

Preliminary Report on 2012 Economic Data Report results for BSAI Crab Harvest Quota Allocation Transfer Lease Activity and Quota Market Prices

Alaska Fisheries Science Center, Economic and Social Sciences Research Program
December 3, 2013

This report provides preliminary results from the BSAI Crab Rationalization Economic Data Report (EDR) program collection of crab harvest quota allocation lease data associated with Bering Sea snow crab (BSS) and Bristol Bay red king crab (BBR) fisheries prosecuted during the 2012 calendar year. BSAI Crab EDR data collection during the most recent annual cycle (EDR forms for 2012 data were due from submitters on July 31, 2013) implemented revised data collection forms and other reporting requirements 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 quota 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 data collected previously for 2005-2011 fisheries was not deemed of sufficient quality to disseminate. For collection of data associated with 2012 fisheries, EDR forms employ revised instructions specifying quota lease data elements as market-rate or negotiated-price transfers of annually-issued IFQ or CDQ pounds (see Figure 1).

Preliminary results of analysis of EDR quota lease data shown in Table 1 are provided for informational purposes only; data upon which these results are based have not been fully validated and the fishery-level summary statistics shown are expected to change upon completion of the validation process.¹ Revisions in EDR reporting protocols were developed to address data quality limitations identified in previously collected data; however, assessment of the revised EDR design and data collection protocols is pending completion of data validation audits. Final statistical results for EDR data, incorporating error corrections identified in the validation process, as well as a summary of EDR data quality findings, will be published in the BSAI 2013 Crab Economic Status Report.²

¹ EDR data validation includes mandatory audit of supporting documentation by a third-party auditor; audits of Crab EDR data are performed by AKT CPA, LLC of Portland, OR and are currently ongoing for 2012 EDR data; audit reports for 2005-2011 annual EDR collections can be accessed at http://www.psmfc.org/alaska_crab/. Consultation with AKT staff (12/2/13) regarding preliminary audit findings for 2012 quota lease data indicate moderate rate of incidence of errors in quota lease pounds and cost reported, but do not indicate any systematic bias in magnitude or direction of reporting errors.

² The Economic Status Report for BSAI Crab provides a comprehensive presentation of statistical information and analysis regarding economic dimensions of the fishery evaluation; the 2013 report is in preparation, with expected release in January, 2014.

Table 1 shows aggregated results for crab fishing quota lease volume (in pounds) and cost reported for crab vessels active in 2012 calendar year BBR and BSS fisheries,³ by fishing quota type category, including total quantities summed over all reporting vessels, average values (both median and mean) for volume and cost of leased quota per vessel, average lease price paid (\$US per pound), and average lease rate (lease price as percentage of ex-vessel price) per vessel. Both median and arithmetic mean average value metrics are presented to provide information on the variation in reported values within each stratum, with the higher mean values shown indicating the presence of a subset of high-value data points in these data. Harvest quota types are categorized as the following: catcher vessel owner (CVO) Class A IFQ; catcher vessel owner Class B IFQ and catcher/processor owner (CPO) IFQ; catcher vessel crew (CVC) IFQ and catcher/processor crew (CPC) IFQ, and community development quota (CDQ).

The number of vessels reporting quota leases in the 2012 BBR fishery range from 49 vessels leasing CVO Class A shares, to 5 vessels leasing CDQ shares (out of 64 crab vessels active during the 2012 BBR fishery), and from 52 vessels leasing CVO A Class BSS IFQ allocation to 11 vessels leasing CDQ allocation (out of 72 active vessels) in the BSS fishery. Total volume and cost over all vessels leasing the respective quota types range from 3.5 million pounds and \$17.6 million for BBR CVO Class A IFQ, to 159,000 pounds and \$855,000 for BBR CVO and CPC crew IFQ; BSS lease volume and cost ranged from 40.8 million pounds and \$40.8 million for CVO A Class IFQ to 1.7 million pounds and \$1.8 million for crew share IFQ.

Per vessel averages (median) for BBR quota leased volume and cost ranged from 65 thousand pounds and \$328,000 per vessel for BBR CVO A Class IFQ, to four thousand pounds and \$22,000 for BBR CVO and CPO crew IFQ; BSS per-vessel averages ranged from 654 thousand pounds and \$679,000 per vessel for per vessel CVO- A Class IFQ to 48 thousand pounds and \$49,000 for BSS crew share IFQ.

The difference in median and mean values shown in Table 1 are most pronounced in the per-vessel pounds and cost statistics. This primarily reflects the incidence of high volume quota lease activity on the part of a small number of vessels within each quota type category (particularly in the case of pooled results for CVO- B Class and CPO IFQ, where the latter is leased exclusively by a small subset of vessels).

Average (median) lease prices and lease rates shown in Table 1 range from \$5.40 per pound (64% of ex-vessel price) for BBR CDQ to \$5.14 per pound (64% of ex-vessel) for BBR CVO A Class IFQ, and \$1.12 (49% of ex-vessel price) for BSS CDQ to \$1.00 per pound (46% of ex-vessel) for BSS CVO A Class allocation. Average values are calculated over individual vessel-level observations of both quota lease price and ex-vessel value; the general consistency of results between median and mean statistics across quota types indicates the relative uniformity of quota price paid by leasing vessels and the limited effect that the small number of high-price outliers in data have on aggregate statistical results.

³ Note that CR crab fisheries are managed on a July-June seasonal calendar. 2012 calendar year fisheries include the 2011/2012 BSS season and 2012/2013 BBR season.

Table 1: Crab Harvest Quota Leasing - Volume, Cost, and Lease Prices and Rates, 2012 Calendar Year Fisheries (PRELIMINARY RESULTS, BBR and BSS fisheries only)

| Fishery | Quota type ^a | Vessels ^b | Pounds Leased (1000 pounds) | | | Cost (\$1000) | | | Average Lease Price (\$/pound) ^c | | Average Lease Rate (% of ex-vessel value) ^d | |
|---------|-------------------------|----------------------|-----------------------------|--------------------|------|---------------|--------------------|------|---|------|--|------|
| | | | Total | Average per vessel | | Total | Average per vessel | | Median | Mean | Median | Mean |
| | | | | Median | Mean | | Median | Mean | | | | |
| BBR | CVO A | 49 | 3,529 | 65 | 72 | 17,586 | 328 | 359 | 5.14 | 5.18 | 64% | 65% |
| | CVO B +CPO | 41 | 536 | 8 | 12 | 2,971 | 48 | 68 | 5.33 | 5.48 | 65% | 67% |
| | CVC + CPC | 33 | 159 | 4 | 5 | 855 | 22 | 24 | 5.18 | 5.34 | 62% | 66% |
| | CDQ | 5 | 369 | 71 | 74 | 2,180 | 433 | 436 | 5.40 | 5.93 | 64% | 72% |
| BSS | CVO A | 52 | 40,758 | 654 | 784 | 40,769 | 679 | 784 | 1.00 | 1.02 | 46% | 49% |
| | CVO B +CPO | 45 | 6,569 | 84 | 131 | 7,353 | 101 | 147 | 1.09 | 1.17 | 46% | 51% |
| | CVC + CPC | 37 | 1,728 | 48 | 45 | 1,859 | 49 | 49 | 1.09 | 1.11 | 46% | 48% |
| | CDQ | 11 | 6,464 | 563 | 588 | 7,286 | 662 | 662 | 1.12 | 1.13 | 49% | 49% |

Source: NMFS AFSC BSAI Crab Economic Data (preliminary findings subject to revision following completion of data validation).

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

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

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

^d Average lease rate statistics by fishery and quota type are calculated as the median and mean, respectively, of the ratio of lease price to ex-vessel price, over all observations where both ex-vessel and lease pounds, and ex-vessel revenue and lease cost, were reported as non-zero values.

**2. CR Crab Fishing Quota Costs, by CR Fishery and Quota Type
Market-Value and Negotiated-Price Transfers Only**

In Table 2 below, record the total pounds and monetary cost for negotiated transfers of annual crab fishing quota (IFQ and CDQ) pounds received for harvest on your vessel during calendar year 2012, by CR fishery and harvest quota permit type. Use the CR Fishery codes from Table A and Quota Type codes from Table B.

Include only transfers of quota for which you paid only monetary compensation, based on the market value or a price negotiated between you and the quota holder(s). Do **not** include quota transfers for which:

- payment was based on a nominal (or non-negotiated) price, **or**
- non-monetary or in-kind compensation was included in the transaction, in addition to transferred quota pounds and monetary payment, **or**
- you did not catch the transferred quota pounds on this vessel by the end of the season, or re-transferred the quota pounds for use by another vessel.

For all market-value and/or negotiated-price quota transfers, report the following:

Pounds Transferred: Record the total pounds of transferred crab fishing quota used to land crab caught by the vessel during the previous calendar year.

Total Cost: Record the total gross cost paid as monetary compensation, after taxes or fees are deducted. Include all post-season adjustments paid as of the date of submitting this EDR, but do not report any payments not paid by this date.

**Table 2: CR Crab Fishing Quota Costs, by CR Fishery and Quota Type:
Market-Value and Negotiated Price Transfers Only**

| Quota Type | CR Fishery | Pounds Transferred | Total Cost |
|------------|------------|--------------------|------------|
| CVO-A | BBR | lbs | \$ |
| | BSS | lbs | \$ |
| | EAG | lbs | \$ |
| | WAG | lbs | \$ |
| | EBT | lbs | \$ |
| | WBT | lbs | \$ |
| | SMB | lbs | \$ |
| | PIK | lbs | \$ |
| | WAI | lbs | \$ |
| CVO-B | BBR | lbs | \$ |
| | BSS | lbs | \$ |
| | EAG | lbs | \$ |
| | WAG | lbs | \$ |
| | EBT | lbs | \$ |
| | WBT | lbs | \$ |
| | SMB | lbs | \$ |
| | PIK | lbs | \$ |
| | WAI | lbs | \$ |

Catcher Vessel Crab EDR
Page 10 of 16

| Quota Type | CR Fishery | Pounds Transferred | Total Cost |
|------------|------------|--------------------|------------|
| CPO | BBR | lbs | \$ |
| | BSS | lbs | \$ |
| | EAG | lbs | \$ |
| | WAG | lbs | \$ |
| | EBT | lbs | \$ |
| | WBT | lbs | \$ |
| | SMB | lbs | \$ |
| | PIK | lbs | \$ |
| | WAI | lbs | \$ |
| CVC | BBR | lbs | \$ |
| | BSS | lbs | \$ |
| | EAG | lbs | \$ |
| | WAG | lbs | \$ |
| | EBT | lbs | \$ |
| | WBT | lbs | \$ |
| | SMB | lbs | \$ |
| | PIK | lbs | \$ |
| | WAI | lbs | \$ |
| CPC | BBR | lbs | \$ |
| | BSS | lbs | \$ |
| | EAG | lbs | \$ |
| | WAG | lbs | \$ |
| | EBT | lbs | \$ |
| | WBT | lbs | \$ |
| | SMB | lbs | \$ |
| | PIK | lbs | \$ |
| | WAI | lbs | \$ |
| CDQ | BBR | lbs | \$ |
| | BSS | lbs | \$ |
| | EAG | lbs | \$ |
| | EBT | lbs | \$ |
| | WBT | lbs | \$ |
| | SMB | lbs | \$ |
| | PIK | lbs | \$ |
| | WAI | lbs | \$ |
| ACA-WAG | WAG | lbs | \$ |

Catcher Vessel Crab EDR
Page 11 of 16

Figure 1: 2012 Crab Catcher Vessel EDR form, fishing quota cost section^a

^a Current (2012) and previous versions of Crab Economic Data Report (EDR) forms are available from Pacific States Marine Fisheries Commission at http://www.psmfc.org/alaska_crab/.