377: (78%)	357: (79%)	452: (79%)	510: (77%)	627: (82%)
Monetary values in \$1000 (\$2021)						
Gross ex-vessel revenue	\$ 3,226	\$ 2,552	\$ 2,395	2,979	3,285	\$ 4,442
Quota lease cost	(1,154): (36%)	(1,062): $(42%)$	(961): (40%)	(1,186): (40%)	(1,267): $(39%)$	(1,720): $(39%)$
Gross residual after lease cost	\$ 2,072: 64%	\$ 1,490: 58%	\$ 1,434: 60%	\$ 1,793: 60%	\$ 2,018: 61%	\$ 2,722: 61%
Provisions	(20): (1%)	(13): (0.5%)	(14): (0.6%)	(16): (0.5%)	(22): (0.7%)	(21): (0.5%)
Bait	(43): (1%)	(32): (1.2%)	(34): (1.4%)	(45): (1.5%)	(46): (1.4%)	(44): (1%)
Fuel	(190): (6%)	(85): (3.3%)	(99): (4.1%)	(110): (3.7%)	(122): (3.7%)	(426): (9.6%)
Non-labor vessel cost (Total)	(252): (8%)	(130): (5%)	(147): (6%)	(170): (6%)	(190): (6%)	(491): (11%)
Gross residual (non-labor)	\$ 1,820: 56%	\$ 1,360: 53%	\$ 1,287: 54%	\$ 1,622: 54%	\$ 1,829: 56%	\$ 2,230: 50%
Labor cost	(642): (20%)	(505): (20%)	(473): (20%)	(583): (20%)	(669): (20%)	(903): (20%)
Harvesting cost (Total)	(2,048): (64%)	(1,696): (66%)	(1,581): (66%)	(1,939): (65%)	(2,126): (65%)	(3,115): $(70%)$
Gross ex-vessel profit	\$ 1,178: 36%	\$ 855: 34%	\$ 814: 34%	\$ 1,040: 35%	\$ 1,159: 35%	\$ 1,327: 30%
BBR						
Number of active vessels	63	61	55	56	47	-
Pounds landed, millions	140	108	76	68	56	-
Quota pounds leased, thousands (% of landed)	95: (68%)	81: (75%)	61: (79%)	52: (77%)	44: (78%)	-
Monetary values in \$1000 (\$2021)						
Gross ex-vessel revenue	1,129	\$ 997	\$ 793	\$ 806	\$ 684	-
Quota lease cost	(490): (43%)	(476): (48%)	(407): (51%)	(399): (49%)	(344): (50%)	-
Gross residual after lease cost	\$ 639: 57%	\$ 521: 52%	\$ 386: 49%	\$ 407: 51%	\$ 339: 50%	-
Provisions	(5): (1%)	(5): (0.5%)	(4): (0.5%)	(4): (0.5%)	(5): (0.7%)	-
Bait	(9): (1%)	(8): (0.8%)	(7): (0.9%)	(9): (1.1%)	(9): (1.4%)	-
Fuel	(39): (4%)	(26): (2.6%)	(23): (3%)	(24): (2.9%)	(19): (2.7%)	
Non-labor vessel cost (Total)	(53): (5%)	(39): (4%)	(35): (4%)	(37): (5%)	(33): (5%)	
Gross residual (non-labor)	\$ 586: 52%	\$ 482: 48%	\$ 351: 44%	\$ 370: 46%	\$ 307: 45%	-
Labor cost	(202): (18%)	(170): (17%)	(134): (17%)	(130): (16%)	(112): (16%)	-
Harvesting cost (Total)	(745): (66%)	(685): (69%)	(575): (73%)	(566): (70%)	(489): (72%)	-
Gross ex-vessel profit	\$ 384: 34%	\$ 312: 31%	\$ 218: 27%	\$ 240: 30%	\$ 195: 28%	-
BSS						
Number of active vessels	70	63	62	61	59	62
Pounds landed, millions	901	337	292	441	563	701

Table 4.23: Vessel-level mean operating costs and revenue residuals, BBR, BSS, and all CR Program fisheries in aggregate, 2017 to 2021. *(continued)* 

	2012-2016	2017	2018	2019	2020	2021
Quota pounds leased, thousands (% of landed)	633: (71%)	261: (78%)	226: (77%)	347: (79%)	430: (76%)	571: (81%)
Monetary values in \$1000 (\$2021)						
Gross ex-vessel revenue	\$ 2,050	1,379	1,167	\$ 1,753	\$ 2,213	\$ 3,469
Quota lease cost	(697): (34%)	(514): (37%)	(433): (37%)	(657): (38%)	(843): (38%)	(1,349): (39%)
Gross residual after lease cost	\$ 1,353: 66%	\$ 865: 63%	\$ 734: 63%	\$ 1,095: 62%	\$ 1,370: 62%	\$ 2,121: 61%
Provisions	(12): (1%)	(6): (0.4%)	(7): (0.6%)	(8): (0.5%)	(14): (0.6%)	(16): (0.5%)
Bait	(23): (1%)	(14): (1%)	(15): (1.3%)	(23): (1.3%)	(21): (0.9%)	(25): (0.7%)
Fuel	(133): (6%)	(50): (3.6%)	(55): (4.7%)	(67): (3.8%)	(87): (3.9%)	(420): (12.1%)
Non-labor vessel cost (Total)	(167): (8%)	(71): (5%)	(76): (7%)	(98): (6%)	(122): (6%)	(460): (13%)
Gross residual (non-labor)	\$ 1,186: 58%	\$ 794: 58%	\$ 657: 56%	\$ 997: 57%	\$ 1,247: 56%	\$ 1,660: 48%
Labor cost	(417): (20%)	(284): (21%)	(237): (20%)	(352): (20%)	(450): $(20%)$	(704): (20%)
Harvesting cost (Total)	(1,280): $(62%)$	(869): (63%)	(747): (64%)	(1,108): (63%)	(1,416): (64%)	(2,513): $(72%)$
Gross ex-vessel profit	\$ 769: 38%	\$ 510: 37%	\$ 421: 36%	\$ 645: 37%	\$ 797: 36%	\$ 956: 28%

Note Data shown for all CR program crab fisheries by calendar year. All dollar values are adjusted for inflation to 2021-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. 2012 - 2016 figures represent the mean of vessel-level annual mean operating costs and revenue residuals from 2012 - 2016, weighted by the number of vessels in each year.

Table 4.24: Fleet-level aggregate operating costs and revenue residuals, BBR, BSS, and all CR Program fisheries in aggregate, 2017 to 2021.

	2012-2016	2017	2018	2019	2020	2021
All						
Number of active vessels	81	72.0	67.0	67.0	64.0	65.0
Pounds landed, million	85	34.7	30.2	38.5	42.7	49.5
IFQ leased, thousands (% of landed)	61:~72%	27.1:78%	23.9:79%	30.3:79%	32.6:77%	40.7:82%
Monetary values in \$1000 (\$2021)						
Gross ex-vessel revenue	\$260	\$183.7	\$160.4	\$199.6	\$210.2	\$288.7
Provisions	(2): (1%)	(1.0): (1%)	(1.0): (1%)	(1.0): (1%)	(1.4): (1%)	(1.3): 0%
Bait	(3): (1%)	(2.3): (1%)	(2.3): (1%)	(3.0): $(2%)$	(3.0): (1%)	(2.9): (1%)
Fuel	(15): (6%)	(6.1): (3%)	(6.6): (4%)	(7.3): (4%)	(7.8): (4%)	(27.7): $(10%)$
Non-labor vessel cost (Total)	(20): (8%)	(9.3):(5%)	(9.9): (6%)	(11.4): (6%)	(12.1): (6%)	(31.9): (11%)
Gross residual (non-labor)	\$240: 92%	\$174.4: 95%	\$150.6: 94%	\$188.2: 94%	\$198.1: 94%	\$256.8: 89%
Labor cost	(52): (20%)	(36.4): (20%)	(31.7): (20%)	(39.0): (20%)	(42.8): (20%)	(58.7): $(20%)$
Harvesting cost (Total)	(72): (28%)	(45.7): $(25%)$	(41.6): $(26%)$	(50.5): $(25%)$	(55.0): $(26%)$	(90.6): $(31%)$
Gross ex-vessel profit	\$188: 72%	\$138.0: 75%	\$118.9: 74%	\$149.1: 75%	\$155.3: 74%	\$198.1: 69%
Gross returns to vessel sector	\$ 95: 51%	\$ 61.6: 45%	\$ 54.5: 46%	\$ 69.7: 47%	\$ 74.2: 48%	\$ 86.3: 44%
Lease royalties (QS sector)	93: 49%	76.4: 55%	64.4: 54%	79.5: 53%	81.1: 52%	111.8:56%
BBR						
Number of active vessels	63	61.0	55.0	56.0	47.0	-
Pounds landed, million	9	6.6	4.2	3.8	2.6	-
IFQ leased, thousands ( $\%$ of landed)	6: 68%	5.0: 75%	3.3:79%	2.9:77%	2.1:~78%	-
Monetary values in \$1000 (\$2021)						
Gross ex-vessel revenue	\$ 72	60.8	\$ 43.6	\$ 45.1	\$ 32.1	-
Provisions	0: (1%)	(0.3): 0%	(0.2): $(1%)$	(0.2): $(1%)$	(0.2): $(1%)$	-
Bait	(1): (1%)	(0.5): $(1%)$	(0.4): $(1%)$	(0.5): $(1%)$	(0.4): $(1%)$	-
Fuel	(2): (4%)	(1.6): (3%)	(1.3): (3%)	(1.3): (3%)	(0.9): $(3%)$	-
Non-labor vessel cost (Total)	(3): (5%)	(2.4): $(4%)$	(1.9): $(4%)$	(2.1): $(5%)$	(1.5): $(5%)$	-
Gross residual (non-labor)	\$ 68: 95%	\$ 58.4: 96%	\$ 41.7: 96%	\$ 43.1: 95%	\$ 30.6: 95%	-
Labor cost	(13): (18%)	(10.4): (17%)	(7.4): (17%)	(7.3): (16%)	(5.3): (16%)	-
Harvesting cost (Total)	(16): $(23%)$	(12.8): (21%)	(9.3): (21%)	(9.4): $(21%)$	(6.8): $(21%)$	-
Gross ex-vessel profit	\$ 55: 77%	\$ 48.0: 79%	\$ 34.3: 79%	\$ 35.8: 79%	\$ 25.3: 79%	-
Gross returns to vessel sector	\$ 24: 43%	\$ 19.0: 40%	\$ 12.0: 35%	\$ 13.4: 38%	9.2:36%	-
Lease royalties (QS sector)	31: 57%	29.0: 60%	22.4:65%	22.3:62%	16.2: 64%	-
BSS						
Number of active vessels	70	63.0	62.0	61.0	59.0	62.0
Pounds landed, million	63	21.2	18.1	26.9	33.2	43.5

Table 4.24: Fleet-level aggregate operating costs and revenue residuals, BBR, BSS, and all CR Program fisheries in aggregate, 2017 to 2021. (continued)

	2012-2016	2017	2018	2019	2020	2021
IFQ leased, thousands (% of landed)	44: 71%	16.4: 78%	14.0: 77%	21.2: 79%	25.3: 76%	35.4: 81%
Monetary values in \$1000 (\$2021)						
Gross ex-vessel revenue	\$143	\$ 86.8	\$ 72.4	\$106.9	\$130.6	\$215.1
Provisions	(1): (1%)	(0.4): 0%	(0.4): (1%)	(0.5): 0%	(0.8): (1%)	(1.0): 0%
Bait	(2): (1%)	(0.9): (1%)	(0.9): (1%)	(1.4): (1%)	(1.2): (1%)	(1.5): (1%)
Fuel	(9): (6%)	(3.2): (4%)	(3.4):(5%)	(4.1): $(4%)$	(5.1): (4%)	(26.0): $(12%)$
Non-labor vessel cost (Total)	(12): (8%)	(4.5):(5%)	(4.7):(7%)	(6.0): (6%)	(7.2): (6%)	(28.5): (13%)
Gross residual (non-labor)	\$132: 92%	\$ 82.4: 95%	\$ 67.6: 93%	\$100.9: 94%	\$123.3: 94%	\$186.6: 87%
Labor cost	(29): (20%)	(17.9): (21%)	(14.7): (20%)	(21.5): (20%)	(26.6): $(20%)$	(43.7): $(20%)$
Harvesting cost (Total)	(41): (29%)	(22.4): $(26%)$	(19.4): (27%)	(27.5): $(26%)$	(33.8): $(26%)$	(72.2): $(34%)$
Gross ex-vessel profit	\$103: 71%	\$ 64.5: 74%	\$ 53.0: 73%	\$ 79.4: 74%	\$ 96.8: 74%	\$142.9: 66%
Gross returns to vessel sector	\$ 54: 52%	\$ 32.1: 50%	\$ 26.1: 49%	\$ 39.3: 50%	\$ 47.0: 49%	\$ 59.3: 41%
Lease royalties (QS sector)	49: 48%	32.4:50%	26.9:51%	$40.1:\ 50\%$	49.7: 51%	83.6: 59%

Note Data shown for all CR program crab fisheries by calendar year. All dollar values are adjusted for inflation to 2021-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. 2012 - 2016 figures represent the mean of vessel-level annual mean operating costs and revenue residuals from 2012 - 2016, weighted by the number of vessels in each year. 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.

		Vessels	Lea (per ex-ves	se rate ccent of sel price)	Pe (1	ounds Leased 000 pounds)			Cost (\$ 1000)		Lease pounds as % of pounds landed	Lease cost as % of ex-vessel gross
			Median	Wtd mean	Total	Median	Mean	Total	Median	Mean	Wtd mean	Wtd mean
	2012	5	$42 \ \%$	45 %	4202	553	840	\$ 8821	\$ 1200.59	\$ 1764.24	71 %	37 %
	2013	6	36 %	42 %	3664	589	611	\$ 7232	\$ 1080.42	\$ 1205.34	62 %	43 %
	2014	4	51 %	45 %	4250	1164	1062	\$ 9261	\$ 2347.19	\$ 2315.26	70 %	42 %
	2015	5	49 %	45 %	4013	1094	803	\$ 9253	\$ 1789.94	\$ 1850.59	69 %	36~%
	2016	4	51 %	46 %	4114	1157	1029	\$ 12228	\$ 2892.59	\$ 3057.13	73 %	43 %
	2017	5	51 %	54 %	4524	934	905	\$ 14981	\$ 2826.27	\$ 2996.29	81 %	45 %
	2018	4	45 %	44 %	4674	1180	1169	\$ 13616	\$ 3261.27	\$ 3403.92	72 %	42 %
	2019	4	48 %	47 %	5197	1265	1299	\$ 16391	\$ 3583.64	\$ 4097.85	77 %	43 %
All	2020	4	41 %	43 %	4645	1068	1161	\$ 15003	\$ 3407.64	\$ 3750.67	81 %	42 %
Quota	2021	4	46~%	47 %	4941	1131	1235	\$ 27769	\$ 6805.65	\$ 6942.27	84 %	47 %
	2012	4	46~%	45 %	2809	549	702	\$ 5993	\$ 1364.08	\$ 1498.16	-	-
	2013	5	35 %	43 %	2026	328	405	\$ 4176	\$ 667.24	\$ 835.21	-	-
	2014	4	51 %	48 %	2653	658	663	\$ 6177	\$ 1507.63	1544.25	-	-
	2015	5	49 %	49 %	2252	351	450	\$ 5889	\$ 1045.56	\$ 1177.78	-	-
	2016	3	51 %	52 %	2204	826	735	\$ 7547	\$ 2731	\$ 2515.62	-	-
	2017	5	51 %	53 %	2368	570	474	\$ 7778	\$ 1589.04	\$ 1555.59	-	-
	2018	4	44 %	48 %	2763	776	691	\$ 8622	\$ 2371.55	\$ 2155.48	-	-
	2019	4	47 %	51 %	3129	890	782	\$ 10626	\$ 2803.82	\$ 2656.49	-	-
CVO	2020	4	40 %	47 %	2970	830	742	\$ 10294	\$ 2708.19	\$ 2573.58	-	-
А	2021	4	41 %	50 %	2901	851	725	\$ 18900	\$ 5189.29	\$ 4725.12	-	-
	2012	4	48~%	45 %	660	196	165	\$ 1362	\$ 323.28	\$ 340.44	-	-
	2013	6	36 %	37 %	1285	195	214	\$ 2133	\$ 350.01	\$ 355.45	-	-
	2014	4	51 %	37 %	1179	130	295	\$ 1969	\$ 328.35	\$ 492.3	-	-
	2015	5	37 %	36 %	1375	105	275	\$ 2287	\$ 238.72	\$ 457.39	-	-
	2016	4	44 %	34 %	1504	133	376	\$ 3222	\$ 365.35	\$ 805.56	-	-
	2017	5	52 %	40 %	1285	118	257	\$ 3247	408.42	\$ 649.33	-	-
	2018	4	39 %	35 %	1525	221	381	\$ 3712	\$ 760.85	927.93	-	-
CVO	2019	4	49 %	37 %	1635	266	409	\$ 4325	997.32	\$ 1081.33	-	-
В +	2020	4	40 %	35 %	1440	207	360	\$ 3871	\$ 743.51	\$ 967.68	-	-
CPO	2021	4	48 %	38 %	1431	175	358	\$ 6141	\$ 1265.56	\$ 1535.23	-	-
	2012	4	48~%	63~%	130	32	33	\$ 343	\$ 61.53	\$ 85.77	-	-
	2013	5	41 %	49 %	151	32	30	\$ 357	\$ 63.25	\$ 71.35	-	-
	2014	4	53 %	58 %	87	21	22	\$ 251	\$ 55.18	\$ 62.71	-	-
	2015	4	44 %	47 %	55	13	14	\$ 144	\$ 36.63	\$ 36.1	-	-
	2016	3	51 %	43 %	76	23	25	\$ 198	\$ 88.02	\$ 65.91	-	-
	2017	5	52 %	74 %	204	23	41	\$ 966	\$ 80.28	\$ 193.15	-	-
	2018	3	38 %	37 %	91	16	30	\$ 287	\$ 40.78	\$ 95.75	-	-
CVC	2019	4	49 %	49 %	145	31	36	\$ 546	\$ 120.84	\$ 136.48	-	-
+	2020	3	38~%	40 %	114	19	38	\$ 358	\$ 50.97	\$ 119.21	-	-
CPC	2021	4	53 %	52 %	121	30	30	\$ 786	\$ 211.51	\$ 196.6	-	-
	2012	4	53 %	41 %	602	131	151	\$ 1124	\$ 302.47	\$ 280.94	_	-

Table 4.25: Crab harvest quota lease activity, volume, cost, and average lease prices and rates, CR Program fisheries

			Vessels	Lea (pe: ex-ves	use rate rcent of ssel price)	Po (1	ounds Leased 1000 pounds)		(	Cost (\$ 1000)		Lease pounds as % of pounds landed	Lease cost as % of ex-vessel gross
				Median	Wtd mean	Total	Median	Mean	Total	Median	Mean	Wtd mean	Wtd mean
		2013	2	*	*	*	*	*	*	*	*	-	-
		2014	- 3	53 %	55 %	331	116	110	\$ 864	\$ 338.97	\$ 288.01	-	_
		2015	3	53 %	54 %	331	116	110	\$ 933	\$ 371.61	\$ 310.89	-	-
		2016	3	52 %	54 %	331	116	110	\$ 1262	\$ 460.34	\$ 420.55	-	-
		2017	4	55 %	78 %	668	115	167	\$ 2991	\$ 378.66	\$ 747.78	-	-
		2018	2	*	*	*	*	*	*	*	*	-	-
	CDQ	2019	2	*	*	*	*	*	*	*	*	-	-
	+	2020	2	*	*	*	*	*	*	*	*	-	-
AIG	ACA	2021	3	53~%	46 %	488	234	163	\$ 1941	\$ 377.92	\$ 647.1	-	-
		2012	53	65 %	63 %	4698	80	89	\$ 28184	\$ 488.52	\$ 531.77	60 %	50 %
		2013	55	65 %	65 %	6116	88	111	\$ 33062	\$ 467.84	\$ 601.13	72 %	53 %
		2014	52	64 %	63 %	7122	108	137	\$ 34994	\$ 547.2	\$ 672.96	72 %	56 %
		2015	52	63 %	66 %	6515	106	125	\$ 38676	\$ 595.37	\$ 743.76	67 %	53 %
		2016	53	62 %	63 %	5786	89	109	\$ 44086	\$ 691.4	\$ 831.81	69 %	51 %
		2017	52	62 %	64 %	4959	70	95	\$ 31869	\$ 441.12	\$ 612.87	76 %	54 %
		2018	45	63 %	65 %	3328	48	74	\$ 24016	\$ 360.36	\$ 533.69	79 %	58 %
	All	2019	46	63 %	64 %	2938	42	64	\$ 23563	\$ 334.51	\$ 512.23	78 %	57 %
	Quota	2020	38	64~%	64 %	2061	41	54	\$ 16869	\$ 314.5	\$ 443.93	78 %	60 %
		2012	50	65~%	62~%	3619	65	72	\$ 21102	\$ 361.82	\$ 422.03	-	-
		2013	51	64 %	65 %	4425	79	87	\$ 23592	\$ 399.79	462.58	-	-
		2014	50	62 %	64 %	5229	88	105	\$ 25441	\$ 426.9	508.82	-	-
		2015	49	63 %	65 %	5129	90	105	\$ 30044	\$ 501.47	\$ 613.14	-	-
		2016	50	62 %	62 %	4433	75	89	\$ 33137	\$ 552.35	\$ 662.73	-	-
		2017	50	62 %	63 %	3709	56	74	\$ 23728	\$ 352.5	474.56	-	-
		2018	42	62 %	64 %	2503	41	60	\$ 17777	\$ 295.18	\$ 423.27	-	-
	CVO	2019	42	62 %	63 %	2164	35	52	\$ 16923	\$ 274.53	\$ 402.93	-	-
	Α	2020	36	64 %	64 %	1578	33	44	\$ 12726	\$ 267.71	\$ 353.49	-	-
		2012	42	65 %	67 %	539	8	13	\$ 3436	\$ 56.37	\$ 82.17	-	-
		2013	45	64 %	64 %	778	10	17	\$ 4308	\$ 59.72	\$ 95.74	-	-
		2014	43	64 %	62 %	854	13	20	\$ 4264	\$ 71.26	\$ 99.16	-	-
		2015	42	63 %	66 %	697	11	17	\$ 4318	\$ 75.37	\$ 102.81	-	-
		2016	43	63 %	65 %	610	10	14	\$ 4974	\$ 80.23	\$ 115.67	-	-
		2017	43	63 %	63 %	546	9	13	\$ 3535	\$ 56.04	\$ 82.22	-	-
	CVO	2018	39	63 %	65 %	358	6	9	\$ 2691	\$ 41.61	\$ 68.99	-	-
	B +	2019	42	63 %	67 %	366	7	9	\$ 3175	\$ 57.53	\$ 75.59	-	-
	CPO	2020	35	63 %	64 %	203	4	6	\$ 1701	\$ 34.76	\$ 48.59	-	-
		2012	36	63 %	64 %	172	5	5	\$ 1063	\$ 28.9	\$ 29.52	-	-
		2013	37	66 %	66 %	199	5	5	\$ 1133	\$ 29.38	\$ 30.63	-	-
		2014	34	65 %	64 %	213	6	6	\$ 1060	\$ 30.5	\$ 31.18	-	-
		2015	40	64 %	65 %	222	5	6	\$ 1368	\$ 34.27	\$ 34.19	-	-
		2016	35	62 %	62 %	193	5	6	\$ 1494	\$ 41.74	\$ 42.68	-	-
		2017	39	62 %	64 %	153	3	4	\$ 1013	\$ 24.59	25.98	-	-

Table 4.25: Crab harvest quota lease activity, volume, cost, and average lease prices and rates, CR Program fisheries (continued)

			Vessels	Lea (per ex-ves	ase rate rcent of ssel price)	Pc (1	ounds Leased .000 pounds)			Cost (\$ 1000)		Lease pounds as % of pounds landed	Lease cost as % of ex-vessel gross
				Median	Wtd mean	Total	Median	Mean	Total	Median	Mean	Wtd mean	Wtd mean
	CVC	2018	35	64 %	67 %	109	3	3	\$ 822	\$ 23.09	\$ 23.47	-	-
	+	2019	35	63 %	65 %	93	3	3	\$ 785	\$ 23	\$ 22.44	-	-
	CPC	2020	33	65 %	62~%	60	2	2	\$ 506	\$ 13.2	\$ 15.32	-	-
		2012	5	64 %	72 %	369	71	74	\$ 2584	\$ 512.56	\$ 516.73	-	-
		2013	8	67 %	66 %	713	77	89	\$ 4029	\$ 435.7	\$ 503.61	-	-
		2014	7	63 %	66 %	826	118	118	\$ 4228	\$ 575.33	\$ 604.07	-	-
		2015	5	67 %	68 %	468	100	94	\$ 2946	\$ 614.46	\$ 589.29	-	-
		2016	5	63 %	67 %	550	121	110	\$ 4482	\$ 946.75	\$ 896.32	-	-
		2017	6	63 %	64 %	551	94	92	\$ 3592	\$ 601.79	\$ 598.71	-	-
	CDQ	2018	6	66 %	67 %	357	71	60	\$ 2727	\$ 527.67	\$ 454.42	-	-
	+	2019	6	67 %	68 %	315	54	52	\$ 2679	\$ 446.56	\$446.58	-	-
BBR	ACA	2020	5	68 %	68 %	220	48	44	\$ 1937	\$ 409.32	\$ 387.41	-	-
		2012	60	46 %	47 %	58129	830	969	\$ 70664	\$ 1037.39	\$ 1177.74	66 %	39 %
		2013	61	47 %	48 %	50270	671	824	\$ 65771	\$ 797.7	\$ 1078.21	71 %	41 %
		2014	59	46 %	47 %	42296	556	717	\$ 54112	\$ 710.98	\$ 917.15	77 %	40 %
		2015	57	46 %	48 %	42317	641	742	\$ 47458	\$ 719.8	\$ 832.6	69 %	40 %
		2016	56	46 %	49 %	27475	412	491	\$ 41430	\$ 570.96	\$ 739.83	69 %	41 %
		2017	54	46 %	48 %	16448	218	305	\$ 35532	\$ 470.51	\$ 658.01	77 %	42 %
		2018	52	47 %	48 %	14030	187	270	\$ 28864	\$ 367.19	\$ 555.08	74 %	43 %
		2019	51	46 %	48 %	21151	303	415	\$ 42300	\$ 623.54	\$ 829.42	78 %	43 %
	All	2020	47	46 %	50 %	25348	429	539	\$ 51879	\$ 893.79	\$ 1103.8	75 %	44 %
	Quota	2021	51	46~%	47 %	35392	541	694	\$ 83620	\$ 1244.87	\$ 1639.61	80 %	44 %
		2012	55	46 %	46 %	42796	640	778	\$ 50408	\$ 777.47	\$ 916.51	-	-
		2013	56	46 %	47 %	34353	487	613	\$ 42948	\$ 598.56	\$ 766.93	-	-
		2014	57	46 %	46 %	29683	442	521	\$ 36982	\$ 558.99	\$ 648.81	-	-
		2015	55	46 %	48 %	30362	523	552	\$ 33399	\$ 548.81	\$ 607.26	-	-
		2016	54	46 %	49 %	19640	337	364	\$ 29040	\$ 450.45	\$ 537.78	-	-
		2017	52	46 %	47 %	11518	176	222	\$ 24229	\$ 354.79	\$ 465.95	-	-
		2018	48	46 %	47 %	10046	153	209	\$ 20108	\$ 302.8	\$ 418.91	-	-
		2019	48	46 %	47 %	15318	235	319	\$ 29873	\$ 461.58	\$ 622.36	-	-
	CVO	2020	45	46 %	49 %	18443	338	410	\$ 36919	\$ 663.33	\$ 820.41	-	-
	Α	2021	49	46~%	46 %	25135	428	513	\$ 57261	\$ 948.82	\$ 1168.59	-	-
		2012	47	46 %	48 %	6990	84	149	\$ 9247	\$ 118.78	\$ 196.75	-	-
		2013	50	47 %	50 %	7741	83	155	\$ 11103	\$ 111.66	\$ 222.06	-	-
		2014	48	47 %	49 %	5988	76	125	\$ 8213	\$ 116.26	\$ 171.11	-	-
		2015	47	46 %	48 %	6289	82	134	\$ 7319	\$ 88.37	\$ 155.72	-	-
		2016	45	46 %	50 %	3868	45	86	\$ 6112	\$ 78.16	\$ 135.82	-	-
		2017	48	48 %	50 %	2469	28	51	\$ 5629	\$ 61.17	\$ 117.27	-	-
		2018	42	47 %	48 %	2091	32	50	\$ 4548	\$ 66.4	\$ 108.29	-	-
	CVO	2019	45	46 %	47 %	3094	44	69	\$ 6404	\$ 89	\$ 142.3	-	-
	B +	2020	41	46 %	53 %	3585	55	87	\$ 7865	\$ 119.38	\$ 191.82	-	-
	CPO	2021	39	46 %	50 %	4913	92	126	\$ 12497	\$ 206.41	\$ 320.45	-	-

Table 4.25: Crab harvest quota lease activity, volume, cost, and average lease prices and rates, CR Program fisheries (continued)

		Vessels	Lea (pe ex-ve	ase rate rcent of ssel price)	P(	ounds Leased 1000 pounds)		(	Cost (\$ 1000)		Lease pounds as % of pounds landed	Lease cost as % of ex-vessel gross
			Median	Wtd mean	Total	Median	Mean	Total	Median	Mean	Wtd mean	Wtd mean
	201	2 39	46 %	46 %	1880	48	47	\$ 2376	\$ 58.64	\$ 60.91	-	-
	201	3 41	46 %	48 %	1767	36	43	\$ 2422	\$ 46.51	\$ 59.07	-	-
	201	4 37	46 %	46 %	1258	32	33	\$ 1674	\$ 43.51	\$ 45.23	-	-
	201	5 37	46 %	49 %	1516	38	40	\$ 1761	\$ 44.43	\$ 47.6	-	-
	201	6 36	46 %	47 %	925	24	26	\$ 1423	\$ 36.61	\$ 39.52	-	-
	201	7 37	49 %	55 %	479	12	13	\$ 1143	\$ 24.41	\$ 30.9	-	-
	201	8 36	46 %	50 %	500	12	14	\$ 1116	\$ 27.52	\$ 31.01	-	-
CV	VC 201	9 37	46 %	49 %	704	18	19	\$ 1541	\$ 40.39	\$ 41.66	-	-
+	202	0 34	46 %	50 %	829	21	24	\$ 1790	\$ 46.23	\$ 52.63	-	-
CF	PC 202	1 33	46~%	49 %	1234	32	37	\$ 3165	\$ 75.32	\$ 95.91	-	-
	201	2 11	49 %	50 %	6464	563	588	\$ 8633	\$ 784.28	\$ 784.85	-	-
	201	3 11	54 %	53 %	6409	564	583	\$ 9297	\$ 870.45	\$ 845.22	-	-
	2014	4 10	49 %	51 %	5367	423	537	\$ 7243	\$ 583.3	\$ 724.28	-	-
	201	5 7	51 %	52 %	4150	509	593	\$ 4979	\$ 611.64	\$ 711.29	-	-
	201	6 7	51 %	52 %	3042	335	435	\$ 4856	\$ 511.71	\$ 693.65	-	-
	201	7 8	50 %	51 %	1982	222	248	\$ 4531	\$ 515.33	\$ 566.4	-	-
	201	8 6	51 %	51 %	1393	228	232	\$ 3092	\$ 513.98	\$ 515.41	-	-
CL	DQ 201	9 8	48 %	51 %	2035	228	254	\$ 4482	\$ 503.94	\$ 560.29	-	-
+	202	0 8	51 %	51 %	2491	294	311	\$ 5306	\$ 648.62	\$ 663.2	-	-
BSS AC	CA 202	1 12	51~%	51 %	4110	234	343	\$ 10697	\$ 623.42	\$ 891.4	-	-
	201	3 19	30~%	31~%	1022	32	54	\$ 884	\$ 32.38	\$ 46.55	82 %	28 %
	201	4 36	28 %	27 %	7231	191	201	\$ 5489	\$ 135.56	\$ 152.48	80 %	27 %
	201	5 45	28 %	30 %	12737	215	283	\$ 11080	185.53	\$ 246.23	85 %	29 %
	201	6 38	28 %	30 %	9862	158	260	\$ 9747	\$ 157.28	\$ 256.49	94 %	32 %
	201	7 15	28 %	29 %	1188	70	79	\$ 1542	\$ 85.65	\$ 102.79	84 %	26 %
	201	8 30	31 %	31 %	1891	54	63	\$ 2663	\$ 76.79	\$ 88.76	83 %	29 %
	201	9 16	32 %	33 %	1010	42	63	\$ 1578	\$ 65.08	\$ 98.62	86 %	33 %
All	1 202	0 17	$30 \ \%$	32 %	592	22	35	\$ 799	\$ 24.1	\$ 47.01	96 %	31 %
Qu	uota 202	1 17	29 %	32 %	806	39	47	\$ 1409	\$ 50.33	\$ 82.88	85 %	31 %
	201	3 16	28 %	29 %	777	53	49	\$ 633	\$ 29.37	\$ 39.57	-	-
	2014	4 32	28 %	27 %	5256	143	164	\$ 3924	\$ 112.87	\$ 122.61	-	-
	201	5 43	28 %	30 %	9487	158	221	\$ 8092	\$ 140.74	\$ 188.19	-	-
	201	6 37	28 %	29 %	7470	131	202	\$ 7029	\$ 123.76	189.98	-	-
	201	7 15	28 %	29 %	829	60	55	\$ 1047	\$ 58.07	\$ 69.81	-	-
	201	8 28	29 %	30 %	1394	44	50	\$ 1891	\$ 56.93	\$ 67.53	-	-
	201	9 15	32~%	33 %	691	32	46	\$ 1092	\$ 55.81	\$ 72.81	-	-
CV	VO 202	0 17	30 %	32 %	488	19	29	\$ 654	\$ 23.85	\$ 38.48	-	-
A	202	1 13	31 %	31 %	556	44	43	\$ 956	\$ 69.1	\$ 73.53	-	-
	201	3 13	28~%	47 %	130	8	10	\$ 139	\$ 7.61	\$ 10.68	-	-
	201	4 25	28 %	26 %	820	16	33	\$ 690	\$ 14.48	\$ 27.6	-	-
	201	5 27	28 %	29 %	1527	37	57	\$ 1357	\$ 26.76	50.27	-	-

Table 4.25: Crab harvest quota lease activity, volume, cost, and average lease prices and rates, CR Program fisheries (continued)

			Vessels	Lea (pei ex-ves	se rate ccent of sel price)	Pe (1	ounds Leased 1000 pounds)		(	Cost (\$ 1000)		Lease pounds as % of pounds landed	Lease cost as % of ex-vessel gross
				Median	Wtd mean	Total	Median	Mean	Total	Median	Mean	Wtd mean	Wtd mean
		2016	31	28 %	33 %	1125	23	36	\$ 1271	\$ 26.69	\$ 41	-	-
		2017	15	28 %	29 %	172	7	11	\$ 234	\$ 8.14	\$ 15.61	-	-
		2018	26	$31 \ \%$	35 %	244	5	9	\$ 399	\$ 7.43	\$ 15.35	-	-
	CVO	2019	14	32 %	33 %	146	5	10	\$ 227	\$ 6.88	\$ 16.19	-	-
	B +	2020	9	28 %	27 %	51	3	6	\$ 64	\$ 3.48	\$ 7.16	-	-
	CPO	2021	13	32 %	34 %	125	8	10	\$ 235	\$ 14.78	\$ 18.06	-	-
		2013	9	28~%	33 %	27	2	3	\$ 26	\$ 1.48	\$ 2.88	-	-
		2014	24	28 %	16 %	428	6	18	\$ 208	\$ 5.03	\$ 8.68	-	-
		2015	24	28 %	27 %	382	11	16	\$ 295	\$ 8.93	\$ 12.3	-	-
		2016	23	28 %	39 %	438	11	19	\$ 590	\$ 11.02	\$ 25.65	-	-
		2017	14	28 %	28 %	31	2	2	\$ 41	\$ 2.21	\$ 2.94	-	-
		2018	22	29 %	30 %	54	2	2	\$ 72	\$ 2.15	\$ 3.29	-	-
	CVC	2019	14	32 %	32 %	42	1	3	\$ 64	\$ 1.84	\$ 4.59	-	-
	+	2020	9	27 %	28 %	14	1	2	\$ 17	\$ 1.35	\$ 1.84	-	-
	CPC	2021	10	31 %	34 %	33	2	3	\$ 61	\$ 3.88	\$ 6.1	-	-
		2013	5	34~%	34 %	88	25	18	\$ 86	\$ 18.21	\$ 17.29	-	-
		2014	6	29 %	30 %	729	115	121	\$ 668	\$ 102.96	\$ 111.26	-	-
		2015	8	29 %	35 %	1342	119	168	\$ 1336	\$ 96.69	\$ 166.94	-	-
		2016	7	29 %	32 %	830	96	119	\$ 856	\$ 88.55	\$ 122.34	-	-
		2017	4	32 %	31 %	156	44	39	\$ 219	\$ 58.96	\$ 54.84	-	-
		2018	5	29 %	31 %	199	44	40	\$ 301	\$ 63.88	\$ 60.11	-	-
	CDQ	2019	3	29 %	32 %	132	46	44	\$ 195	\$ 62.68	\$ 64.94	-	-
	+	2020	1	*	*	*	*	*	*	*	*	-	-
BST	ACA	2021	3	29 %	29 %	92	35	31	\$ 157	\$ 41.42	\$ 52.4	-	-
		2012	17	33~%	32 %	1488	68	88	\$ 2421	\$ 130.31	\$ 142.43	$93 \ \%$	35 %
	All	2014	4	32 %	28 %	134	18	33	\$ 186	\$ 28.26	\$46.57	44 %	20 %
	Quota	2015	3	22 %	21 %	86	26	29	\$ 103	\$ 35.37	\$ 34.27	82 %	18 %
		2012	17	32~%	34 %	1149	49	68	\$ 1929	\$ 78.33	\$ 113.45	-	-
	CVO	2014	3	32 %	28 %	101	16	34	\$ 138	\$ 25.18	\$ 46	-	-
	Α	2015	3	22 %	21 %	73	23	24	\$ 86	\$ 29.82	\$ 28.81	-	-
	CVO	2012	10	33 %	35 %	144	12	14	\$ 246	\$ 22.66	\$ 24.58	-	-
	В+	2014	2	*	*	*	*	*	*	*	*	-	-
	CPO	2015	3	22 %	21 %	11	2	4	\$ 13	\$ 3.1	\$ 4.46	-	-
	CVC	2012	9	34~%	11 %	95	2	11	\$ 53	\$ 6.35	\$ 5.92	-	-
	+	2014	2	*	*	*	*	*	*	*	*	-	-
	CPC	2015	2	*	*	*	*	*	*	*	*	-	-
	CDQ	2012	3	40 %	40 %	100	23	33	\$ 194	\$ 45.49	\$ 64.54	-	-
SMB	+	2014	1	*	*	*	*	*	*	*	*	-	-
	A ( ' A												

Table 4.25: Crab harvest quota lease activity, volume, cost, and average lease prices and rates, CR Program fisheries (continued)

Notes Asterisks indicate data suppressed due to confidentiality All dollar values are adjusted for inflation to 2021-equivalent 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. Lease data shown represent arms-length lease transactions reported by vessel owners in the Crab EDR. Vessels column shows total count of vessel-level observations where both pounds and cost of quota leased were reported as non-zero values, noting that a segment of active vessels do not report leasing quota of any type, i.e., harvest only quota held by the vessel owner. Lease rate statistics by fishery and quota type are calculated as the median and weighted mean, respectively, of the ratio of quota lease cost per pound to ex-vessel revenue per pound, over all observations where all four elements were reported as non-zero values. Lease pounds as **Source** NMFS AFSC BSAI Crab Economic Data Report (EDR) database.

		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		
2019/20	191	-	167	-	38		
2020/21	296	-	154	-	63		
2021/22	160	-	56	3	39		

Table 4.26: Counts of QS/PQS sales and IFQ/IPQ lease transfers, all CR Program fisheries

**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

			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	21(19,14)	1,221	56	1.13	14(6,10)	7,140	115	0.70	
	2006/07	24(20,17)	1,130	40	0.82	27(17,11)	24,420	404	1.18	
	2007/08	10(8,5)	525	56	0.90	21(11,13)	7,145	289	1.50	
	2008/09	9(7,7)	482	54	0.98	25(16,19)	13,988	274	1.50	
	2009/10	9(6,7)	428	38	0.91	12(10,11)	4,526	375	1.25	
	2010/11	5(5,5)	293	46	0.80	33(15,22)	14,596	195	1.07	
	2011/12	3(3,2)	*	*	*	3(3,3)	*	*	*	
	2012/13	4(3,3)	*	*	*	21(9,16)	7,044	141	0.93	
BBR	2013/14	9(8,7)	283	34	0.93	7(6,4)	$5,\!424$	1,051	1.11	
	2014/15	10(8,6)	484	48	1.02	18(8,11)	8,903	86	1.40	
	2015/16	3(2,2)	*	*	*	6(5,5)	2,866	364	1.52	
	2016/17	11(7,10)	603	51	1.03	9(7,7)	3,138	71	1.45	
	2017/18	17(17, 14)	1,020	58	0.63	10(7,8)	2,207	223	1.07	
	2018/19	4(4,3)	*	*	*	4(3,4)	*	*	*	
	2019/20	8(6,7)	254	24	0.33	8(5,7)	5,007	427	0.55	
	2020/21	12(10,8)	873	65	0.23	16(10,10)	4,022	25	0.24	
	2021/22	1(1,1)	*	*	*	-	-	-	-	
	2005/06	25(14,12)	2,793	110	0.28	22(9,12)	$24,\!619$	442	0.46	
	2006/07	35(17,15)	2,864	65	0.26	36(17,8)	48,984	604	0.36	
	2007/08	12(5,5)	822	51	0.38	26(10,13)	24,752	1,000	0.69	
	2008/09	10(5,6)	758	48	0.53	15(9,11)	$12,\!649$	382	0.62	
	2009/10	15(6,8)	1,121	49	0.35	14(8,10)	6,452	366	0.49	
	2010/11	11(6,6)	852	81	0.44	56(17, 24)	34,572	248	0.60	
	2011/12	2(1,1)	*	*	*	21(10,12)	12,598	289	0.70	
	2012/13	9(4,5)	*	*	*	40(9,18)	16,223	179	1.07	
BSS	2013/14	12(6,6)	674	34	0.83	50(15,18)	$20,\!656$	121	1.25	
	2014/15	9(5,3)	*	*	*	23(13,14)	22,281	396	1.21	
	2015/16	$_{3(2,1)}$	*	*	*	16(9,10)	7,089	119	0.90	
	2016/17	13(7,8)	1,433	138	0.33	7(4,5)	*	*	*	
	2017/18	26(14, 13)	2,305	76	0.31	4(2,3)	*	*	*	
	2018/19	6(3,3)	*	*	*	16(4,10)	3,611	104	0.55	
	2019/20	14(8,5)	1,058	62	0.55	14(8,10)	$9,\!647$	321	0.69	
	2020/21	24(11,8)	2,219	70	0.73	28(9,18)	11,467	256	1.28	
	2021/22	-	-	-	-	2(1,2)	*	*	*	

Table 4.27: Crab harvest quota (QS) sale transfers, estimated price per QS unit, catcher vessel owner and crew QS

			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
BST	2005/06 2006/07	$14(13,11)\ 3(3,3)$	401 *	30 *	0.22 *	10(8,9)	5,203	407	0.36
EAG	$\begin{array}{c} 2005/06\\ 2007/08\\ 2008/09\\ 2009/10\\ 2010/11\\ 2013/14\\ 2014/15\\ 2015/16\\ 2016/17\\ 2017/18\\ 2019/20\\ 2020/21\\ 2020/21\\ 2020/21\\ \end{array}$	$\begin{array}{c} 2(2,1)\\ 2(2,2)\\ 4(4,3)\\ 1(1,1)\\ 3(2,3)\\ \hline \\ 1(1,1)\\ 3(2,2)\\ 1(1,1)\\ 1(1,1)\\ 1(1,1)\\ 3(1,1)\\ \end{array}$	* * * * * * * * * *	* * * * * * * * * * * * *	* * * * * * * * * *	2(1,1) $1(1,1)$ $5(2,5)$ $9(2,9)$ $-$ $1(1,1)$ $2(1,2)$	* - * - - - - *	* - * - - - - * *	* - * - - - - - * *
EBT	$\begin{array}{r} 2021/22\\ 2006/07\\ 2007/08\\ 2008/09\\ 2009/10\\ 2010/11\\ 2011/12\\ 2012/13\\ 2013/14\\ 2014/15\\ 2015/16\\ 2016/17\\ 2017/18\\ 2018/19\\ 2019/20\\ 2020/21\\ 2021/22\\ \end{array}$	$\begin{array}{c} & & & \\ 17(14,14) \\ & 5(4,3) \\ & 4(4,4) \\ & 3(2,3) \\ & 3(3,3) \\ \\ & & \\ 2(2,2) \\ & 6(5,6) \\ & 8(8,7) \\ & 5(2,3) \\ & 8(7,7) \\ 19(19,14) \\ & 3(3,3) \\ & 5(4,5) \\ & 2(2,2) \\ & 1(1,1) \end{array}$	- 394 * * * 127 185 * 288 584 * * *	22 * * * 27 25 * 28 30 * *	0.05 * * * 0.06 0.21 * 0.21 0.06 * *	$\begin{array}{r} 2(1,2)\\ \hline 17(13,8)\\ 9(7,8)\\ 14(8,9)\\ 5(4,5)\\ 6(6,2)\\ 2(2,2)\\ 12(5,10)\\ 10(5,6)\\ 15(7,11)\\ 7(6,7)\\ 8(5,7)\\ 9(6,7)\\ 2(2,2)\\ 3(3,3)\\ 4(3,2)\\ 1(1,1)\\ \end{array}$	6,578 3,031 6,246 * * 2,825 1,412 4,355 4,481 2,766 1,657 * * * * * * * *	417 388 373 * * * 44 121 153 314 304 122 * * *	0.10 0.19 0.19 * * * * * * * 0.12 0.06 0.50 0.39 0.51 0.33 * * *
	2007/08 2008/09	4(2,1)	- *	- *	- *	8(2,3)	*	*	*

Table 4.27: Crab harvest quota (QS) sale transfers, estimated price per QS unit, catcher vessel owner and crew QS (continued)
PIK 2010/11 PIK 2012/13 2016/17 2017/18 2018/19	Iransfers           nsferors,           nsferees) $1(1,1)$ $2(1,1)$ $4(2,2)$ $3(2,2)$	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	Median price per QS unit
2010/11 PIK 2012/13 2016/17 2017/18 2018/19	$1(1,1) \\ 2(1,1) \\ 4(2,2) \\ 3(2,2)$	* * *	*	*			(1,000)	GIII
2010/10	-	* -	* * -	* * -	$ \begin{array}{c} 6(3,1) \\ 4(1,2) \\ - \\ 2(1,1) \end{array} $	* * - - *	* * - *	* * - - *
$\begin{array}{r} 2005/06\\ 2006/07\\ 2007/08\\ 2008/09\\ 2009/10\\ 2010/11\\ 2011/12\\ 2012/13\\ 2012/13\\ 2013/14\\ 2014/15\\ 2015/16\\ 2016/17\\ 2017/18\\ 2018/19\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/20\\ 2019/$	$\begin{array}{c} 1(1,1) \\ 4(3,3) \\ 4(2,1) \\ 2(1,1) \\ 2(1,1) \\ 3(2,2) \\ 2(2,1) \\ 2(1,1) \\ 6(3,3) \\ 2(1,1) \\ 1(1,1) \\ 2(1,1) \\ 12(8,9) \\ 3(2,2) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,$	* * * * * * * * * * * * *	* * * * * * * * * * * * * * * * * * * *	* * * * * * * * * * * *	2(1,2) $6(1,3)$ $10(3,4)$ $-$ $4(2,2)$ $1(1,1)$ $2(2,2)$ $23(8,12)$ $2(1,1)$ $2(2,2)$ $-$ $2(1,1)$ $-$ $2(1,2)$ $-$	* * * * 1,003 * * - * - *	* * * * 21 * * - - * - *	* * * * 1.02 * * * - - *
2021/22           2005/06           2007/08           2008/09           2010/11           WAG           2012/13           2013/14           2020/21           WAI           2013/14           2013/14	$ \begin{array}{r} 1(1,1) \\ 2(1,1) \\ 2(1,1) \\ 1(1,1) \\ - \\ - \\ 1(1,1) \\ 2(1,1) \\ \hline - \\ 6(13,13) \\ \end{array} $	* * * * * *	* * * * * * 22	* * * - - - * * *	$ \begin{array}{r} 1(1,1) \\ 1(1,1) \\ 2(1,1) \\ 2(1,1) \\ 2(1,1) \\ 1(1,1) \\ 2(2,1) \\ 2(2,1) \\ 22(18.9) \\ \end{array} $	* * * * * * * * * * * * * * * * * * * *	* * * * * * * * * * * * * * * *	* * * * * * * * * * * * * * * * * * * *

Table 4.27: Crab harvest quota (QS) sale transfers, estimated price per QS unit, catcher vessel owner and crew QS (continued)

			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
	2008/09	4(4,4)	*	*	*	14(8,9)	6,246	373	0.13
	2009/10	2(2,2)	*	*	*	5(4,5)	*	*	*
	2010/11	3(3,3)	*	*	*	5(5,2)	*	*	*
	2011/12	-	-	-	-	1(1,1)	*	*	*
	2012/13	2(2,2)	*	*	*	11(5,9)	885	36	0.09
WDT	2013/14	6(5,6)	127	27	0.06	10(5,6)	1,412	121	0.06
WBI	2014/15	6(6,5)	136	25	0.25	16(8,12)	4,677	172	0.38
	2015/16	5(2,3)	*	*	*	7(6,7)	4,481	314	0.39
	2016/17	9(8,8)	408	34	0.20	7(4,6)	1,894	192	0.47
	2017/18	19(19,15)	616	30	0.10	9(6,7)	$1,\!637$	122	0.33
	2018/19	3(3,3)	*	*	*	1(1,1)	*	*	*
	2019/20	6(5,5)	170	27	0.08	3(3,3)	*	*	*
	2020/21	5(5,4)	*	*	*	6(4,4)	*	*	*
	2021/22	2(2,2)	*	*	*	1(1,1)	*	*	*

Table 4.27: Crab harvest quota (QS) sale transfers, estimated price per QS unit, catcher vessel owner and crew QS (continued)

Notes Data shown for all CR program crab fisheries by calendar year. All dollar values are adjusted for inflation to 2021-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 Alaska Region - Restricted Access Management, Quota share transfer data.

181

			Process	sor QS	
		Transfers (transferors, transferees)	Total units transferred (1,000)	Median units per transfer (1,000)	Median price per QS unit
BBR	$\begin{array}{c} 2008/09\\ 2009/10\\ 2014/15\end{array}$	$\begin{array}{c} 4(4,3) \\ 1(1,1) \\ 3(1,1) \end{array}$	31,159.18 * *	4,680.19 * *	0.11 * *
BSS	$\begin{array}{c} 2008/09\\ 2009/10\\ 2013/14\\ 2014/15\\ 2017/18 \end{array}$	$2(2,2) \\ 2(1,1) \\ 1(1,1) \\ 3(1,1) \\ 1(1,1)$	* * * *	* * * *	* * * *
EAG	$\begin{array}{c} 2005/06\\ 2008/09\\ 2014/15\\ 2017/18\end{array}$	$1(1,1) \\ 3(2,2) \\ 1(1,1) \\ 1(1,1)$	* * *	* * *	* * *
WAG	2008/09	8(4,3)	$18,\!921.69$	979.27	0.08
EBT	$\begin{array}{c} 2008/09\\ 2014/15\\ 2017/18\\ 2018/19\\ 2021/2\end{array}$	$5(5,4) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1(1,1) \\ 1$	12,152.78 * * *	1,645.50 * * *	0.05 * * * *
WBT	$\frac{2008/09}{2014/15}\\2018/19$	$5(5,4) \\ 1(1,1) \\ 1(1,1)$	12,152.78 * *	1,645.50 *	0.00 * *
SMB	$\frac{2012/13}{2014/15}$	$3(2,1) \\ 2(1,1)$	*	*	*

Table 4.28: Crab processor quota (PQS) sale transfers, estimated price per PQS unit

**Notes** Data shown for all CR program crab fisheries by calendar year. All dollar values are adjusted for inflation to 2021-equivalent value. Information suppressed for confidentiality where indicated by '\*', and data not available where indicated by '-'. **Source** NMFS Alaska Region - Restricted Access Management, Quota share transfer data.

	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
BBR	2020/21	387,828,995	$12,\!000,\!335$	399,829,330	167.77
BSS	2020/21 2021/22	970,675,714 970,675,714	30,207,732 30,207,732	1,000,883,446 1,000,883,446	24.71 198.59
EAG	2020/21 2021/22 2022/23	9,700,156 9,700,156 9,700,156	299,989 299,989 299,989	10,000,145 10,000,145 10,000,145	$3.04 \\ 3.08 \\ 3.35$
WAG	$\begin{array}{c} 2020/21 \\ 2021/22 \\ 2022/23 \end{array}$	38,800,000 38,800,000 38,800,000	1,200,058 1,200,058 1,200,058	$\begin{array}{c} 40,000,058\\ 40,000,058\\ 40,000,058\end{array}$	$15.02 \\ 19.16 \\ 25.69$
EBT	2022/23	$194,\!308,\!390$	5,734,553	200,042,943	191.12
WBT	$\begin{array}{c} 2020/21 \\ 2021/22 \\ 2022/23 \end{array}$	194,308,390 194,308,390 193,986,406	5,920,159 5,920,159 5,734,553	200,228,549 200,228,549 199,720,959	$94.75 \\ 202.25 \\ 261.07$

Table 4.29: CR Program computation quota share (QS) and IFQ ratio

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

				CVC QS					CVO QS		
	Season	Average price/QS	Ratio QS units:IFQ pounds	QS Price/IFQ Pound	Average IFQ Lease Price	IFQ/QS Price Batio	Average price/QS	Ratio QS units:IFQ pounds	QS Price/IFQ Pound	Average IFQ Lease Price	IFQ/QS Price Batio
	2005/00	¢ 1 10	04.07	0.00 CD	1 1100	10000	¢ 0.70	04.07	0 17 11	1 1100	Itatio
	2005/06	\$ 1.18	24.27	\$ 28.62	-	-	\$ 0.70	24.27	\$ 17.11	-	-
	2006/07	\$ 1.05	28.75	\$ 30.06	-	-	\$ 1.43	28.75	\$ 41.22	-	-
	2007/08	\$ 0.81	21.91	\$ 17.68	-	-	\$ 1.04	21.91	\$ 22.74	-	-
	2008/09	\$ 1.02	21.92	\$ 22.32	-	-	\$ 1.50	21.92	\$ 32.79	-	-
	2009/10	\$ 0.91	27.88	\$ 25.39	-	-	\$ 1.26	27.88	\$ 35.13	-	-
	2010/11	\$ 0.80	30.08	\$ 24.11	-	-	\$ 1.08	30.08	\$ 32.64	-	-
	2011/12	\$ 0.64	56.71	\$ 36.30	-	-	\$ 0.63	56.71	\$ 35.61	-	-
BBR	2012/13	-	-	- -	- •	-	\$ 0.79	56.57	\$ 44.42	\$ 6.48	\$ 0.15
	2013/14	\$ 0.83	51.66	\$ 42.70	\$ 5.71	\$ 0.13	\$ 1.02	51.66	\$ 52.93	\$ 5.36	\$ 0.10
	2014/15	\$ 0.99	44.49	\$ 44.23	\$ 5.04	\$ 0.11	\$ 1.33	44.49	\$ 58.97	\$ 4.90	\$ 0.08
	2015/16	\$ 1.02	44.54	\$ 45.63	\$ 6.19	\$ 0.14	\$ 1.40	44.54	\$ 62.47	\$ 5.97	\$ 0.10
	2016/17	\$ 1.01	52.46	\$ 52.82	\$ 7.93	\$ 0.15	\$ 1.51	52.46	\$ 79.24	\$ 7.69	\$ 0.10
	2017/18	\$ 1.01	67.30	\$ 67.97	\$ 6.54	\$ 0.10	\$ 1.21	67.30	\$ 81.27	\$ 6.43	\$ 0.08
	2018/19	\$ 0.62	103.12	\$ 64.23	\$ 7.51	\$ 0.12	\$ 1.00	103.12	\$ 103.00	\$ 7.32	\$ 0.07
	2019/20	\$ 0.39	117.00	\$ 45.05	\$ 8.36	\$ 0.19	\$ 0.59	117.00	\$ 69.12	\$ 8.02	\$ 0.12
	2020/21	\$ 0.31	167.77	\$ 52.49	\$ 8.53	\$ 0.16	\$ 0.38	167.77	\$ 62.98	\$ 8.14	\$ 0.13
	2005/06	0.28	29.88	8.51	-	-	\$ 0.70	29.88	\$ 21.07	-	-
	2006/07	0.29	30.60	8.85	-	-	0.39	30.60	11.87	-	-
	2007/08	0.26	17.75	4.55	-	-	0.26	17.75	4.55	-	-
	2008/09	0.53	19.11	10.09	-	-	0.69	19.11	\$ 13.21	-	-
	2009/10	\$ 0.40	23.31	\$ 9.30	-	-	0.60	23.31	13.95	-	-
	2010/11	0.35	20.62	\$ 7.12	-	-	0.60	20.62	\$ 12.46	-	-
	2011/12	-	-	-	-	-	0.64	12.51	\$ 8.01	1.27	0.16
	2012/13	\$ 1.09	16.76	18.27	\$ 1.42	0.08	1.04	16.76	\$ 17.48	\$ 1.30	0.07
BSS	2013/14	\$ 1.06	20.60	\$ 21.83	\$ 1.40	0.06	1.18	20.60	\$ 24.22	\$ 1.33	\$ 0.06
	2014/15	0.83	16.37	\$13.65	\$ 1.22	0.09	\$1.06	16.37	17.39	\$ 1.12	\$ 0.06
	2015/16	-	-	-	-	-	\$ 1.21	27.38	\$ 33.14	\$ 1.54	0.05
	2016/17	0.39	51.56	20.19	\$ 2.33	0.12	0.77	51.56	39.80	\$ 2.28	\$ 0.06
	2017/18	0.33	58.65	\$ 19.11	\$ 2.26	0.12	-	-	-	-	-
	2018/19	0.29	40.31	11.69	2.17	0.19	0.55	40.31	\$ 22.08	\$ 1.99	\$ 0.09
	2019/20	0.46	32.69	\$15.17	\$ 2.26	0.15	0.73	32.69	\$ 23.80	\$ 2.02	0.08
	2020/21	\$ 0.60	24.71	\$ 14.80	\$ 2.54	0.17	0.90	24.71	\$ 22.16	\$ 2.34	0.11
	2021/22	0.73	198.59	144.97	-	-	\$ 1.38	198.59	\$ 274.05	-	-
	2006/07	\$ 0.05	118.90	\$ 6.26	-	-	\$ 0.09	118.90	\$ 10.95	-	-

Table 4.30: Comparison of crab QS sale price to IFQ lease price

				CVC QS					CVO QS		
	Season	Average	Ratio QS	QS	Average	IFQ/QS	Average	Ratio QS	QS	Average	IFQ/QS
		$\mathrm{price}/\mathrm{QS}$	units:IFQ	$\operatorname{Price}/\operatorname{IFQ}$	IFQ Lease	Price	$\operatorname{price}/\operatorname{QS}$	units:IFQ	$\operatorname{Price}/\operatorname{IFQ}$	IFQ Lease	Price
		$\operatorname{unit}$	pounds	Pound	Price	Ratio	unit	pounds	Pound	Price	Ratio
	2007/08	\$ 0.07	64.72	\$ 4.51	-	-	\$ 0.10	64.72	\$ 6.63	-	-
	2008/09	0.15	80.69	\$ 12.17	-	-	0.19	80.69	\$ 15.21	-	-
EBT	2009/10	-	-	-	-	-	0.11	165.14	18.54	-	-
	2013/14	0.06	152.13	\$ 8.86	0.92	0.10	\$ 0.06	152.13	\$ 8.86	0.86	0.10
	2014/15	0.10	26.23	\$ 2.70	0.87	0.32	0.48	26.23	\$ 12.59	0.86	0.07
	2015/16	0.34	19.74	\$ 6.70	0.92	0.14	0.50	19.74	\$ 9.82	\$ 0.93	\$ 0.09
	2006/07	0.05	203.77	\$ 10.72	-	-	\$ 0.29	203.77	58.97	-	-
	2007/08	0.05	102.46	\$ 5.25	-	-	\$ 0.06	102.46	6.56	-	-
	2008/09	\$ 0.09	145.05	\$ 12.76	-	-	\$ 0.13	145.05	\$ 18.23	-	-
	2013/14	0.05	135.26	\$ 6.30	-	-	\$ 0.06	135.26	\$ 7.87	-	-
WDT	2014/15	0.09	33.56	3.07	\$ 0.96	0.31	0.38	33.56	\$ 12.66	0.86	0.07
VV D I	2015/16	0.27	26.50	\$ 7.19	0.75	0.10	0.43	26.50	\$ 11.39	0.83	0.07
	2017/18	0.21	89.00	18.56	\$ 1.44	0.08	0.33	89.00	\$ 29.31	\$ 1.29	0.04
	2018/19	0.08	91.20	\$ 7.35	\$ 1.44	\$ 0.20	-	-	-	-	-
	2020/21	0.08	94.75	\$ 7.90	1.17	0.15	-	-	-	-	-
	2021/22	0.07	202.25	\$ 14.16	\$ 1.81	0.13	0.12	202.25	\$ 24.27	\$ 1.80	0.07
SMB	2012/13	-	-	-	-	-	\$ 1.26	20.47	\$ 25.71	\$ 1.84	\$ 0.07

Table 4.30: Comparison of crab QS sale price to IFQ lease price (continued)

Note Data shown for all CR program crab fisheries by calendar year. All dollar values are adjusted for inflation to 2021-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 Alaska Region - Restricted Access Management,; 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 and Processor Quota Share Pools and Ratios

			Crew Q	S			Owner	QS	
	Season	QS holders	${f Mean(sd)}\ {f holding}$	Median holding	Max holding	QS holders	Mean(sd) holding	Median holding	Max holding
	Initial allocation	181	0.55(0.21) %	0.52~%	1.23~%	252	0.4(0.3) %	0.36~%	2.24 %
BBR	2020/21	103	0.97(0.6)~%	0.71~%	2.00~%	240	0.42(0.54) %	0.31~%	5.00~%
	2021/22	102	0.98(0.6)~%	0.73~%	2.00~%	240	0.42(0.54) %	0.31~%	5.00~%
	Initial allocation	155	0.65(0.25) %	0.64~%	1.59~%	241	0.41(0.32) %	0.39~%	2.35~%
BSS	2020/21	96	1.04(0.6)~%	0.84~%	1.99~%	268	0.37(0.57)~%	0.25~%	5.00~%
	2021/22	96	1.04(0.6)~%	0.84~%	1.99~%	272	0.37(0.56)~%	0.24~%	5.00~%
	Initial allocation	13	7.69(3.28) %	8.20 %	12.79~%	15	6.67(5.18) %	5.90~%	20.11~%
EAG	2020/21	10	10(8.31) %	8.55~%	20.00~%	25	4(4.96) %	1.63~%	20.00~%
	2021/22	10	10(8.31)~%	8.55~%	20.00~%	24	4.17(5) %	1.63~%	20.00~%
	Initial allocation	166	0.6(0.34)~%	0.56~%	1.99~%	256	0.39(0.39) %	0.30~%	3.87~%
EBT	2020/21	112	0.89(0.6) %	0.69~%	1.99~%	229	0.44(0.59) %	0.27~%	4.97~%
	2021/22	110	0.91(0.6)~%	0.69~%	1.99~%	228	0.44(0.59) %	0.27~%	4.97~%
	Initial allocation	40	2.5(1.05) %	2.47 %	4.81 %	112	0.89(0.85)~%	0.53~%	3.41 %
PIK	2020/21	39	2.56(1.14) %	2.68~%	4.81 %	119	0.84(0.9)~%	0.55~%	6.96~%
	2021/22	39	2.56(1.14) %	2.68~%	4.81~%	120	0.83(0.91)~%	0.53~%	6.96~%
	Initial allocation	73	1.37(0.44) %	1.35~%	3.10~%	137	0.73(0.61)~%	0.62~%	4.43 %
SMB	2020/21	61	1.64(0.83) %	1.42~%	3.95~%	137	0.73(0.8)~%	0.54~%	5.00~%
	2021/22	60	1.67(0.86)~%	1.43~%	3.95~%	132	0.76(0.95)~%	0.53~%	7.94~%
	Initial allocation	9	11.11(12.84) %	6.17~%	41.74 %	15	6.67(12.38) %	1.78~%	45.73 %
WAG	2020/21	8	12.5(13.37) %	7.45~%	41.74~%	13	7.69(13.33) %	1.81~%	45.73~%
	2021/22	8	12.5(13.37) %	7.45~%	41.74~%	13	7.69(13.33) %	1.81~%	45.73~%
	Initial allocation	4	25(17.29) %	20.84 %	49.46~%	30	3.33(8.46) %	0.65~%	45.16 %
WAI	2020/21	4	25(17.29) %	20.84~%	49.46~%	38	2.63(7.53) %	0.63~%	45.16~%
	$2021^{'}/22$	4	25(17.29) %	20.84 %	49.46 %	38	2.63(7.53) %	0.63 %	45.16 %
	Initial allocation	166	0.6(0.34) %	0.56~%	1.99 %	256	0.39(0.39)~%	0.30~%	3.87 %
WBT	2020/21	112	0.89(0.6)~%	0.69~%	1.99~%	229	0.44(0.59) %	0.27~%	4.97~%
	2021/22	110	0.91(0.6)~%	0.69~%	1.99~%	229	0.44(0.59) %	0.27~%	4.97~%

Table 4.31: CR Program Crew (CVC/CPC) and Vessel Owner (CVO/CPO) - summary of QS account registry

Note 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 persons directly holding QS (number of individual persons directly holding crew QS, and number of persons directly holding owner QS including both individual persons and non-individual entities), and the mean and standard deviation (shown as mean(sd)), median and maximum percentage of QS pool shares held amongst distinct entities in the pool., Owner QS statistics include QS held by CDQ groups and 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 Alaska Region, Restricted Access Management, BSAI Crab - Quota Share (QS) Holders files; [https://www.fisheries.noaa.gov/alaska/commercial-fishing/permits-and-licenses-issued-a

	Season	PQS holders	Median holding	Max holding	Mean holding in fishery PQS pool (sd)
	Initial	17	1.64~%	22.98 %	5.88(7.07) %
BBR	2020/21	14	6.12~%	23.20~%	7.14(6.79) %
	2021/22	14	6.12~%	23.20~%	7.14(6.79) %
	Initial allocation	20	2.08 %	25.18 %	5(6.73) %
BSS	2020/21	16	3.76~%	25.18~%	6.25(7.61) %
	2021/22	17	3.42~%	25.18~%	5.88(7.52) %
	Initial allocation	9	$3.55 \ \%$	45.36 %	11.11(15.37) %
EAG	2020/21	10	5.68~%	45.36~%	10(13.61) %
	2021/22	10	5.68~%	45.36~%	10(13.61)~%
	Initial allocation	9	1.03~%	62.98~%	11.11(21.23) %
WAG	2020/21	10	3.41~%	29.98~%	10(12.04) %
	2021/22	10	3.41~%	29.98~%	10(12.04) %
	Initial allocation	23	0.83~%	24.26~%	4.35(6.51) %
EBT	2020/21	17	1.89~%	24.37~%	5.88(7.2) %
	2021/22	18	1.87~%	24.37~%	5.56(7.13) %
	Initial allocation	23	0.83~%	24.26~%	4.35(6.51) %
WBT	2020/21	17	1.89~%	24.37~%	5.88(7.2) %
	2021/22	18	1.87~%	24.37~%	5.56(7.13) %
	Initial allocation	12	5.06~%	32.67~%	8.33(10.56) %
SMB	2020/21	10	$4.18 \ \%$	32.67~%	10(11.3)~%
	2021/22	10	4.18~%	32.67~%	10(11.3)~%
	Initial allocation	14	3.17~%	24.49 %	7.14(8.09) %
PIK	2020/21	12	4.99~%	25.46~%	8.33(8.47) %
	2021/22	12	4.99~%	25.46~%	8.33(8.47) %
	Initial allocation	9	1.03~%	62.98~%	11.11(21.23) %
WAI	2020/21	8	4.03~%	32.99~%	12.5(14.67) %
	2021/22	8	4.03~%	32.99~%	12.5(14.67) %

Table 4.32:	CR	Program	Processor	OS -	summarv	of ]	POS	account	registry
	~ ~ ~ ~			~~~~					

**Note** 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., Owner QS statistics include QS held by CDQ groups and 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 season. Source NMFS Alaska Region, Restricted Access Management, BSAI Crab - Quota Share (QS) Holders files; https://www.

fisheries. no aa.gov/alaska/commercial-fishing/permits-and-licenses-issued-alaska/commercial-fishing/permits-and-licenses-issued-alaska/commercial-fishing/permits-and-licenses-issued-alaska/commercial-fishing/permits-and-licenses-issued-alaska/commercial-fishing/permits-and-licenses-issued-alaska/commercial-fishing/permits-and-licenses-issued-alaska/commercial-fishing/permits-and-licenses-issued-alaska/commercial-fishing/permits-and-licenses-issued-alaska/commercial-fishing/permits-and-licenses-issued-alaska/commercial-fishing/permits-and-licenses-issued-alaska/commercial-fishing/permits-and-licenses-issued-alaska/commercial-fishing/permits-and-licenses-issued-alaska/commercial-fishing/permits-and-licenses-issued-alaska/commercial-fishing/permits-and-licenses-issued-alaska/commercial-fishing/permits-and-licenses-issued-alaska/commercial-fishing/permits-and-licenses-issued-alaska/commercial-fishing/permits-and-licenses-issued-alaska/commercial-fishing/permits-and-licenses-issued-alaska/commercial-fishing/permits-and-licenses-issued-alaska/commercial-fishing/permits-and-licenses-issued-alaska/commercial-fishing/permits-and-licenses-issued-alaska/commercial-fishing/permits-and-licenses-issued-alaska/commercial-fishing/permits-and-licenses-issued-alaska/commercial-fishing/permits-and-licenses-issued-alaska/commercial-fishing/permits-and-licenses-issued-alaska/commercial-fishing/permits-and-licenses-issued-alaska/commercial-fishing/permits-and-licenses-issued-alaska/commercial-fishing/permits-and-licenses-issued-alaska/commercial-fishing/permits-and-licenses-issued-alaska/commercial-fishing/permits-and-licenses-issued-alaska/commercial-fishing/permits-and-licenses-issued-alaska/commercial-fishing/permits-and-licenses-issued-alaska/commercial-fishing/permits-and-licenses-issued-alaska/commercial-fishing/commercial-fishing/commercial-fishing/commercial-fishing/commercial-fishing/commercial-fishing/commercial-fishing/commercial-fishing/commercial-fishing/commercial-fishing/commercial-fishing/commercial-fishing/commer

		Owner Q	S, Alaska	Owne WA-C	er QS, DR-ID	Owne Other L	er QS, location
	Season	QS	Percent of	QS	Percent of	QS	Percent of
		holders	pool	holders	pool	holders	pool
	Initial	41	16 %	203	82~%	8	2~%
BBR	2020/21	52	27 %	176	70~%	12	3 %
BBIU	2021/22	62	34%	169	63 %	9	3%
	Initial	40	16~%	195	82 %	6	2~%
BSS	2020/21	55	29 %	197	67~%	16	4 %
200	2021/22	67	36%	192	61~%	13	3%
	Initial	1	2 %	14	98~%	0	0 %
EAG	2020/21	7	$35 \ \%$	16	$52 \ \%$	2	$14 \ \%$
	2021/22	7	35 %	15	52%	2	14~%
	Initial	40	$16 \ \%$	209	82 %	7	2~%
EBT	2020/21	49	$30 \ \%$	166	66 %	14	4 %
	2021/22	59	36 %	158	60 %	11	4 %
	Initial allocation	22	$25 \ \%$	86	72~%	4	3 %
PIK	2020/21	32	$35 \ \%$	79	56~%	8	9 %
	2021/22	40	40~%	74	52~%	6	8 %
	Initial allocation	20	$19 \ \%$	113	80 %	4	1 %
SMB	2020/21	33	33~%	96	63~%	8	4 %
	2021/22	38	42~%	88	$55 \ \%$	6	4 %
	Initial allocation	1	2 %	14	$98 \ \%$	0	0 %
WAG	2020/21	6	63~%	6	30~%	1	7~%
	2021/22	6	63~%	6	30~%	1	7~%
	Initial allocation	6	$3 \ \%$	24	97~%	0	0 %
WAI	2020/21	14	56~%	24	44 %	0	0 %
	2021/22	16	60~%	22	40~%	0	0 %
	Initial allocation	40	16 %	209	82 %	7	2 %
WBT	2020/21	49	30~%	166	66~%	14	4 %
	2021/22	60	37~%	158	60~%	11	4 %

Table 4.33: CR Program Vessel Owner (CVO/CPO) QS holdings by holder location

**Note** 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. Owner QS statistics include QS held by CDQ groups and 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 Alaska Region, Restricted Access Management, BSAI Crab - Quota Share (QS) Holders files; https://www.fisheries.noaa.gov/alaska/commercial-fishing/permits-and-licenses-issued-alaska

		Crew QS	, Alaska	Crew WA-O	QS, PR-ID	Owne: Other L	r QS, ocation
	Season	QS holders	Percent of pool	QS holders	Percent of pool	QS holders	Percent of pool
	Initial	44	$19 \ \%$	128	75~%	9	6~%
BBR	2020/21	28	$25 \ \%$	68	$70 \ \%$	7	6~%
	2021/22	28	25~%	69	70~%	5	4 %
	Initial allocation	35	19~%	111	76~%	9	5 %
BSS	2020/21	27	24 %	63	72~%	6	4 %
	2021/22	27	24 %	64	72~%	5	3 %
	Initial allocation	1	2 %	11	94~%	1	4 %
EAG	2020/21	0	0 %	10	$100 \ \%$	0	0 %
	2021/22	0	0 %	10	$100 \ \%$	0	0 %
	Initial allocation	40	20~%	117	75~%	9	5 %
EBT	2020/21	30	26~%	72	67~%	10	7 %
	2021/22	29	26 %	72	67~%	9	6~%
	Initial allocation	16	34~%	19	$55 \ \%$	5	11 %
PIK	2020/21	13	29~%	19	$52 \ \%$	7	18 %
	2021/22	13	$29 \ \%$	20	55 %	6	16 %
	Initial allocation	17	24~%	53	72~%	3	4 %
SMB	2020/21	16	27~%	41	68~%	4	5 %
	2021/22	16	$27 \ \%$	41	70~%	3	4 %
	Initial allocation	0	0 %	8	94~%	1	6~%
WAG	2020/21	0	0 %	8	100 $\%$	0	0 %
	2021/22	0	0 %	8	$100 \ \%$	0	0 %
	Initial allocation	0	0 %	4	100~%	0	0 %
WAI	2020/21	0	0 %	4	$100 \ \%$	0	0 %
	2021/22	0	0 %	4	100 %	0	0 %
	Initial allocation	40	20~%	117	75 %	9	5 %
WBT	2020/21	30	26~%	72	67~%	10	7 %
	2021/22	29	26~%	72	67~%	9	6~%

Table 4.34: CR Program Crew (CVC/CPC) QS holdings by holder location

Note 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

	Season	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 vesse operators
	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 %
Combined	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	65	37 %	45 9
	2017/10	179	50	31 70	40 0
	2010/10	166	50	36 %	44 / 11 0
	2019/20	100	59 59	30 V 20 V	44 / 27 0:
	2020/21 2021/22	162	30 37	23%	31 7
	2005/06	218	94	43 %	53 %
	2006/07	208	81	39 %	51 9
	2007/08	205	83	40 %	51 9
	2008/09	200	80	40 %	49 %
	2009/10	201	72	36 %	49 9
	2010/11	198	70	35 %	47 9
	$\frac{2010}{11}$	197	71	36 %	45 9
	2012/13	196	64	33 %	43 9
CVC	2012/10 2013/14	197	63	32 %	42 9
0.00	2010/11 2014/15	198	65	33 %	42 9
	2011/10 2015/16	197	70	36 %	44 9
	2016/17	196	60 60	31 %	40.9
	2010/17	190	00 63	91 /0 97 0/	40 / 16 0
	2017/10	160	50	31 70	40 /
	2010/19	109	50 E 0	04 /0 26 07	40 / 11 0
	2019/20	102	00 40	0070 9107	44 7 97 0
	2020/21 2021/22	150	49 36	23%	37 % 29 %
	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 9
	2010/11	27	12	44 %	51 9
	2011/12	28	12	43 %	51 9
	2012/12	20	12	39 %	49 9
CPC	2012/10 2013/14	20	11	38 %	49 9
	2010/14 2014/15	25	*** 8	29 %	-13 / 27 0
	2014/10	20	19	23 70 12 07	21 / 22 0;
	2010/10	20	12	40 /0 96 07	55 / 1 A O
	2010/17	20	10	00 70 96 07	44.7 90.0
	2017/18	28 97	10	30 % 99 07	32 % 35 0
	2018/19	27	9	33 % 27 07	25 %
	2019/20	27	10	37 %	44 9
	0000/01	07	4.4	11 04	10.0

Table 4.35: CR Program Crew (CVC/CPC) QS allocation held by active CFEC-licensed gear operators

**Note** 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

		CPO	QS	CVO	QS	All G	QS	PQ	8
	Season	CDQ Groups	Share of QS held	CDQ Groups	Share of QS held	CDQ Groups	Share of QS held	CDQ Groups	Share of QS held
	Initial	1	4.29 %	3	1.23~%	4	1.37~%	-	-
BBB	2020/21	4	40.98 %	5	14 37 %	5	15 57 %	9	13.84 %
BBR	2020/21 2021/22	4	40.98 %	5	14.37%	5	15.57 %	$\frac{2}{2}$	13.84%
	Initial	1	3.86~%	3	1.42~%	4	1.64~%	-	-
BSS	2020/21	4	44.53~%	6	15.16~%	6	17.82~%	3	22.90~%
	2021/22	4	44.53 %	6	15.16~%	6	17.82~%	3	22.90~%
- DAG	2020/21	-	-	4	28.27 %	4	26.94 %	2	11.72 %
EAG	2021/22	-	-	4	28.30~%	4	26.97~%	2	11.72~%
WAC	2020/21	1	96.19~%	3	27.83~%	4	59.35~%	1	29.98~%
WAG	2021/22	1	96.19~%	3	27.83~%	4	59.35~%	1	29.98 %
	Initial allocation	1	3.39~%	3	1.42~%	4	1.55~%	-	-
EBT	2020/21	4	62.68~%	6	13.28~%	6	16.63~%	2	18.56~%
	2021/22	4	62.68~%	6	13.28~%	6	16.63~%	2	18.56~%
	Initial allocation	1	3.39~%	3	1.42~%	4	1.55~%	-	-
WBT	2020/21	4	62.68~%	6	13.28~%	6	16.63~%	2	18.56~%
	2021/22	4	62.68~%	6	13.28~%	6	16.63~%	2	18.56~%
	Initial allocation	-	-	2	1.14 %	2	1.11 %	-	-
SMB	2020/21	2	100.00~%	4	13.60~%	5	15.26~%	2	23.74~%
	2021/22	2	100.00~%	4	16.51~%	5	18.12~%	2	23.74~%
	Initial	-	-	1	2.34 %	1	2.33~%	-	-
PIK	2020/21	-	-	6	14.42~%	6	14.35~%	2	15.77~%
	2021/22	-	-	6	15.78 %	6	15.70 %	2	15.77 %
	Initial	-	-	1	0.16 %	1	0.10 %	-	-
WAI	2020/91	1	95.82 %	5	16 95 %	5	47 13 %	_	_
,,,,,,	2020/21 2021/22	1	95.82%	5	16.95%	5	47.13 %	-	-

Table 4.36: CDQ group direct holdings of CR Program QS and PQS allocation

Note 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

	Quota	Initial	2020/2021	2021/2022	Net change	Net change
	Quota	issuance	2020/2021	2021/2022	from initial	from previous
		ibbddiitee			issuance	year
	CPC	8	5	5	-3	0
	CPO	13	5	5	-8	0
	CVC	178	61	60	-118	-1
	CVO	242	153	151	-91	-2
BBR	All Harvest	426	220	218	-208	-2
	QS			-10	-00	-
	Processor QS	17	8	8	-9	0
	CPC	8	4	4	-4	0
	CPO	14	5	5	-9	0
	CVC	152	52	52	-100	0
Daa	CVO	231	147	145	-86	-2
BSS	All Harvest	389	203	202	-187	-1
	QS					
	Processor QS	20	10	10	-10	0
	CPC	15	-	-	-	-
	CPO	14	-	-	-	-
	$\operatorname{CVC}$	170	-	-	-	-
DCT	CVO	248	-	-	-	-
B21	All Harvest	426	-	-	-	-
	QS					
	Processor QS	23	-	-	-	-
	CPC	15	8	8	-7	0
	CPO	13	5	5	-8	0
	$\operatorname{CVC}$	160	69	68	-92	-1
BTE	CVO	246	153	151	-95	-2
DIL	All Harvest	413	230	228	-185	-2
	QS					
	Processor QS	23	12	12	-11	0
	CPC	15	8	8	-7	0
	CPO	13	5	5	-8	0
	$\operatorname{CVC}$	160	69	68	-92	-1
BTW	CVO	246	153	151	-95	-2
210	All Harvest	413	230	228	-185	-2
	QS	2.2				
	Processor QS	23	12	12	-11	0
	CPO	2	0	0	-2	0
	$\operatorname{CVC}$	13	2	2	-11	0
	CVO	13	8	8	-5	0
EAG	All Harvest	28	10	10	-18	0
	QS	0	4		-	0
	Processor QS	9	4	4	-5	0
	CPO	1	1	1	0	0
	CVC	40	26	26	-14	0
DII	CVO	111	74	73	-38	-1
PIK	All Harvest	148	99	98	-50	-1
	QS Decese Of	1 4	0	0	-	0
	Processor QS	14	9	9	-5	0
	CPO	5	1	1	-4	0
	$\operatorname{CVC}$	73	30	29	-44	-1

Table 4.37: CR Program QS/PQS initial recipients currently remaining in QS Pools

	Quota	Initial issuance	2020/2021	2021/2022	Net change from initial issuance	Net change from previous year
	CVO	133	84	79	-54	-5
SMB	All Harvest	210	116	110	-100	-6
	QS					
	Processor QS	12	5	5	-7	0
	CPC	2	1	1	-1	0
	CPO	2	1	1	-1	0
	CVC	8	5	5	-3	0
WAC	CVO	13	8	8	-5	0
WAG	All Harvest	24	15	15	-9	0
	QS					
	Processor QS	9	6	6	-3	0
	CPC	1	1	1	0	0
	CPO	2	2	2	0	0
	CVC	4	3	3	-1	0
<b>117A</b>	CVO	29	17	17	-12	0
WAI	All Harvest	34	21	21	-13	0
	QS					
	Processor QS	9	5	5	-4	0

Table 4.37: CR Program QS/PQS initial recipients currently remaining in QS Pools (continued)

**Note** 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 issues 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 issues remaining reported for EBT and WBT is relative

to 2006. Source NMFS AKRO RAM division Quota Share and Processor Quota Share holder files

		Owner New in	· QS, fishery	Owner New in all	r QS, fisheries	Crew New in	QS, fishery	Crev New in a	v QS, ll fisheries	PQ New in	S, fishery	PQ New in all	S, fisheries
	Relative to season	Entrants	Share of QS type acquired	Entrants	Share of QS type acquired	Entrants	Share of QS type acquired	Entrants	Share of QS type acquired	Entrants	Share of QS type acquired	Entrants	Share of QS type acquired
	2020 season end	4	1 %	4	1 %	-	-	-	-	1	5 %	1	5 %
BBR	Initial allocation	85	30 %	79	27~%	40	48 %	36	45 %	6	33 %	5	32~%
	2020 season	9	1 %	9	1 %	-	-	-	-	1	0 %	-	-
BSS	Initial allocation	123	29~%	113	27~%	42	51~%	39	48 %	7	32 %	6	31 %
EAG	Initial allocation	16	$51 \ \%$	12	46~%	8	80 %	6	78 %	6	$25 \ \%$	5	24 %
	2020 season	2	4 %	2	4 %	-	-	-	-	-	-	-	-
PIK	end Initial allocation	46	48~%	32	34~%	13	34~%	9	21~%	3	30~%	2	16~%
	2020 season	1	0 %	1	0 %	-	-	-	-	-	-	-	-
SMB	end Initial allocation	52	28~%	42	21~%	31	$55 \ \%$	25	48 %	5	35~%	4	27~%
WAG	Initial allocation	4	16 %	3	4 %	2	20 %	2	20 %	4	53 %	3	53 %
WAI	Initial allocation	20	28 %	12	14 %	1	9 %	1	9 %	3	62 %	2	35 %

Table 4.38: New holders of Crab QS and PQS in 2021/22 relative to initial allocation and prior season end

Note Entrants and share of QS type acquired columns show the change in entry to the respective quota pools, as of the beginning of the 2021/22 crab season, relative to the end of the 2020/21 and 2005/06 (initial allocation) seasons.

Source NMFS Alaska Region - Restricted Access Management,, Quota shareholder files.

	Season	QS Entities	Owners	Herfindahl Index
	2005/06	251	394	0.33
	2006/07	255	460	0.35
	2007/08	249	466	0.37
	2008/09	254	575	0.33
	2009/10	256	576	0.33
	2010/11	264	574	0.32
	2011/12	261	550	0.32
	2012/13	257	583	0.32
BBR	2013/14	261	598	0.32
	2014/15	256	621	0.32
	2015/16	249	498	0.36
	2016/17	247	525	0.35
	2017/18	246	523	0.35
	2018/19	248	519	0.35
	2019/20	243	517	0.35
	2020/21	241	513	0.35
	2021/22	240	539	0.32
	2005/06	240	372	0.33
	2006/07	239	428	0.36
	2007/08	237	435	0.37
	2008/09	245	542	0.33
	2009/10	249	551	0.33
	2010/11	250	518	0.32
	2011/12	263	518	0.31
	2012/13	258	549	0.32
BSS	2013/14	266	568	0.31
	2014/15	260	572	0.31
	2015/16	261	451	0.35
	2016/17	263	480	0.34
	2017/18	261	481	0.34
	2018/19	264	486	0.34
	2019/20	263	472	0.33
	2020/21	266	477	0.33
	2021/22	268	504	0.31

Table 4.39: CVO/CPO total entity decomposition, BBR and BSS QS pools

$\begin{tabular}{ c c c c c c c c c c c c c c c c c c c$	Dwners -           Percent           66.35 %           16.53 %           7.45 %           2.42 %           4.24 %           76.47 %           6.66 %           8.42 %           2.08 %           3.34 %           77.87 %           4.77 %           11.74 %           2.36 %           0.26 %           77.70 %           4.25 %           12.23 %           2.57 %           0.26 %
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{c} 66.35 \ \% \\ 16.53 \ \% \\ 7.45 \ \% \\ 2.42 \ \% \\ 4.24 \ \% \\ \hline \\ 76.47 \ \% \\ 6.66 \ \% \\ 8.42 \ \% \\ 2.08 \ \% \\ 3.34 \ \% \\ \hline \\ 77.87 \ \% \\ 4.77 \ \% \\ 11.74 \ \% \\ 2.36 \ \% \\ 0.26 \ \% \\ \hline \\ 77.70 \ \% \\ 4.25 \ \% \\ 12.23 \ \% \\ 2.57 \ \% \\ 0.26 \ \% \\ \hline \end{array}$
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{c} 2.42 \ \% \\ 4.24 \ \% \\ \hline \\ 76.47 \ \% \\ 6.66 \ \% \\ 8.42 \ \% \\ 2.08 \ \% \\ 3.34 \ \% \\ \hline \\ 77.87 \ \% \\ 4.77 \ \% \\ 11.74 \ \% \\ 2.36 \ \% \\ 0.26 \ \% \\ \hline \\ 77.70 \ \% \\ 4.25 \ \% \\ 12.23 \ \% \\ 2.57 \ \% \\ 0.26 \ \% \\ \hline \\ 0.26 \ \% \\ \hline \end{array}$
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{c} 76.47 \ \% \\ 6.66 \ \% \\ 8.42 \ \% \\ 2.08 \ \% \\ 3.34 \ \% \\ \hline 77.87 \ \% \\ 4.77 \ \% \\ 11.74 \ \% \\ 2.36 \ \% \\ 0.26 \ \% \\ \hline 77.70 \ \% \\ 4.25 \ \% \\ 12.23 \ \% \\ 2.57 \ \% \\ 0.26 \ \% \end{array}$
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{c} 8.42 \ \% \\ 2.08 \ \% \\ 3.34 \ \% \\ \hline \\ 77.87 \ \% \\ 4.77 \ \% \\ 11.74 \ \% \\ 2.36 \ \% \\ 0.26 \ \% \\ \hline \\ 77.70 \ \% \\ 4.25 \ \% \\ 12.23 \ \% \\ 2.57 \ \% \\ 0.26 \ \% \\ \hline \end{array}$
Individual         32         394         78.08 %         30         368           2007/08         Corp/Invest Fund         212         18         4.82 %         202         16           2007/08         CDQ/Nonprofit         4         6         11.61 %         4         6           Trust/Estate         -         24         2.24 %         -         23           Unknown         -         24         0.26 %         -         22	3.34 %           77.87 %           4.77 %           11.74 %           2.36 %           0.26 %           77.70 %           4.25 %           12.23 %           2.57 %           0.26 %
Corp/Invest Fund         212         18         4.82 %         202         16           2007/08         CDQ/Nonprofit         4         6         11.61 %         4         6           Trust/Estate         -         24         2.24 %         -         23           Unknown         -         24         0.26 %         -         22	$\begin{array}{c} 4.77 \ \% \\ 11.74 \ \% \\ 2.36 \ \% \\ 0.26 \ \% \\ \hline 77.70 \ \% \\ 4.25 \ \% \\ 12.23 \ \% \\ 2.57 \ \% \\ 0.26 \ \% \\ \hline \end{array}$
Unknown         -         24         0.26 %         -         22	0.26 % 77.70 % 4.25 % 12.23 % 2.57 % 0.26 %
Individual $32$ $430$ $77.77\%$ $20$ $402$	$\begin{array}{c} 4.25 \ \% \\ 12.23 \ \% \\ 2.57 \ \% \\ 0.26 \ \% \end{array}$
Corp/Invest Fund         217         80         4.09 %         211         78           2008/09         CDQ/Nonprofit         4         7         12.42 %         4         7	$2.57 \% \\ 0.26 \%$
Trust/Estate- $31$ $2.47\%$ - $30$ Unknown- $27$ $0.27\%$ - $25$	
Individual         35         430         75.29 %         32         408           Corp/Invest Fund         216         76         3.10 %         211         75	76.22 % 3.06 %
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	13.70% 3.87% 0.17%
Individual         38         424         75.38 %         35         376           Come (Invert Fund         201         76         2.82 %         200         74	75.49 %
2010/11         CDQ/Nonprofit         4         7         14.65 %         4         7           Trust/Estate         -         31         3.97 %         1         31	2.38 % 15.08 % 3.87 %
Unknown         -         36         0.18 %         -         30           Individual         41         409         73 54 %         46         382	0.17 %
Corp/Invest Fund         215         72         3.14 %         211         73           2011/12         CDQ/Nonprofit         4         7         16.30 %         5         7	2.82 % 16.60 %
Trust/Estate         -         32         3.67 %         -         31           Unknown         -         30         0.37 %         -         25	$3.39 \% \\ 0.34 \%$
Individual         39         433         73.86 %         42         405           Corp/Invest Fund         213         74         2.79 %         210         73	74 % 2.47 \%
2012/13     CDQ/Nonprofit     4     7     16.41 %     5     7       Trust/Estate     -     40     3.73 %     -     40       Unknown     -     29     0.20 %     -     24	16.87 % 3.46 % 0.19 %
Individual         39         439         72.34 %         44         413           Corp/Invest Fund         217         73         2 79 %         216         72	72.61 %
2013/14         CDQ/Nonprofit         4         7         16.41 %         5         7           Trust/Estate         -         48         5.24 %         -         48	16.96% 4.78%
Unknown         -         31         0.20 %         -         28           Individual         38         456         70.85 %         42         416	0.19% 70.32\%
Corp/Invest Fund         213         74         2.70 %         212         71           2014/15         CDQ/Nonprofit         4         7         17.48 %         5         7	2.34 % 18.85 %
Trust/Estate         -         50         5.78 %         -         49           Unknown         -         34         0.20 %         -         29	5.29 % 0.18 %
Individual         38         417         69.45 %         44         376           Corp/Invest Fund         206         8         2.06 %         211         5	68.95% 1.87%
2015/16         CDQ/Nonprofit         4         6         19.91 %         5         6           Trust/Estate         -         35         5.40 %         -         34           Unknown         -         32         0.20 %         -         30	21.09 % 4.90 % 0.18 %

## Table 4.40: CVO/CPO entity decomposition by entity type, BBR and BSS QS pools

			BBR			BSS	
		QS Entities	Owners -	Owners -	QS Entities	Owners -	Owners -
		- Count	Count	QS Percent	- Count	Count	QS Percent
	Individual	36	426	$68.58 \ \%$	45	386	68.21~%
	Corp/Invest Fund	206	7	1.09~%	212	4	0.93~%
2016/17	CDQ/Nonprofit	4	6	19.91~%	5	6	21.09~%
	Trust/Estate	-	51	7.39~%	-	51	6.72~%
	Unknown	-	35	0.04~%	-	33	0.04~%
	Individual	35	425	68.80~%	45	389	68.41 %
	Corp/Invest Fund	206	7	1.09~%	210	4	0.93~%
2017/18	CDQ/Nonprofit	4	6	19.59~%	5	6	20.82~%
	Trust/Estate	-	51	7.49~%	-	51	6.82~%
	Unknown	-	34	0.03~%	-	31	0.02~%
	Individual	37	418	67.99~%	44	390	68.26~%
	Corp/Invest Fund	206	7	1.08~%	214	4	0.94~%
2018/19	CDQ/Nonprofit	4	5	19.34~%	5	6	20.64~%
	Trust/Estate	-	56	8.60~%	-	55	7.15~%
	Unknown	-	33	0.01~%	-	31	0 %
	Individual	34	415	67.17~%	46	377	67.62~%
	Corp/Invest Fund	204	7	1.05~%	211	4	0.94~%
2019/20	CDQ/Nonprofit	4	5	19.34~%	5	6	20.64~%
	Trust/Estate	-	61	9.43~%	-	58	7.78~%
	Unknown	-	29	0.01~%	-	27	0 %
	Individual	35	411	68.33~%	46	376	68.53~%
	Corp/Invest Fund	201	5	0.53~%	214	3	0.41~%
2020/21	CDQ/Nonprofit	4	5	19.35~%	5	6	20.65~%
	Trust/Estate	-	60	8.79~%	-	59	7.40~%
	Unknown	-	32	0.01~%	-	33	0.01~%
	Individual	35	398	64.09 %	48	366	$64.88 \ \%$
	Corp/Invest Fund	200	5	1.01~%	214	4	0.94~%
2021/22	CDQ/Nonprofit	4	40	22.42~%	5	41	23.34~%
	Trust/Estate	-	62	9.47~%	-	60	7.81~%
	Unknown	-	34	0.01~%	-	33	0.01~%

Table 4.40: CVO/CPO entity decomposition by entity type, BBR and BSS QS pools (continued)

Note Statistics shown for Owner QS report combined crab catcher vessel and catcher/processor owner (CVO and CPO) quota share pools, and report the number of distinct QS entities ('Entities'), and number of distinct individuals and equity owners of QS entities ('Owners") obtained by decomposition of ownership information reported to NMFS in Annual IFQ Permit applications, and summed percentages of QS pool shares collectively by Entities and Owners, categorized by type – Individual, CDQ Group/Non-profit, Corporate, Trust/Estate, and Unknown (rounding error and incomplete company ownership data, particularly in the early years of the CR program, result in residual shares that are assigned to "Unknown" entities).

Source NMFS Alaska Region - Restricted Access Management, Quota Share holder files; Alaska Fisheries Information Network (AKFIN).

			Count of QS	Holders		Share of QS Pool Held				
	Season	Active (vessel owner)	Active (gear operator)	Active (total)	Inactive	Active (vessel owner)	Active (gear operator)	Active (total)	Inactive	
	2005/06	175	39	183	209	0.59	0.12	0.60	0.40	
	2006/07	204	39	212	245	0.63	0.07	0.64	0.36	
	2007/08	205	34	212	251	0.63	0.06	0.64	0.36	
	2008/09	297	31	307	266	0.60	0.05	0.62	0.38	
	2009/10	286	31	294	278	0.62	0.06	0.63	0.37	
	2010/11	267	28	275	292	0.61	0.04	0.62	0.38	
	2011/12	248	28	256	293	0.62	0.03	0.63	0.37	
	2012/13	291	25	296	287	0.65	0.04	0.66	0.34	
BBR	2013/14	290	23	294	302	0.60	0.04	0.61	0.39	
	2014/15	293	21	297	323	0.62	0.04	0.62	0.38	
	2015/16	180	20	186	312	0.64	0.03	0.65	0.35	
	2016/17	210	21	215	310	0.64	0.04	0.65	0.35	
	2017/18	203	25	209	314	0.61	0.05	0.63	0.37	
	2018/19	198	23	203	316	0.61	0.04	0.62	0.38	
	2019/20	202	23	207	310	0.62	0.04	0.63	0.37	
	2020/21	195	20	200	313	0.61	0.03	0.61	0.39	
	2021/22	168	13	170	369	0.55	0.02	0.55	0.45	
	2005/06	171	39	179	193	0.61	0.12	0.62	0.38	
	2006/07	204	38	212	215	0.65	0.07	0.66	0.34	
	2007/08	204	34	211	219	0.65	0.06	0.66	0.34	
	2008/09	297	32	307	233	0.62	0.05	0.63	0.37	
	2009/10	284	30	291	255	0.59	0.05	0.61	0.39	
	2010/11	264	26	271	243	0.61	0.04	0.61	0.39	
	2011/12	252	29	260	257	0.63	0.04	0.64	0.36	
	2012/13	297	26	302	246	0.65	0.04	0.66	0.34	
BSS	2013/14	294	28	301	263	0.61	0.04	0.62	0.38	
	2014/15	297	27	305	267	0.64	0.04	0.65	0.35	
	2015/16	192	27	200	251	0.67	0.04	0.67	0.33	
	2016/17	219	26	226	254	0.66	0.04	0.67	0.33	
	2017/18	212	29	219	262	0.64	0.05	0.65	0.35	
	2018/19	205	26	210	275	0.62	0.04	0.63	0.37	
	2019/20	208	28	215	255	0.64	0.04	0.65	0.35	
	2020/21	205	23	210	264	0.63	0.03	0.63	0.37	
	2021/22	178	18	182	320	0.57	0.02	0.57	0.43	

Table 4.41: Estimated active and inactive QS owners and share of QS pool held

			Count of QS	Holders		Share of QS Pool Held				
	Season	Active (vessel owner)	Active (gear operator)	Active (total)	Inactive	Active (vessel owner)	Active (gear operator)	Active (total)	Inactive	
	2006/07	204	40	212	261	0.64	0.08	0.65	0.35	
	2007/08	202	34	208	263	0.62	0.07	0.64	0.36	
	2008/09	296	32	305	275	0.59	0.05	0.60	0.40	
	2009/10	282	31	290	283	0.57	0.06	0.59	0.41	
	2010/11	263	27	270	287	0.58	0.04	0.59	0.41	
	2011/12	243	26	250	289	0.58	0.04	0.59	0.41	
	2012/13	285	24	290	279	0.61	0.04	0.61	0.39	
FPT	2013/14	284	22	288	296	0.57	0.04	0.58	0.42	
EDI	2014/15	288	21	292	315	0.60	0.04	0.61	0.39	
	2015/16	175	19	180	307	0.62	0.03	0.62	0.38	
	2016/17	209	21	214	300	0.63	0.04	0.64	0.36	
	2017/18	202	25	208	309	0.60	0.05	0.61	0.39	
	2018/19	195	23	200	311	0.59	0.04	0.60	0.40	
	2019/20	199	23	204	303	0.62	0.04	0.62	0.38	
	2020/21	192	20	197	309	0.60	0.04	0.61	0.39	
	2021/22	165	13	167	366	0.53	0.03	0.53	0.47	
	2006/07	204	40	212	261	0.64	0.08	0.65	0.35	
	2007/08	202	34	208	263	0.62	0.07	0.64	0.36	
	2008/09	296	32	305	276	0.59	0.05	0.60	0.40	
	2009/10	282	31	290	284	0.57	0.06	0.59	0.41	
	2010/11	263	27	270	288	0.58	0.04	0.58	0.42	
	2011/12	243	26	250	290	0.58	0.04	0.59	0.41	
	2012/13	285	24	290	280	0.60	0.04	0.61	0.39	
WBT	2013/14	284	22	288	297	0.57	0.04	0.58	0.42	
WDI	2014/15	288	21	292	316	0.60	0.04	0.61	0.39	
	2015/16	175	20	181	307	0.62	0.04	0.63	0.37	
	2016/17	209	22	215	300	0.63	0.04	0.64	0.36	
	2017/18	202	26	209	309	0.60	0.05	0.61	0.39	
	2018/19	195	24	201	309	0.60	0.05	0.60	0.40	
	2019/20	199	24	205	303	0.62	0.05	0.63	0.37	
	2020/21	192	20	197	310	0.60	0.04	0.61	0.39	
	2021/22	165	13	167	366	0.53	0.03	0.53	0.47	
	2005/06	16	3	16	21	0.64	0.11	0.64	0.36	
	2006/07	30	3	30	15	0.72	0.02	0.72	0.28	

Table 4.41: Estimated active and inactive QS owners and share of QS pool held (continued)

			Count of QS	Holders		Share of QS Pool Held				
	Season	Active (vessel owner)	Active (gear operator)	Active (total)	Inactive	Active (vessel owner)	Active (gear operator)	Active (total)	Inactive	
	2007/08	32	2	33	11	0.81	0.01	0.82	0.18	
	2008/09	24	3	27	2	0.76	0.08	0.84	0.16	
	2009/10	17	3	18	3	0.63	0.08	0.64	0.36	
	2010/11	18	3	19	7	0.79	0.11	0.80	0.20	
	2011/12	16	3	17	9	0.74	0.11	0.75	0.25	
	2012/13	16	2	16	10	0.74	0.10	0.74	0.26	
EAG	2013/14	16	2	16	13	0.64	0.10	0.64	0.36	
	2014/15	20	5	23	15	0.72	0.07	0.73	0.27	
	2015/16	19	7	23	12	0.72	0.08	0.74	0.26	
	2016/17	20	6	23	12	0.86	0.08	0.87	0.13	
	2017/18	27	5	29	13	0.86	0.07	0.86	0.14	
	2018/19	25	6	28	13	0.86	0.07	0.86	0.14	
	2019/20	26	6	29	12	0.88	0.08	0.88	0.12	
	2020/21	25	6	28	13	0.86	0.08	0.86	0.14	
	2021/22	25	5	27	15	0.85	0.08	0.85	0.15	
	2005/06	17	3	17	12	0.89	0.03	0.89	0.11	
	2006/07	23	3	23	13	0.89	0.01	0.89	0.11	
	2007/08	25	2	26	12	0.91	0	0.91	0.09	
	2008/09	18	2	20	4	0.91	0	0.91	0.09	
	2009/10	17	3	20	4	0.81	0	0.81	0.19	
	2010/11	18	2	20	4	0.91	0	0.91	0.09	
	2011/12	14	2	16	6	0.90	0	0.90	0.10	
	2012/13	14	1	15	7	0.90	0	0.90	0.10	
WAG	2013/14	15	0	15	10	0.88	0	0.88	0.12	
	2014/15	16	0	16	7	0.88	0	0.88	0.12	
	2015/16	16	1	16	7	0.88	0	0.88	0.12	
	2016/17	17	1	17	6	0.95	0	0.95	0.05	
	2017/18	24	1	24	6	0.95	0	0.95	0.05	
	2018/19	25	1	25	7	0.95	0	0.95	0.05	
	2019/20	26	1	26	6	0.97	0	0.97	0.03	
	2020/21	25	1	25	7	0.95	0	0.95	0.05	
	2021/22	25	1	25	7	0.95	0	0.95	0.05	
-	2005/06	126	26	130	107	0.65	0.13	0.66	0.34	
	2006/07	154	26	158	133	0.68	0.07	0.70	0.30	

Table 4.41: Estimated active and inactive QS owners and share of QS pool held (continued)

			Count of QS	Holders		Share of QS Pool Held			
	Season	Active (vessel owner)	Active (gear operator)	Active (total)	Inactive	Active (vessel owner)	Active (gear operator)	Active (total)	Inactive
	2007/08	149	24	153	136	0.65	0.05	0.65	0.35
	2008/09	242	20	248	138	0.57	0.04	0.58	0.42
	2009/10	226	20	231	147	0.58	0.05	0.59	0.41
	2010/11	208	17	212	148	0.55	0.04	0.56	0.44
	2011/12	210	16	214	150	0.61	0.03	0.62	0.38
	2012/13	248	14	250	146	0.64	0.04	0.65	0.35
SMB	2013/14	250	14	252	147	0.60	0.04	0.61	0.39
	2014/15	253	12	255	154	0.64	0.04	0.65	0.35
	2015/16	145	13	147	140	0.66	0.04	0.68	0.32
	2016/17	173	13	176	149	0.67	0.04	0.68	0.32
	2017/18	169	15	172	160	0.65	0.04	0.66	0.34
	2018/19	160	13	162	169	0.63	0.03	0.63	0.37
	2019/20	164	14	167	151	0.66	0.03	0.67	0.33
	2020/21	161	12	164	152	0.64	0.03	0.64	0.36
	2021/22	138	9	140	210	0.57	0.01	0.57	0.43
	2005/06	113	20	117	94	0.48	0.11	0.50	0.50
	2006/07	137	22	140	84	0.57	0.10	0.59	0.41
	2007/08	153	23	157	87	0.59	0.11	0.61	0.39
	2008/09	232	22	239	110	0.52	0.08	0.55	0.45
	2009/10	226	20	232	113	0.59	0.08	0.60	0.40
	2010/11	217	18	222	112	0.59	0.07	0.60	0.40
	2011/12	201	19	206	104	0.59	0.06	0.60	0.40
	2012/13	238	16	242	102	0.61	0.08	0.62	0.38
PIK	2013/14	239	16	242	114	0.61	0.07	0.61	0.39
	2014/15	242	14	245	128	0.63	0.07	0.64	0.36
	2015/16	130	14	135	122	0.60	0.07	0.62	0.38
	2016/17	157	12	160	118	0.61	0.06	0.62	0.38
	2017/18	156	16	160	126	0.58	0.06	0.59	0.41
	2018/19	144	14	147	139	0.55	0.05	0.56	0.44
	2019/20	142	15	146	134	0.53	0.06	0.54	0.46
	2020/21	148	11	151	140	0.57	0.05	0.58	0.42
	2021/22	130	7	132	176	0.51	0.03	0.51	0.49
	2005/06	58	9	61	17	0.74	0.03	0.74	0.26
	2006/07	83	7	83	8	0.76	0.01	0.76	0.24

Table 4.41: Estimated active and inactive QS owners and share of QS pool held *(continued)* 

			Count of QS	Holders			Share of QS F	ool Held	
	Season	Active (vessel owner)	Active (gear operator)	Active (total)	Inactive	Active (vessel owner)	Active (gear operator)	Active (total)	Inactive
	2007/08	71	5	71	31	0.82	0.01	0.82	0.18
	2008/09	72	5	74	19	0.81	0.01	0.82	0.18
	2009/10	51	5	52	32	0.91	0.01	0.91	0.09
	2010/11	52	5	53	32	0.91	0.01	0.91	0.09
	2011/12	52	3	52	33	0.88	0.01	0.88	0.12
	2012/13	51	5	52	31	0.88	0.02	0.88	0.12
WAI	2013/14	54	6	55	25	0.83	0.02	0.84	0.16
	2014/15	55	6	56	33	0.84	0.02	0.85	0.15
	2015/16	55	7	57	33	0.84	0.06	0.89	0.11
	2016/17	55	6	56	35	0.84	0.02	0.85	0.15
	2017/18	53	9	55	40	0.84	0.02	0.85	0.15
	2018/19	53	7	55	41	0.84	0.01	0.85	0.15
	2019/20	52	7	54	40	0.84	0.01	0.85	0.15
	2020/21	51	6	53	37	0.85	0.01	0.86	0.14
	2021/22	32	5	34	68	0.80	0.01	0.81	0.19

Table 4.41: Estimated active and inactive QS owners and share of QS pool held (continued)

Note Active QS owners are decomposed owners of CVO/CPO QS that meet at least one of the following requirements during the year that QS is owned: 1) held ownership interest in a vessel that fished for BSAI crab during the year of QS ownership; 2) participated in the IFQ crab fishery as a gear operator. Due to incomplete data on decomposed QS and vessel ownership, these plots show the estimated minimum share of the QS pool held by active QS owners.

Source NMFS Alaska Region - Restricted Access Management, crab IFQ quota holdings, vessel ownership, company company ownership data; eLandings landing reports.

	Season	IFQ permit holders	RCR permit	Landings	IFQ pounds	Sold pounds	Personal use pounds	Deadloss pounds
			holders		(million)	(million)	(1,000)	(1,000)
	2005/06	83	13	255.00	16.50	16.40	18.40	77.50
	2006/07	36	13	183.00	13.90	13.80	10.30	98.70
	2007/08	27	17	246.00	18.30	18.20	33.80	132.00
	2008/09	25	16	252.00	18.30	18.10	21.00	160.80
	2009/10	13	14	212.00	14.40	14.20	20.80	111.50
	2010/11	10	14	223.00	13.30	13.20	25.90	99.50
	2011/12	10	15	254.00	7.10	7.00	15.10	30.20
DDD	2012/13	9	15	219.00	7.10	7.00	15.20	28.80
DDN	2013/14	10	15	250.00	7.70	7.70	18.70	60.60
	2014/15	10	14	241.00	9.00	8.90	14.40	94.50
	2015/16	9	12	243.00	9.00	8.80	12.80	178.00
	2016/17	8	14	249.00	7.60	7.60	19.30	35.40
	2017/18	8	14	237.00	5.90	5.90	15.80	23.00
	2018/19	8	12	208.00	3.90	3.80	15.90	26.70
	2019/20	8	12	197.00	3.40	3.40	14.80	7.50
	2020/21	7	14	141.00	2.40	2.40	14.00	3.70
	2005/06	70	13	301.00	33.30	32.90	0.70	322.60
	2006/07	30	16	272.00	32.70	32.30	0.30	378.80
	2007/08	25	17	459.00	56.70	56.20	6.50	500.10
	2008/09	24	15	428.00	52.70	52.30	0.60	403.30
	2009/10	12	11	321.00	43.20	42.70	1.80	500.00
	2010/11	10	14	466.00	48.80	48.50	3.30	314.00
	2011/12	11	14	798.00	79.90	79.40	5.40	582.40
	2012/13	9	14	585.00	59.60	59.20	2.10	427.30
BSS	2013/14	10	13	573.00	48.60	48.20	1.50	354.50
	2014/15	10	13	640.00	61.10	60.60	1.30	546.00
	2015/16	9	11	492.00	36.60	36.20	2.00	352.70
	2016/17	8	13	360.00	19.40	19.20	0.70	234.70
	2017/18	8	11	356.00	17.10	16.90	1.30	153.50
	2018/19	8	12	413.00	24.80	24.60	0.30	237.60
	2019/20	7	12	460.00	30.60	30.20	0.70	372.40
	2020/21	8	12	463.00	40.50	39.70	1.70	788.10
	2021/22	8	9	170.00	5.00	4.90	0.80	63.80
BST	2005/06	34	9	73.00	0.80	0.80	2.90	14.60
	2006/07	21	10	57.00	1.30	1.30	0.70	8.40
	2007/08	10	8	58.00	1.40	1.40	0.10	15.60
	2008/09	10	10	60.00	1.60	1.50	0.80	11.90
	2009/10	8	12	45.00	1.20	1.20	3.50	7.10
EBT	2013/14	5	13	107.00	1.30	1.30	2.10	6.20
	2014/15	7	13	194.00	7.60	7.60	1.20	48.20
	2015/16	8	12	244.00	10.10	10.00	1.10	115.00
	2018/19	1	4	8.00	*	*	*	*
	2020/21	1	1	1.00	*	*	*	*
	2006/07	14	10	60.00	0.60	0.60	0.00	18.50
	2007/08	8	8	44.00	0.50	0.50	1.10	4.10
	2008/09	10	7	50.00	0.10	0.10	0.10	2.60
	2009/10	4	1	22.00	*	*	*	*
	2013/14	8	13	186.00	1.20	1.20	0.00	15.00
WBT	2014/15	8	13	234.00	4.60	4.50	1.70	92.40
VV D I	2015/16	7	11	268.00	7.50	7.50	0.60	49.60
	2017/18	8	14	133.00	2.20	2.20	2.90	15.80
	2018/19	8	13	149.00	2.20	2.20	1.90	39.10
	2019/20	2	2	5.00	*	*	*	*
	2020/21	6	13	94.00	1.30	1.30	0.80	24.90
	2021/22	7	10	95.00	1.00	1.00	1.90	8.60
	2005/06	6	5	32.00	2.60	2.50	0.10	23.80

Table 4.42: CR Program fisheries - catch, landings, and deadloss, by season

	Season	IFQ permit	RCR	Landings	IFQ	Sold	Personal use pounds	Deadloss
		noiders	holders		(million)	(million)	(1,000)	(1,000)
	2006/07	4	6	32.00	2.70	2.70	0.00	31.30
	2007/08	4	4	36.00	2.70	2.70	0.00	21.00
	2008/09	3	5	29.00	2.80	2.80	0.00	24.10
	2009/10	2	6	32.00	*	*	*	*
	2010/11	2	7	30.00	*	*	*	*
	2011/12	2	9	45.00	*	*	*	*
	2012/13	2	10	46.00	*	*	*	*
EAG	2013/14	2	9	39.00	*	*	*	*
	2014/15	2	7	37.00	*	*	*	*
	2015/16	2	6	37.00	*	*	*	*
	2016/17	2	7	41.00	*	*	*	*
	2017/18	2	7	41.00	*	*	*	*
	2018/19	3	8	49.00	3.50	3.40	0.00	47.50
	2019/20	3	8	49.00	3.90	3.80	0.00	51.50
	2020/21	3	9	46.00	3.30	3.30	0.00	29.80
	2021/22	3	7	39.00	3.30	3.20	0.00	27.80
	2005/06	3	5	42.00	2.40	2.40	3.50	26.30
	2006/07	3	5	31.00	2.00	2.00	0.00	19.80
	2007/08	3	4	34.00	2.20	2.20	0.00	23.20
	2008/09	3	7	37.00	2.30	2.20	0.20	22.80
	2009/10	2	5	38.00	*	*	*	*
	2010/11	2	7	37.00	*	*	*	*
	2011/12	2	7	43.00	*	*	*	*
	2012/13	2	8	46.00	*	*	*	*
WAG	2013/14	2	6	42.00	*	*	*	*
	2014/15	1	8	44.00	*	*	*	*
	2015/16	1	8	48.00	*	*	*	*
	2016/17	2	8	41.00	*	*	*	*
	2017/18	3	7	45.00	2.00	2.00	0.60	55.80
	2018/19	3	6	44.00	2.30	2.20	0.00	48.50
	2019/20	3	6	50.00	2.60	2.50	0.00	52.00
	2020/21	3	8	42.00	2.50	2.40	2.00	56.60
	2021/22	2	6	43.00	*	*	*	*
	2009/10	1	6	30.00	*	*	*	*
	2010/11	2	8	63.00	*	*	*	*
CMD	2011/12	6	10	107.00	1.70	1.70	2.90	25.60
SMB	2012/13	3	10	125.00	1.50	1.40	0.90	19.80
	2014/15	1	6	28.00	*	*	*	*
	2015/16	1	4	21.00	*	*	*	*

Table 4.42: CR Program fisheries - catch, landings, and deadloss, by season (continued)

Note Excludes harvest from CDQ programs. Asterisks indicate data suppressed due to confidentiality 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

	Year	Vessels	Sold weight (million lbs)	Median vessel weight sold	Median vessel harvest as	Gini ratio
				(1,000lbs)	percent of fishery-year commercial lbs	
	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	0.3
	2001	230	8.30	29.26	0.35	0.3
	2002	241	9.48	36.09	0.38	0.2
	2003	250	15.39	48.19	0.31	0.3
	2004	251	15.02	53.79	0.36	0.2
	2005	89	18.14	177.99	0.98	0.3
	2000	81 72	15.55	109.27	1.09	0.3
	2007	73	20.17	239.03	1.29	0.3
BBB	2008	79	15 78	240.15	1.20	0.3
DDR	2005	65	14.73	203.23	1.55	0.2
	2010	62	7 79	109.07	1.40	0.2
	2011	64	7.80	108.53	1.40	0.3
	2012	63	8.52	122.03	1.43	0.2
	2014	63	9.87	134.03	1.36	0.2
	2015	64	9.77	134.73	1.38	0.2
	2016	63	8.41	112.63	1.34	0.2
	2017	61	6.55	86.43	1.32	0.3
	2018	55	4.23	64.23	1.52	0.3
	2019	56	3.77	57.29	1.52	0.3
	2020	47	2.64	47.32	1.79	0.3
	1998	230	249.05	1,050.76	0.42	0.2
	1999	241	192.41	813.75	0.42	0.2
	2000	231	32.81	132.61	0.40	0.2
	2001	207	24.78	88.71	0.36	0.4
	2002	191	31.94	149.81	0.47	0.3
	2003	190	27.51	127.15	0.46	0.2
	2004	189	23.69	113.04	0.48	0.2
	2005	167	24.86	131.14	0.53	0.2
	2006	78	38.02	402.31	1.06	0.3
	2007	68	34.76	447.33	1.29	0.3
	2008	78	62.23	702.73	1.13	0.3
BSS	2009	77	57.68	599.96	1.04	0.3
	2010	68	47.84	642.93	1.34	0.3
	2011	68 79	54.05	693.58	1.28	0.3
	2012	72	88.23	1,126.73	1.28	0.3
	2013	/ 1 70	70.69	892.41	1.20	0.3
	2014	70	00.22 60.01	100.09	1.55	0.3
	2015	70 68	00.91 30.57	526-21	1.42	0.2
	2010	63	09.07 91.39	20.21 204 17	1.35	0.3
	2017	63	18 84	234.17	1.30	0.3
	2010	61	27.26	357 64	1.20	0.0
	2010	59	33.61	462.94	1.38	0.3
	2020	62	44.14	598.74	1.36	0.3
	2005	Δ	0.26	78 57	30.59	0.3
	2005	4 45	0.20	5 94	0.60	0.5
	2000	20	2.25	56 02	2.49	0.5
	2008	20 30	2.33	45.52	1.95	0.6
	2009	18	2.00	01.07	4.30	0.6

Table 4.43: CR Program fisheries - distribution of vessel catch and landings volume, by calendar year

	Year	Vessels	Sold weight (million	Median vessel	Median vessel	Gini ratio
			lbs)	weight sold $(1,000 \text{lbs})$	harvest as percent of	
					fishery-year commercial lbs	
	2010	4	0.37	101.52	27.09	0.25
	2013	22	1.25	45.51	3.64	0.49
BST	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
	2019	18	1.18	50.56	4.28	0.37
	2020	25	0.62	12.76	2.06	0.60
	2021	20	0.95	32.08	3.38	0.46
	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
SMB	2011	18	1.85	80.15	4.33	0.32
	2012	17	1.59	83.71	5.25	0.31
	2014	4	0.30	74.41	24.55	0.36
	2015	3	0.10	34.50	32.89	0.18

Table 4.43: CR Program fisheries - distribution of vessel catch and landings volume, by calendar year *(continued)* 

**Note** 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. The Gini coefficient measures the relative evenness of the distribution of vessel-level total IFQ landings across the set of active vessels in a given crab fishery season. The index varies between 0 and 1, with higher values indicating greater relative concentration of catch; see section 3.4.5 for discussion of Gini coefficient results shown in the table.

Source ADF&G fish ticket data and eLandings

Fishery	Vear	Processors	Purchased	Median	Median as	Gini ratio
r isiter y	rear	1100055015	weight	purchased	percent of	Gilli Tatio
			(million	weight	fishery year	
			lbs)	(million	commercial	
			,	lbs)	lbs	
	1998	9	5.24	0.23	4.30	0.66
	1999	8	4.89	0.29	5.90	0.59
	2000	7	5.76	0.65	11.30	0.40
	2001	7	6.36	0.36	5.70	0.59
	2002	6	5.54	0.83	15.10	0.50
	2003	6	5.82	1.08	18.60	0.45
	2004	5	6.02	1.35	22.50	0.40
	2005	6	4.44	0.48	10.80	0.49
	2006	6	5.24	0.71	13.50	0.56
	2007	6 7	5.44 5.72	0.79	14.50	0.49
	2008	1	0.70 5.51	1.04	18.10 5.40	0.54
AIG	2009	9	5.51 6.00	0.30	3.40 8.00	0.08
	2010	9	6.00	0.49	8.00 4.70	0.42
	2011	14	5.02	0.28	4.70	0.52
	2012	14	5.94	0.20	4 20	0.55
	2010	10	6.07	0.26	4.20	0.60
	2014	9	5.80	0.32	5.50	0.56
	2016	11	5.60	0.30	5.30	0.60
	2017	13	5.56	0.25	4.50	0.55
	2018	11	6.51	0.24	3.70	0.56
	2019	11	6.78	0.34	5.00	0.58
	2020	12	5.72	0.30	5.20	0.58
	2021	10	5.90	0.34	5.70	0.52
	1998	28	14.70	0.26	1.80	0.61
	1999	24	11.53	0.21	1.90	0.61
	2000	24	8.07	0.11	1.40	0.65
	2001	25	8.30	0.10	1.20	0.66
	2002	26	9.48	0.13	1.40	0.64
	2003	26	15.39	0.29	1.90	0.58
	2004	25	15.02	0.23	1.50	0.61
	2005	16	18.14	0.50	2.80	0.61
	2006	15	15.55	0.54	3.50	0.61
	2007	18	20.17	0.52	2.60	0.60
DDD	2008	17	20.13	0.61	3.00	0.54
BBR	2009	16	15.78	0.48	3.10	0.55
	2010	10	14.73	0.39	2.70	0.58
	2011	10	7.19	0.20	2.50	0.58
	2012	17	7.60 8.50	0.00	4.20	0.54
	2013	17	0.52	0.34	4.00	0.56
	2014	17	9.81	0.39	4.00	0.50
	2015	15	9.11 8.41	0.29	2.90	0.01
	2010	17	6 55	0.19	2.20	0.09
	2017	15	4 93	0.15	2.50 4 00	0.02
	2010	10	3 77	0.14	3 70	0.50
	2020	16	2.64	0.09	3.40	0.56
	1998	44	249.05	1.73	0.70	0.59
	1999	37	192.41	3.79	2.00	0.55
	2000	28	32.81	0.86	2.60	0.52
	2001	24	24.78	0.63	2.50	0.51
	2002	27	31.94	0.35	1.10	0.63
	2003	21	27.51	0.97	3.50	0.48
	2004	23	23.69	0.61	2.60	0.53

Table 4.44: CR Program fisheries - distribution of crab processor purchasing volume, by calendar year

Fishery	Year	Processors	Purchased	Median	Median as	Gini ratio
			weight	purchased	percent of	
			(million	weight	fishery year	
			lbs)	(million	commercial	
				lbs)	lbs	
	2005	20	24.86	0.86	3.50	0.53
	2006	13	38.02	2.27	6.00	0.47
	2007	18	34.76	1.74	5.00	0.49
	2008	17	62.23	2.96	4.80	0.49
BSS	2009	18	57.68	2.51	4.30	0.52
200	2010	13	47.84	3.30	6.90	0.42
	2011	16	54.05	2.21	4.10	0.49
	2012	16	88.23	3.73	4.20	0.50
	2013	15	70.69	3.14	4.40	0.53
	2014	13	55.22	4.43	8.00	0.45
	2015	14	60.91	2.82	4.60	0.47
	2016	12	39.57	2.56	6.50	0.45
	2017	14	21.32	0.86	4.00	0.51
	2018	13	18.84	0.77	4.10	0.47
	2019	13	27.26	1.11	4.10	0.48
	2020	13	33.61	1.37	4.10	0.45
	2021	13	44.14	2.15	4.90	0.52
	2005	5	0.26	0.02	6.00	0.78
	2006	9	0.99	0.07	7.50	0.61
	2007	9	2.25	0.21	9.40	0.41
	2008	11	2.33	0.16	6.90	0.51
	2009	11	2.14	0.16	7.50	0.45
	2010	7	0.37	0.04	9.60	0.43
	2013	13	1.25	0.06	4.70	0.61
BST	2014	13	9.09	0.34	3.80	0.56
	2015	13	14.98	0.59	3.90	0.56
	2016	12	10.45	0.66	6.40	0.54
	2017	11	1.41	0.07	5.10	0.46
	2018	14	2.29	0.07	3.20	0.59
	2019	10	1.18	0.13	10.70	0.42
	2020	9	0.62	0.04	6.40	0.56
	2021	11	0.95	0.04	4.30	0.50
PIK	1998	17	1.03	0.03	2.80	0.57
	1998	16	2.95	0.09	3.10	0.66
	2009	6	0.45	0.06	12.20	0.45
	2010	9	1.25	0.07	5.70	0.59
SMB	2011	11	1.85	0.08	4.10	0.61
	2012	11	1.59	0.07	4.40	0.59
	2014	6	0.30	0.03	9.00	0.64
	2015	4	0.10	0.03	24.30	0.50
	1998	1	*	*	*	*
WAI	2002	9	0.50	0.04	8.20	0.42
	2003	10	0.48	0.04	8.20	0.53

Table 4.44: CR Program fisheries - distribution of crab processor purchasing volume, by calendar year *(continued)* 

**Note** Data shown by calendar year. Asterisks indicate data suppressed due to confidentiality Includes purchased crab landings from CDQ and IFQ fisheries and pre-rationalization general access fisheries. Landings/harvest made by and self-processed by catcher/processors are treated as purchases, with catcher/processors counted as buyers. Buyers include catcher/processors landing and processing their own crab. The Gini coefficient measures the relative evenness of the distribution of catch purchasing across the set of active buyers in a given crab fishery season. The index varies between 0 and 1, with higher values indicating greater relative concentration of purchasing; see section 3.4.5 for discussion of Gini coefficient results shown in the table.

Source ADF&G fish ticket data and eLandings

Landings per trip, mean(sd) (1,000	Trips total	Landings per delivery, mean(sd)	Trips per vessel means(sd)	Deliveries per vessel $mean(sd)$	Deliveries total	Vessels	Season	
pounds)		(1,000 pounds)						
-	-	50.2(27.3)	-	1.1(0.3)	293	274	1998	
-	-	42.2(22.8)	-	1.1(0.3)	273	256	1999	
-	-	30.7(16.2)	-	1.1(0.4)	263	244	2000	
-	-	33.3(20.1)	-	1.1(0.4)	249	230	2001	
-	-	36.7(14.6)	-	1.1(0.4)	258	241	2002	
-	-	56.2(35.5)	-	1.1(0.4)	274	250	2003	
-	-	54(25.1)	-	1.1(0.4)	278	251	2004	
-	-	69.8(47.8)	-	2.9(1.7)	261	89	2005/06	
88.7(67)	176	82.8(61.6)	2.2(1)	2.3(1.1)	187	81	2006/07	
98.4(55.7)	207	81.7(53.7)	2.8(1.4)	3.3(1.6)	247	74	2007/08	
85.8(51.3)	237	76.5(48.1)	3(1.5)	3.4(1.8)	263	78	2008/09	
80.5(50.3)	198	74.8(48.4)	2.8(1.1)	3(1.2)	211	70	2009/10	BBR
73.8(45.7)	201	69(42.7)	3.1(1.1)	3.3(1.3)	213	65	2010/11	
68.1(51.9)	114	62.8(49.8)	1.8(0.9)	2(0.9)	124	62	2011/12	
77.7(57.1)	101	66.1(45.2)	1.6(0.7)	1.8(0.9)	118	64	2012/13	
81.9(52.7)	105	71.6(47.7)	1.7(0.7)	1.9(1)	119	63	2013/14	
87.6(56.1)	113	84.4(51.6)	1.8(0.6)	1.9(0.6)	117	63	2014/15	
87.5(53.5)	114	84.3(51.9)	1.8(0.7)	1.8(0.7)	116	64	2015/16	
73(42.4)	115	71.8(41.6)	1.8(0.8)	1.9(0.8)	117	63	2016/17	
58.9(37)	112	58.6(36.9)	1.8(0.8)	1.8(0.8)	112	61	2017/18	
50.7(30.3)	85	47.9(30.4)	1.5(0.8)	1.6(0.9)	89	55	2018/19	
44.1(30.1)	86	43.8(30)	1.5(0.7)	1.5(0.7)	86	56	2019/20	
43.4(28.4)	61	41.1(27.1)	1.3(0.6)	1.4(0.7)	64	47	2020/21	
-	-	111.9(71.8)	-	7.1(2.7)	1,720	241	1999	
-	-	104.8(53.8)	-	1.4(0.7)	313	231	2000	
-	-	78.4(56.3)	-	1.5(1)	316	207	2001	
-	-	74.3(57.5)	-	2.3(1.1)	430	191	2002	
-	-	105.4(55.9)	-	1.4(1)	261	190	2003	
-	-	97.5(53.9)	-	1.3(0.8)	243	189	2004	
-	-	116.1(52.3)	-	1.3(0.7)	211	167	2005	
-	-	115.9(75.7)	-	4.1(2.9)	316	78	2005/06	
169.1(104.1)	215	131.5(83.1)	3.1(2)	4(2.5)	273	69	2006/07	
149.4(84.6)	420	134.1(81.2)	5.4(2.6)	6(2.9)	466	78	2007/08	
153.7(84.4)	381	132.9(78)	4.9(2.3)	5.7(2.7)	437	77	2008/09	
165(88.7)	289	154.1(85.4)	4.3(1.7)	4.5(1.9)	308	68	2009/10	BSS
168(84.6)	323	157.2(83.9)	4.8(2.1)	5(2.2)	343	68	2010/11	
139.7(87.8)	636	134(85.4)	8.8(3.7)	9.1(3.7)	658	72	2011/12	
157(82.7)	422	151.2(81.9)	6(2.4)	6.2(2.5)	435	70	2012/13	
145.1(78.5)	370	141.4(76.7)	5.3(2.3)	5.4(2.3)	379	70	2013/14	
146.7(84.4)	458	143(79.3)	6.5(2.8)	6.7(2.9)	471	70	2014/15	
124.9(92.8)	289	136.4(83.1)	4.1(1.6)	4.2(1.7)	295	70	2015/16	
111.8(79.3)	192	106.1(76.4)	3(1)	3.2(1.1)	201	63	2016/17	
99.3(80.3)	187	98.9(76.5)	3(1.4)	3(1.4)	190	63	2017/18	
116.4(85.4)	230	112.9(79.9)	3.8(1.8)	4(1.8)	242	61	2018/19	
114.9(77.4)	296	110.2(74.4)	5(1.8)	5.2(1.8)	305	59	2019/20	
147.1(92.8)	305	142.8(90.4)	4.9(1.5)	5(1.6)	309	62	2020/21	

Table 4.45: 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) (1,000 pounds)	Trips total	Landings per trip, mean(sd) (1,000 pounds)
	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)	3(2.3)	28.7(35.8)	59	14.7(33.8)
	2009/10	13	32	2.5(1.6)	2.2(1.2)	41(43)	28	14.9(35.7)
BST	2013/14	25	74	3(2)	2.8(2)	37.2(35.2)	71	10.9(26)
	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(2.6)	5(2.5)	69(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)
	2018/19	33	57	1.7(1.1)	1.6(0.8)	42.1(32.1)	52	31.3(36.1)
	2020/21	35	56	1.6(0.8)	1.6(0.8)	25.4(21.2)	55	19.1(23.8)
	1998	14	51	3.6(1.5)	-	59.8(35.8)	-	-
	1999	15	59	3.9(1.2)	-	48.7(33)	-	-
	2000	15	50	3.3(0.8)	-	59(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)	-	-
	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(2.7)	105.6(59.5)	24	124.7(57.9)
	2007/08	4	35	8.8(1.3)	7(2.4)	84.8(57.7)	28	106.8(62.3)
	2008/09	3	28	9.3(2.5)	7(3)	111.2(60.8)	21	149.7(39.2)
EAG	2009/10	3	27	9(3.5)	7.7(3.5)	115.5(47)	23	137(44.1)
	2010/11	3	26	8.7(4.5)	7(3)	118.3(50.9)	21	149.9(40.4)
	2011/12	3	28	9.3(4.7)	6.3(2.1)	111.6(48.5)	19	165.8(23.7)
	2012/13	3	30	10(5.6)	8.7(4.2)	107.7(47.2)	26	127.5(44.4)
	2013/14	3	30	10(4.4)	7.7(2.3)	109.1(51.2)	23	143.6(44.9)
	2014/15	3	22	7.3(2.5)	7.3(2.5)	149(43.7)	22	150.3(44.1)
	2015/16	3	22	7.3(2.5)	7(2.6)	147.7(49.3)	21	157.3(52.9)
	2016/17	4	27	6.8(4.6)	6.3(3.9)	120.1(54.9)	25	132.3(52.6)
	2017/18	4	26	6.5(5.6)	6(4.7)	125.2(65.5)	24	137.8(65)
	2018/19	3	29	9.7(4.5)	9.3(4)	138.4(63.9)	28	145.2(65)
	2019/20	3	28	9.3(4.2)	9.7(4)	144.5(56.4)	29	141.3(59.9)
	2020/21	3	30	10(3.6)	9.3(3.5)	121.1(64.6)	28	130.9(59.7)
PIK	1998	58	91	1.6(0.7)	-	11.3(8.7)	-	-
	1998	131	259	2(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)	57	33(21)
	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(0.6)	3.5(0.6)	21.6(15.5)	14	22(15.9)
	2015/16	3	6	2(1)	2(1)	17.5(8.8)	6	17.7(9)
	1998/99	3	44	14.7(18.7)	-	37.8(23)	-	-
	1999/00	15	113	7.5(10.4)	-	23.2(15.3)	-	-

Table 4.45: CR Program fisheries - delivery and trip statistics, by season (continued)

	Season	Vessels	Deliveries total	Deliveries per vessel mean(sd)	Trips per vessel means(sd)	Landings per delivery, mean(sd) (1,000 pounds)	Trips total	Landings per trip, mean(sd) (1,000 pounds)
	2000/01	12	97	8.1(9.4)	-	28(17.5)	-	-
	2001/02	9	90	10(8.2)	-	29.9(16.2)	-	-
	2002/03	6	72	12(9.2)	-	36.2(20.7)	-	-
	2003/04	6	60	10(6.8)	-	44(29.5)	-	-
	2004/05	6	51	8.5(5.9)	-	51.8(36.2)	-	-
	2005/06	3	44	14.7(5.5)	-	59.5(33.7)	-	-
	2006/07	4	33	8.3(7.9)	7.3(6.7)	67.6(29.6)	29	77.7(32)
	2007/08	3	35	11.7(7.6)	10.3(7.4)	71.2(31.7)	31	81.2(28)
	2008/09	3	36	12(9.8)	11(9.2)	69.7(32.3)	33	76.8(32.1)
WAG	2009/10	3	33	11(8.2)	10.3(7.6)	82.5(35.2)	31	89.1(35.4)
	2010/11	3	32	10.7(7)	10(7)	86.9(42.2)	30	94(42.5)
	2011/12	3	35	11.7(6.1)	10(6)	79.3(36.6)	30	93.8(35.2)
	2012/13	4	32	8(4.1)	6.8(3.5)	90.5(40.1)	27	109.4(40.2)
	2013/14	3	29	9.7(3.1)	7.3(3.2)	99.2(40.9)	22	135(18.3)
	2014/15	2	*	*	*	*	*	*
	2015/16	2	*	*	*	*	*	*
	2016/17	3	29	9.7(5.7)	9(4.6)	74.1(41.9)	27	82.8(42.6)
	2017/18	3	29	9.7(3.1)	9(3)	75(41.8)	27	82.8(43.6)
	2018/19	3	30	10(2)	9.3(1.5)	82.3(46.4)	28	90.1(48.7)
	2019/20	3	32	10.7(0.6)	10.3(0.6)	86.4(42.5)	31	90.9(42.9)
	2020/21	3	28	9.3(3.8)	9.3(3.8)	97.4(33.4)	28	99.7(34.1)
	1998/99	1	*	*	-	*	-	-
WAI	2002/03	33	35	1.1(0.2)	-	14.4(8.3)	-	-
	2003/04	30	30	1	-	15.8(9.7)	-	-

Table 4.45: CR Program fisheries - delivery and trip statistics, by season (continued)

Note 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. Asterisks indicate data suppressed due to confidentiality

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

	Year	Season dates	Season length, davs	Earliest landing	Latest landing	Days fished	Percent of season fished
	1009	01 New Of New	6				
	1998	15  Oct 20  Oct	0	-	-	-	-
	2000	16-Oct - 20-Oct	5	-	-	-	-
	2000	15-Oct - 18-Oct	5 4	_			
	2001	15-Oct - 18-Oct	4	_	_	_	_
	2002	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	$97 \ \%$
	2008/09	15-Oct - 15-Jan	93	18-Oct	17-Jan	92	$99 \ \%$
BBR	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 %
	2019/20	15-Oct - 15-Jan	93	21-Oct	11-Jan	83	89 %
	2020/21	15-Oct - 15-Jan	93	20-Oct	15-Jan	88	95~%
	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~%
	2008/09	15-Oct - 31-May	229	30-Nov	16-May	168	73 %
BSS	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 %
	2019/20	15-Oct - 31-May	230	11-Jan	19-May	130	57 %
	2020/21	15-Oct - 04-Jun	233	09-Jan	02-Jun	145	62 %
	2021/22	15-Oct - 06-Jun	235	14-Jan	04-Jun	142	60 %
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 %
BTE	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 %

Table 4.46: Opening and closing dates, season length, and days fished by season, CR Program fisheries

	Year	Season dates	Season length,	Earliest	Latest	Days fished	Percent of
			days	landing	landing		season fished
	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 %
BTW	2014/15	15-Oct - 31-Mar	168	03-Nov	18-Apr	167	99~%
DIW	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~%
	2020/21	15-Oct - 05-Apr	173	29-Oct	04-Apr	158	91 %
	2021/22	15-Oct - 31-Mar	168	25-Oct	27-Mar	154	92 %
PIK	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 %
SMB	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	$05\text{-}\mathrm{Dec}$	39	35 %
	2015/16	15-Oct - 01-Feb	110	30-Oct	28-Nov	30	27~%
	1998/99	01-Nov - 31-Jul	273	-	-	-	-
WAI	2002/03	25-Oct - 27-Oct	3	-	-	-	-
	2003/04	24-Oct - 29-Oct	372	-	-	-	-
	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 %
	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 %
EAG	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 %
	2019/20	15-Jul - 18-May	309	29-Jul	08-Feb	195	63 %
	2020/21	01-Aug - 30-Apr	273	16-Aug	21-Feb	190	70 %
	2021/22	01-Jul - 30-Apr	304	15-Aug	31-Jan	170	56 %
	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 %
	2008/09	15-Aug - 15-May	274	13-Sep	12-May	242	88 %

Table 4.46: Opening and closing dates, season length, and days fished by season, CR Program fisheries (continued)
	Year	Season dates	Season length, days	Earliest landing	Latest landing	Days fished	Percent of season fished
	2009/10	15-Aug - 15-May	274	05-Sep	18-May	256	93 %
WAG	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 %
	2019/20	15-Jul - 18-May	309	22-Aug	12-May	265	86 %
	2020/21	01-Aug - 24-May	297	25-Aug	18-May	267	$90 \ \%$
	2021/22	01-Aug - 30-Apr	273	28-Aug	25-May	271	99~%

Table 4.46: Opening and closing dates, season length, and days fished by season, CR Program fisheries *(continued)* 

Note Days fished is calculated as the difference between latest and earliest landing dates during a given season. Percent of season fished is calculated as days fished divided by season length. In some fishery seasons, deliveries made were after the season closing date. Includes landings made on catcher/processors. 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.

	Season	Vessels with one	Vessels with	Average days	Median days	Minimum days	Maximum days
		delivery	multiple deliveries	between first and			
				delivery, mean(sd)			
	2005/06	3	10	17(10)	14	4	35
	2006/07	6	7	10(7)	9	2	19
	2007/08	1	9	15(12)	14	4	43
	2008/09	3	12	13(10)	10	1	34
	2009/10	5	6	16(14)	14	1	38
	2010/11	4	6	24(13)	21	12	40
	2011/12	7	2	7(1)	7	6	8
RBR	2012/13	5	4	5(3)	6	1	ç
DDI	2013/14	9	1	11	11	11	11
	2014/15	3	6	7(2)	8	3	10
	2015/16	5	3	8(4)	6	6	13
	2016/17	6	2	13(6)	13	9	17
	2017/18	5	3	15(5)	17	9	19
	2018/19	6	2	7(2)	7	5	ç
	2019/20	5	3	7(3)	7	4	10
	2020/21	4	3	8(4)	6	5	12
	2005/06	4	11	25(20)	18	4	64
	2006/07	4	8	25(16)	20	11	59
	2007/08	2	13	24(14)	24	2	45
	2008/09	2	13	29(15)	25	9	54
	2009/10	1	10	17(13)	15	1	42
	2010/11	2	12	18(11)	18	4	48
	2011/12	1	15	78(46)	82	15	152
Daa	2012/13	0	13	56(30)	65	17	103
BSS	2013/14	0	12	31(23)	23	12	88
	2014/15	0	11	54(35)	46	8	115
	2015/16	0	11	22(13)	16	4	48
	2016/17	2	8	16(13)	10	5	41
	2017/18	1	8	24(15) 24(16)	20	3	48
	2018/19	う 1	8	$\frac{24(10)}{42(16)}$	21 41	4	5U 70
	2019/20 2020/21	1	10	43(10) 42(24)	41 25	∠ə 12	/ J 01
	2020/21 2021/22	0	5	$\frac{42(24)}{22(12)}$	35 18	13	42
	2005/06	3	3	11(12)	7		25
	2005/00	3	5	11(12) 45(48)	1 97	11	115
	2000/07	0 0	-4 Δ	29(42)	19	3	01
	2008/09	1	2	30(27)	30	11	31 40
	2000/00 2009/10	4	0		-	-	-10
	2013/14	4	4	73(58)	66	12	146
BST	2014/15	1	7	69(53)	77	12	130
	2015/16	5	9	46(49)	19	4	138
	2017/18	$\tilde{5}$	2	2	2	2	
	2018/19	5	- 1	112	112	112	112
	2020/21	$\overset{\circ}{2}$	1	118	118	118	118
	2021/22	2	3	41(46)	22	8	93
	2005/06	0	3	22(24)	15	2	48
	2006/07	1	9	13(8)	13	- 7	10

Table 4.47: Days between first and last delivery by season, CR Program fisheries

	Season	Vessels with one delivery	Vessels with multiple	Average days between	Median days	Minimum days	Maximum days
			deliveries	first and last delivery, mean(sd)			
	2007/08	2	1	2	2	2	2
	2008/09	0	3	31(22)	30	10	54
	2009/10	1	2	29(1)	29	28	30
	2010/11	2	1	27	27	27	27
	2011/12	1	2	56(39)	56	28	83
	2012/13	1	2	37(21)	37	22	51
EAG	2013/14	1	2	42(6)	42	37	46
	2014/15	3	0	-	-	-	-
	2015/16	1	2	21(1)	21	20	22
	2016/17	2	1	44	44	44	44
	2017/18	0	3	42(17)	51	22	52
	2018/19	1	2	16(3)	16	14	18
	2019/20	0	3	24(12)	27	11	34
	2020/21	0	3	45(17)	40	30	64
	2021/22	1	2	50(19)	50	36	63
	2005/06	0	1	126	126	126	126
	2006/07	0	2	14(11)	14	6	22
	2007/08	0	1	163	163	163	163
	2008/09	0	1	168	168	168	168
	2009/10	0	1	41	41	41	41
	2010/11	0	1	33	33	33	33
	2011/12	0	1	33	33	33	33
	2012/13	0	1	52	52	52	52
WAG	2013/14	0	1	46	46	46	46
	2014/15	0	1	94	94	94	94
	2015/16	0	1	137	137	137	137
	2016/17	0	1	237	237	237	237
	2017/18	0	1	112	112	112	112
	2018/19	0	2	58(57)	58	18	98
	2019/20	0	2	63(42)	63	33	92
	2020/21	0	1	200	200	200	200
	2021/22	0	1	114	114	114	114
	2010/11	1	2	22(13)	22	12	31
SMB	2011/12	3	2	19(18)	19	6	32
JUID	2012/13	2	2	21(5)	21	17	24
	2014/15	1	0	-	-	-	-

Table 4.47: Days between first and last delivery by season, CR Program fisheries (continued)

**Note** 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

2017/18		18	2018/19		2019/20		2020/21		2021/22	
Week	Vessels	Percent of pounds landed								
1: 15-Oct	16	13(17,16)	17	19(22, 15)	0	0(2,0)	18	25(26,17)	0	-
2: 22-Oct	46	61(66, 48)	40	80(83,77)	47	64(67, 45)	27	87(90,78)	0	-
3: 29-Oct	30	89(89,92)	13	94(95, 93)	25	90(90,90)	6	99(100, 98)	0	-
4: 05-Nov	8	99(100,96)	7	99(100, 100)	6	99(100,100)	0	99(100, 98)	0	-
5: 12-Nov	2	100(100,100)	0	99(100, 100)	0	99(100,100)	1	99(100, 100)	0	-
6: 19-Nov	0	100(100, 100)	0	99(100,100)	0	99(100,100)	0	99(100,100)	0	-
7: 26-Nov	0	100(100, 100)	0	99(100, 100)	0	99(100,100)	0	99(100,100)	0	-
8: 03-Dec	0	100(100, 100)	0	99(100, 100)	0	99(100,100)	0	99(100,100)	0	-
9: 10-Dec	0	100(100, 100)	0	99(100, 100)	0	99(100,100)	0	99(100,100)	0	-
10: 17-Dec	0	100(100, 100)	0	99(100, 100)	0	99(100,100)	0	99(100,100)	0	-
11: 24-Dec	0	100(100, 100)	0	99(100, 100)	0	99(100,100)	0	99(100,100)	0	-
12: 31-Dec	0	100(100, 100)	1	99(100, 100)	1	99(100,100)	0	99(100, 100)	0	-
13: 07-Jan	1	100(100, 100)	1	100(100,100)	1	100(100,100)	1	99(100, 100)	0	-
14: 14-Jan	0	100(100,100)	0	100(100, 100)	0	100(100,100)	1	100(100,100)	0	-
Postseason:	0	100(100,100)	0	100(100,100)	0	100(100,100)	0	100(100, 100)	0	-
16-Jan				. , ,		· · · /				

Table 4.48: BBR fishery harvest by week of season

Note The BBR fishery season is open by regulation from October 15 to January 15. Percent of pounds column shows the cumulative proportion of pounds landed for combined IFQ and CDQ sold pounds, including catcher/processor landings, and, in parentheses: a) sold pounds landed on catcher vessel owner A-type IFQ permits (CVOA); and b) 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.

2017/18		7/18	2018/	19	2019/	/20	2020/	/21	2021	/22
Week	Vessels	Percent of pounds landed								
1: 15-Oct	0	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	0	0(0,0)	0	0(0,0)	0	0(0,0)	0	0(0,0)	0	0(0,0)
4: 05-Nov	0	0(0,0)	2	0(0,0)	0	0(0,0)	0	0(0,0)	0	0(0,0)
5: 12-Nov	0	0(0,0)	1	0(0,0)	0	0(0,0)	0	0(0,0)	0	0(0,0)
6: 19-Nov	0	0(0,0)	1	0(0,0)	0	0(0,0)	0	0(0,0)	0	0(0,0)
7: 26-Nov	0	0(0,0)	0	0(0,0)	0	0(0,0)	0	0(0,0)	0	0(0,0)
8: 03-Dec	0	0(0,0)	0	0(0,0)	0	0(0,0)	0	0(0,0)	0	0(0,0)
9: 10-Dec	0	0(0,0)	0	0(0,0)	0	0(0,0)	0	0(0,0)	0	0(0,0)
10: 17-Dec	0	0(0,0)	0	0(0,0)	0	0(0,0)	0	0(0,0)	0	0(0,0)
11: 24-Dec	0	0(0,0)	0	0(0,0)	0	0(0,0)	0	0(0,0)	0	0(0,0)
12: 31-Dec	0	0(0,0)	0	0(0,0)	0	0(0,0)	0	0(0,0)	0	0(0,0)
13: 07-Jan	2	1(1,0)	11	3(3,1)	1	0(0,0)	4	1(2,0)	0	0(0,0)
14: 14-Jan	12	11(10,3)	11	7(8,3)	10	4(4,0)	8	5(7,1)	2	2(2,0)
15: 21-Jan	19	28(33,6)	17	15(18,3)	20	11(14,2)	13	10(13,2)	9	15(16,1)
16: 28-Jan	21	37(42,15)	27	30(33,7)	24	21(24,2)	18	16(20,2)	10	35(36, 12)
17: 04-Feb	27	53(59, 26)	31	45(49,13)	35	30(36,4)	15	21(25,4)	8	48(50,19)
18: 11-Feb	22	64(69,44)	33	59(64, 20)	23	37(42,6)	28	30(34,6)	12	59(61, 34)
19: 18-Feb	24	75(79,53)	24	69(74, 32)	37	49(55,22)	20	36(41,7)	7	66(67, 38)
20: 25-Feb	16	82(85,65)	19	79(83,60)	26	58(65, 24)	28	44(49,9)	5	70(71,44)
21: 04-Mar	15	90(93,73)	22	88(90,75)	25	65(71, 35)	26	49(55, 14)	4	72(73,44)
22: 11-Mar	7	95(96,79)	10	92(93, 83)	23	71(75,51)	11	53(58, 18)	3	74(74,49)
23: 18-Mar	8	97(98,88)	9	97(97, 93)	18	77(80,53)	24	61(66, 25)	4	77(77,53)
24: 25-Mar	6	99(100, 92)	6	98(98,95)	12	83(87,58)	26	72(75,37)	1	77(77,53)
25: 01-Apr	3	100(100,98)	4	99(99,99)	15	90(92,65)	19	79(82, 46)	2	77(78,53)
26: 08-Apr	0	100(100,98)	1	99(99,99)	5	92(94,77)	18	85(86,61)	0	77(78,53)
27: 15-Apr	1	100(100,100)	1	100(100,100)	11	98(99,87)	10	88(87,72)	0	77(78,53)
28: 22-Apr	0	100(100, 100)	1	100(100, 100)	6	99(99,99)	13	93(92, 87)	0	77(78,53)
29: 29-Apr	0	100(100, 100)	0	100(100, 100)	1	99(99,100)	10	96(95, 90)	3	84(86,65)
30: 06-May	0	100(100,100)	0	100(100,100)	0	99(99,100)	3	97(97, 92)	3	90(92,84)
31: 13-May	0	100(100, 100)	0	100(100,100)	0	99(99,100)	4	98(98,95)	3	96(96,89)
32: 20-May	0	100(100, 100)	0	100(100,100)	1	100(100,100)	3	99(99,98)	2	99(100,91)
33: 27-May	0	100(100, 100)	0	100(100,100)	0	100(100,100)	2	100(100,100)	0	99(100,91)
Postseason:	0	100(100, 100)	0	100(100,100)	0	100(100,100)	1	100(100,100)	1	100(100,100)
01-Jun				/		/		/		/

Table 4.49: BSS fishery harvest by week of season

Note The BSS fishery is open by regulation from October 15 to May 31. Percent of pounds column shows the cumulative proportion of pounds landed for combined IFQ and CDQ sold pounds, including catcher/processor landings, and, in parentheses: a) sold pounds landed on catcher vessel owner A-type IFQ permits (CVOA); and b) 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.

		Vessels	CPUE (lb l	egal crab)	Pot lif	`ts	RPUE (\$)		
	Season		Mean(sd) CPUE per vessel, 1,000	Weighted mean	Mean(sd) per vessel, 1,000	Total	Mean(sd) RPUE per vessel, 1,000	Weighted mean	
	1998	274	15.3(6.7)	15.20	0.5(0.2)	144.90	414(181)	410	
	1999	257	12.6(6.1)	12.50	0.6(0.2)	150.00	731(362)	729	
	2000	244	11.9(5.2)	12.00	0.4(0.1)	103.40	540(237)	547	
	2001	230	19.1(10)	19.20	0.3(0.1)	66.20	860(457)	863	
	2002	242	20.6(7.1)	20.40	0.3(0.1)	72.20	1174(399)	1,163	
	2003	250	18.2(9.5)	18.40	0.5(0.2)	134.10	807(420)	822	
	2004	251	22.9(9)	22.90	0.4(0.1)	96.30	1001(383)	1,005	
	2005/06	89	28(10.5)	23.70	1.3(1)	114.60	1096(414)	933	
	2006/07	81	33.3(9.9)	34.00	0.9(0.5)	71.70	999(305)	1,020	
	2007/08	74	27.9(7.2)	27.50	1.5(0.9)	113.10	993(260)	979	
	2008/09	78	23.7(7.1)	21.70	1.8(1.1)	139.70	967(300)	886	
BBR	2009/10	70	22.3(5.9)	21.20	1.7(0.8)	118.40	787(208)	751	
	2010/11	65	18.6(5.1)	18.10	2(1)	131.40	1024(287)	996	
	2011/12	62	27.6(7.3)	28.20	0.7(0.3)	45.10	2158(570)	2.199	
	2012/13	64	30.7(9)	30.20	0.6(0.3)	38.00	1935(582)	1.911	
	2013/14	63	27(8.9)	26.90	0.7(0.3)	45.80	1461(495)	1.450	
	2014/15	63	29(28.7)	25.30	0.9(0.5)	58.50	1486(1522)	1.291	
	2015/16	64	31.7(9.7)	30.60	0.7(0.4)	48.00	1892(593)	1.830	
	2016/17	63	39.2(9.1)	37.80	0.5(0.3)	33.00	2861(632)	2,800	
	2010/11 2017/18	61	20.5(7.8)	19.90	0.8(0.4)	48.20	1286(477)	1.244	
	2017/10	55	19.7(6.3)	19.50	0.6(0.4)	30.60	1200(477) 1474(481)	1,244 1 $471$	
	2010/15	56	16(6)	15.00	0.6(0.3)	34.40	1366(512)	1, 1, 1	
	2019/20 2020/21	47	22.1(7.7)	21.30	0.0(0.3) 0.4(0.2)	20.20	1657(569)	1,608	
	1999	241	155.4(42)	158.30	3.9(1.5)	945.40	298(76)	303	
	2000	231	138.5(59.9)	136.20	0.8(0.3)	181.50	506(225)	494	
	2001	207	91.6(48)	95.60	0.9(0.5)	191.00	279(134)	291	
	2002	191	76.2(35.2)	75.60	1.7(0.8)	325.60	195(90)	193	
	2003	190	151.6(63)	146.90	0.8(0.4)	153.70	478(189)	461	
	2004	189	156(60.3)	149.60	0.7(0.4)	123.40	563(211)	539	
	2005	168	246.2(87.9)	242.80	0.4(0.1)	72.90	822(309)	809	
	2005/06	78	211.4(71.9)	202.60	1.5(1.1)	120.00	475(153)	458	
	2006/07	69	349.1(74.7)	343.00	1.2(0.8)	85.30	868(200)	841	
	2007/08	78	354.7(74.1)	352.70	1.8(1)	141.40	927(190)	923	
	2008/09	77	284.6(70.5)	279.10	2.1(1.3)	163.30	622(158)	610	
BSS	2009/10	69	255.8(55.6)	255.00	2(1.1)	136.80	550(113)	547	
	2010/11	68	255.3(51.4)	254.90	2.2(1.1)	147.20	1095(218)	1.091	
	2011/12	72	224.7(63.4)	222.70	3.7(1.8)	270.00	819(229)	815	
	2012/13	70	218.9(64)	209.80	3.2(1.6)	224.60	798(224)	767	
	2013/14	70	181.8(49.9)	179.80	3.3(1.7)	231.40	624(174)	612	
	2014/15	71	192.4(57)	190.60	4(1.9)	286.10	550(170)	545	
	2015/16	74	143(53 7)	137.50	2.9(1.6)	200.10 213 40	579(207)	557	
	2016/17	63	$135\ 7(48\ 8)$	137.30	1.9(0.8)	118 10	629(226)	637	
	2017/18	63	1404(616)	132.80	1 9(1)	117 10	682(319)	648	
	2011/10	61	181(46.6)	176 20	91(19)	126.20	888(955)	0+0 868	
	2010/19	50	140.5(38.7)	150.10	3.9(1.7)	188 20	725(100)	720	
	2019/20 2020/21	69 62	$211\ 7(77\ 7)$	217 20	2.7(1.1)	169.30	1263(463)	1 295	
	2020/21	02	211.1(11.1)	211.20	2.1(1.1)	103.00	1200(400)	1,230	
	2005/06	43	19.1(16.7)	15.00	0.7(0.6)	29.00	78(71)	62	

Table 4.50: Fishing effort (pot lifts, CPUE, and RPUE) by season, CR Program fisheries

		Vessels	CPUE (lb l	egal crab)	Pot li	ifts	RPUE	E (\$)
	Season		Mean(sd) CPUE per vessel, 1,000	Weighted mean	Mean(sd) per vessel, 1,000	Total	Mean(sd) RPUE per vessel, 1,000	Weighted mean
	2006/07	52	16.8(15.4)	17.20	1(0.8)	52.90	79(72)	80
	2007/08	41	18.6(10.1)	17.60	1.3(1.3)	52.00	87(48)	84
	2008/09	49	14.7(15.7)	12.90	1.3(1.3)	63.90	67(73)	59
	2009/10	41	38.8(30.9)	11.80	1(0.7)	40.60	214(171)	66
	2010/11	49	Ó	0.00	0.8(0.5)	38.60	Ó	0
	2011/12	56	0	0.00	1.2(0.7)	64.20	0	0
DOT	2012/13	59	0	0.00	1.4(0.9)	81.10	0	0
BST	2013/14	66	15.2(12)	9.70	2.3(1.5)	147.60	87(69)	55
	2014/15	64	34.9(15.2)	33.50	3.5(2.6)	221.70	179(79)	168
	2015/16	70	41.8(19.4)	38.40	4(3.2)	280.40	198(93)	181
	2016/17	47	Ó	0.00	1(0.7)	49.20	Ó	0
	2017/18	39	52.3(28.9)	41.20	0.8(0.6)	32.30	406(236)	315
	2018/19	37	37.2(18.1)	30.40	1.2(0.7)	44.60	293(148)	237
	2019/20	8	Ó	0.00	0.8(0.5)	6.40	Ó	0
	2020/21	41	18.8(12.6)	18.70	1.1(0.8)	45.80	154(116)	157
	1998	14	8(4.4)	9.00	5.6(2.6)	78.10	104(53)	114
	1999	15	9(4.7)	9.00	5(2)	74.30	182(96)	182
	2000	15	9.7(4.3)	9.70	4.6(1.6)	68.40	220(105)	222
	2001	19	11.2(5.6)	11.50	3.3(1.1)	62.60	230(109)	234
	2002	19	12.2(4.9)	12.10	2.7(0.7)	52.00	264(104)	264
	2003	18	10.6(2.9)	10.60	3.3(0.7)	58.90	244(67)	248
	2004	19	18.6(7.1)	18.00	1.8(0.4)	34.80	367(131)	356
	2005/06	7	25.3(7.9)	25.20	3.5(1.9)	24.60	394(146)	413
	2006/07	6	23.7(5.4)	24.50	4.4(3.5)	26.20	252(66)	280
	2007/08	4	29.1(5.2)	27.80	5.7(5.2)	22.70	342(138)	370
	2008/09	3	26(4.6)	27.00	8.2(3.4)	24.50	567(85)	577
EAG	2009/10	3	24.7(4)	25.60	8.8(3.3)	26.30	342(58)	356
	2010/11	3	24.5(4.1)	25.40	8.6(2.6)	25.90	529(100)	549
	2011/12	3	36.2(3.7)	37.00	6(2.5)	17.90	942(72)	950
	2012/13	3	32(0.9)	32.20	6.9(3.1)	20.80	688(23)	681
	2013/14	3	33(4.6)	33.50	6.9(2.3)	20.70	690(73)	698
	2014/15	3	41.9(8.7)	42.00	5.5(2.2)	16.40	922(159)	915
	2015/16	3	37.7(9.5)	38.20	6.2(2)	18.50	868(154)	873
	2016/17	4	42.3(22.4)	31.60	5.8(4.6)	23.40	1160(614)	848
	2017/18	4	30(2.7)	30.70	6.2(5.9)	24.60	790(76)	793
	2018/19	3	35.8(3.7)	35.20	8.8(5.3)	26.50	956(40)	954
	2019/20	3	34.9(2.7)	34.60	9.2(5.1)	27.70	960(49)	946
	2020/21	3	28.6(3.2)	29.70	9.7(5)	29.00	1006(160)	969
PIK	1998	58	3(1.7)	3.00	0.8(0.3)	46.00	81(45)	79
	1998	132	7.1(2)	6.90	0.7(0.3)	91.70	97(27)	95
	2009/10	7	9.3(1.4)	9.60	1.5(1)	10.60	110(17)	115
	2010/11	11	9.7(2)	10.10	2.7(1.2)	29.30	245(49)	256
$\mathbf{SMB}$	2011/12	18	8.5(2.1)	8.90	2.7(1.1)	48.60	203(50)	211
	2012/13	17	9.8(2.6)	10.10	2.2(1)	37.00	213(57)	217
	2014/15	4	6.2(1.7)	6.70	2.5(0.9)	10.10	105(29)	113
	2015/16	3	4.8(1.8)	4.40	1.8(0.8)	5.50	94(35)	87

Table 4.50: Fishing effort (pot lifts, CPUE, and RPUE) by season, CR Program fisheries (continued)

		Vessels	CPUE (lb l	egal crab)	Pot li	ifts	RPUE	E (\$)
	Season		Mean(sd)	Weighted	Mean(sd)	Total	Mean(sd)	Weighted
			CPUE per	mean	per vessel,		RPUE per	mean
			vessel,		1,000		vessel,	
			1,000				1,000	
	1998/99	3	8.2(5.7)	11.20	12(10.9)	35.90	144(92)	190
	1999/00	15	4.2(2.7)	6.10	7(7.7)	104.30	83(52)	121
	2000/01	12	4.7(3.3)	6.80	8.2(6.7)	97.90	94(61)	131
	2001/02	9	5.8(1.7)	6.40	11.7(9.4)	105.50	111(29)	120
	2002/03	6	6.4(3.4)	8.30	13.2(10.5)	79.00	125(62)	162
	2003/04	6	8.5(3.3)	10.00	11(7.8)	66.20	166(63)	193
	2004/05	6	9.3(4.4)	11.90	9.5(7.1)	56.80	159(73)	201
	2005/06	3	20.7(5.8)	21.00	10(2.9)	30.00	275(66)	278
	2006/07	4	18.6(5.7)	20.00	6.5(2.6)	25.90	166(33)	170
	2007/08	3	21(3.3)	19.90	10(9.2)	29.90	210(68)	196
	2008/09	3	23.3(3.8)	22.30	8.7(7.2)	26.10	256(98)	238
WAG	2009/10	3	25.9(6.9)	23.40	8.8(7)	26.50	453(113)	393
	2010/11	3	21.2(6.3)	20.60	10(5.9)	29.90	486(123)	458
	2011/12	3	22.3(4.1)	23.10	8.8(3.5)	26.30	496(115)	515
	2012/13	4	20.8(4.2)	20.20	8.2(4.6)	32.70	396(94)	376
	2013/14	3	15.6(2.4)	15.90	13.9(2.7)	41.80	302(43)	307
	2014/15	2	*	*	*	*	*	*
	2015/16	2	*	*	*	*	*	*
	2016/17	3	13.4(1.2)	13.70	12.7(6.2)	38.10	321(43)	328
	2017/18	3	16.1(2.1)	16.40	10.3(3.1)	30.90	371(59)	383
	2018/19	3	20(7.2)	19.30	9.8(3.8)	29.50	498(152)	491
	2019/20	3	15.3(6)	14.90	14.2(3.2)	42.50	447(150)	438
	2020/21	3	12.5(6.3)	14.30	15.6(7.6)	46.70	470(222)	537
	1998/99	1	*	*	*	*	*	*
WAI	2002/03	33	18.7(12.7)	17.90	0.1	3.80	1228(834)	$1,\!172$
	2003/04	30	10.2(5.4)	10.30	0.2(0.1)	5.80	583(313)	591

Table 4.50: Fishing effort (pot lifts, CPUE, and RPUE) by season, CR Program fisheries (continued)

**Note** 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 2021-equivalent value using the GDP deflator. Includes catcher/processor harvest and effort.

 ${\bf Source}$  ADF&G fish ticket data and eLandings

	Year	Export	Export	Export Unit	Import	Import	Import Unit	Net export	Net export
		(1,000t)	value	Value	(1,000t)	value	Value	(1,000t)	value
			(\$million)	(\$/metric		(\$million)	(\$/metric		(\$million)
				ton)			ton)		
	1991	3.85	\$ 96.61	25.09	0.30	\$ 7.19	23.97	3.55	\$ 89.42
	1992	3.70	\$ 105.06	28.39	2.19	\$ 39.08	17.84	1.51	\$ 65.98
	1993	5.96	\$ 148.20	24.87	1.12	\$ 22.16	19.79	4.84	\$ 126.04
	1994	3.62	\$ 80.59	22.26	2.60	\$ 57.44	22.09	1.02	\$ 23.15
	1995	2.85	5 01.40 \$ 01.65	20.16	4.01	\$ 103 01	16.57	-1.10	5 -17.01 \$ 12.26
	1997	2.80	\$ 44 95	20.05 16.05	9.77	\$ 105.51 \$ 175.52	17.97	-1.31	\$ -12.20 \$ -130.57
	1998	3.10	\$ 35.84	11.56	11.82	\$ 191.64	16.21	-8.72	\$ -155.80
	1999	2.73	\$ 39.69	14.54	11.49	\$ 211.02	18.37	-8.76	\$ -171.33
	2000	3.05	\$ 68.86	22.58	10.05	\$ 219.98	21.89	-7.00	\$ -151.12
	2001	1.83	\$ 49.03	26.79	9.29	\$ 204.93	22.06	-7.46	\$ -155.90
	2002	2.28	\$ 48.82	21.41	10.42	\$ 271.09	26.02	-8.14	\$ -222.27
	2003	3.94	\$ 71.92	18.25	9.96	\$ 231.80	23.27	-6.02	\$ -159.88
	2004	3.25	\$ 54.17	16.67	10.55	\$ 208.32	19.75	-7.30	\$ -154.15
King	2005	3.90	\$ 72.63	18.62	18.39	\$ 337.14	18.33	-14.49	\$ -264.51
crab	2006	4.32	\$ 75.49	17.47	28.07	\$ 437.71	15.59	-23.75	\$ -362.22
	2007	3.31	\$ 62.24	18.80	30.35	\$ 465.26	15.33	-27.04	\$ -403.02
	2008	4.33	\$ 80.03 ¢ 90.24	19.98	15.92	\$ 331.00 \$ 202.74	20.79	-11.59	5-244.47 \$221.40
	2009	3.30	\$ 100.06	24.51	10.06	\$ 210.50	19.19	-12.47	\$ 110.53
	2010	2.66	\$ 76 53	21.04	10.00	\$ 206 20	21.65	-0.44	\$ -119.55 \$ -129.67
	2011	1.98	\$ 59.85	30.23	9.41	\$ 194.65	24.20	-7.43	\$ -134.80
	2013	1.78	\$ 50.69	28.48	10.69	\$ 225.12	21.06	-8.91	\$ -174.43
	2014	2.19	\$ 58.23	26.59	12.34	\$ 278.57	22.57	-10.15	\$ -220.34
	2015	0.75	\$ 19.13	25.51	9.35	\$ 213.35	22.82	-8.60	\$ -194.22
	2016	1.17	\$ 36.54	31.23	10.39	\$ 312.43	30.07	-9.22	\$ -275.89
	2017	1.46	\$ 43.15	29.55	10.01	\$ 335.25	33.49	-8.55	\$ -292.10
	2018	1.33	\$ 40.90	30.75	11.02	\$ 382.80	34.74	-9.69	\$ -341.90
	2019	0.78	\$ 23.18	29.72	12.39	\$ 478.72	38.64	-11.61	\$ -455.54
	2020	0.71	\$ 15.86	22.34	12.79	\$ 531.79	41.58	-12.08	\$ -515.93
	2021	0.17	\$ 3.26	19.18	8.56	\$ 355.14	41.49	-8.39	\$ -351.88
	1991	32.20	\$ 276.31	8.58	0.74	\$ 9.56	12.92	31.46	\$ 266.75
	1992	61.61	\$ 531.76	8.63	0.88	\$ 8.27	9.40	60.73	\$ 523.49
	1993	45.56	462.07	10.14	1.33	\$ 14.71	11.06	44.23	\$ 447.36
	1994	31.12	\$ 430.18	13.82	2.86	\$ 36.14	12.64	28.26	\$ 394.04
	1995	12.26	\$ 203.97	16.64	2.26	\$ 30.58	13.53	10.00	\$ 173.39
	1996	9.53	\$ 113.25	11.88	3.38	\$ 35.81	10.59	6.15	\$ 77.44
	1997	10.17	5 85.40 © 94.41	8.40	0.90	\$ 07.40 \$ 08.21	8.33	3.27	\$ 28.01 \$ 12.00
	1998	11.99	0 04.41 © 142 50	7.04	12.20	\$ 98.31 \$ 959.10	8.02 10.46	-0.27	Φ -13.90 Φ 114 51
	2000	4 75	\$ 62.70	9.19 13.20	24.08 28.61	\$ 258.10 \$ 364.23	10.40	-23.86	\$ -114.51 \$ -301.53
	2000	3.09	\$ 37.05	11.99	42.18	\$ 432.52	10.25	-39.09	\$ -395.47
	2002	3.36	\$ 38.58	11.48	44.41	\$ 456.20	10.27	-41.05	\$ -417.62
	2003	3.92	\$ 54.12	13.81	51.60	\$ 624.14	12.10	-47.68	\$ -570.02
	2004	4.09	\$ 55.12	13.48	49.10	\$ 585.86	11.93	-45.01	\$ -530.74
Snow	2005	3.42	\$ 40.39	11.81	45.97	\$ 438.18	9.53	-42.55	\$ -397.79
crab	2006	4.79	\$ 53.08	11.08	46.28	\$ 396.77	8.57	-41.49	\$ -343.69
ciab	2007	2.12	\$ 19.34	9.12	47.98	\$ 514.57	10.72	-45.86	\$ -495.23
	2008	5.55	\$ 55.71	10.04	42.00	\$ 461.89	11.00	-36.45	\$ -406.18
	2009	5.48	\$ 55.93	10.21	51.65	\$ 474.43	9.19	-46.17	\$ -418.50
	2010	4.96	\$ 50.96	10.27	43.57	\$ 460.64	10.57	-38.61	\$ -409.68
	2011 2012	8.48 19.79	5 109.39 \$ 152.20	12.90	41.04	0000.48 \$ 519.25	14.78	-32.30	J-497.09 8.261 65
	2012	8.22	\$ 105.64	12.97	41.08 52.05	\$ 641 32	12.33	-28.90	\$ -535.68
	2013	7 24	\$ 98.82	13.65	45 49	\$ 576.39	12.52	-38 25	\$ -477 57
	2015	7.72	\$ 88.57	11.47	45.79	\$ 558.11	12.19	-38.07	\$ -469.54
	2016	6.12	\$ 83.09	13.58	49.70	\$ 700.24	14.09	-43.58	\$ -617.15
	2017	3.01	\$ 49.79	16.54	46.10	\$ 780.94	16.94	-43.09	\$ -731.15
	2018	2.48	\$ 44.67	18.01	40.94	\$ 762.74	18.63	-38.46	\$ -718.07
	2019	3.70	\$ 63.75	17.23	46.24	\$ 875.56	18.94	-42.54	\$ -811.81
	2020	4.12	\$ 70.70	17.16	57.55	\$ 1,035.75	18.00	-53.43	\$ -965.05
	2021	5.04	\$ 85.51	16.97	48.10	\$ 1.324.63	27.54	-43.06	\$ -1.239.12

Table 4.51: Snow and king crab exports and imports

**Note** 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). Dollars are inflation-adjusted to 2021-equivalent value using the GDP deflator.

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/].

	Year	GDP Index	2021 GDP Adjustment Factor	PCE Index	2021 PCE Adjustment Factor
1991		65.82	1.80	65.47	1.76
1992		67.32	1.76	67.22	1.72
1993		68.92	1.72	68.89	1.68
1994		70.39	1.68	70.33	1.64
1995		71.86	1.65	71.81	1.61
1996		73.18	1.62	73.35	1.58
1997		74.45	1.59	74.62	1.55
1998		75.27	1.57	75.22	1.54
1999		76.35	1.55	76.34	1.51
2000		78.07	1.52	78.24	1.48
2001		79.82	1.48	79.74	1.45
2002		81.04	1.46	80.79	1.43
2003		82.57	1.44	82.36	1.40
2004		84.78	1.40	84.41	1.37
2005		87.41	1.36	86.81	1.33
2006		90.07	1.32	89.17	1.30
2007		92.50	1.28	91.44	1.26
2008		94.26	1.26	94.18	1.23
2009		95.00	1.25	94.09	1.23
2010		96.11	1.23	95.70	1.21
2011		98.11	1.21	98.13	1.18
2012		100.00	1.18	100.00	1.16
2013		101.77	1.16	101.35	1.14
2014		103.69	1.14	102.87	1.12
2015		104.76	1.13	103.13	1.12
2016		105.90	1.12	104.23	1.11
2017		107.93	1.10	106.07	1.09
2018		110.33	1.07	108.23	1.07
2019		112.32	1.05	109.85	1.05
2020		113.62	1.04	111.22	1.04
2021		118.49	1.00	115.53	1.00
2022		127.18	0.93	-	-

Table 4.52: Inflation-adjustment indices

**Note** 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. 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