

Report of the
Golden king crab arbitration workgroup to the
North Pacific Fishery Management Council
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Workgroup members – Duncan Fields (chair), Larry Cotter, Joe Sullivan, Dick Tremaine, Brett Reasor, Mark JoHahnson, Greg White

The workgroup met 6 times between February and August of 2012.

The Council formed the committee to address dissatisfaction with the golden king crab price formula that is developed through the arbitration system as developed by the non-binding price formula arbitrator. The formula is intended to define an ex vessel price that preserves the historic division of first wholesale revenues in the fishery while considering several other factors, such as crab markets, innovations, efficiency and productivity in the sectors, and the interest of maintaining healthy and stable harvesting and processing sectors. The standard does not state how these factors should be weighted relative to the primary interest of preserving the historic division of first wholesale revenues or when it is appropriate to consider establishing a price that differs from the historic division of first wholesale revenues.

Processor representatives suggested that the available data in the fishery may not accurately reflect historical pricing for establishing the historical division of revenues as specified by the standard. The primary sources of data for establishing that division are COAR data collected by the State of Alaska and revised by Council staff (see Attachment A) and a processor survey conducted by John Sackton for the 2008 formula (see p.73 of that report) as well as data that were voluntarily advanced by one processor during negotiations soon after implementation of the program. Despite the shortcomings perceived by processor representatives, the group agreed that these data should be the starting point for discussions concerning establishing the historical division of revenues as required by the standard. Committee members acknowledged that these data have some error (as suggested by the recovery rates that may be generated by COAR data), but the degree of error and its effects on any estimation of the formula are not settled. Due to disagreements on the accuracy of the data, the committee did not agree on a specific historical division of first wholesale revenues. COAR data suggest that annually the percentage of the first wholesale price represented by the ex-vessel price in the fishery has varied from the low to mid 40s to the low to mid 50s annually. Multiple data sources using processor reported data discussed by the workgroup suggested that, on average, the ex-vessel price that reflects the historical division of revenues in the fishery is between 48 and 49 of the first wholesale price (see Attachment A). No data inconsistent with this interpretation were presented.

The group discussed conditions in each sector under the rationalization program. Processors suggested that processing of golden king crab has not historically and does not currently stand on its own. On the other hand, harvesters engaged in the fishery stated that they are almost exclusively dependent on it. Processing of golden king crab has been supported by multispecies plants that most efficiently process the crab on the shoulders of season for other crab and groundfish. Integration with other activity has allowed processors to use existing crews reducing operating costs.

Processors contend that seasons in the Eastern fishery were relatively short (e.g., few months long) since the early 1990s, and that under the rationalization program, deliveries have been extended over a longer period, in large part due to fleet consolidation. Seasons in the Western fishery were several months long

prior to the rationalization program. Some processors contend that the extension of deliveries over the longer season has limited their ability to access certain markets, particularly the holiday season market in the late fall/early winter. These processors also are concerned that golden king crab deliveries after the New Year can conflict with other activities at their plants, including pollock, cod, and opilio processing. These conflicts could limit the ability of processors to sort crab and produce higher quality products. In addition, processors suggested that quota costs have affected their bottom line under the rationalization program.

Harvesters challenged processor assertions that harvesters have inappropriately extended season duration under rationalization. Harvesters noted that the West region fishery often remained open for an extended period pre-rationalization, and that landings were made throughout the season. Further, harvesters note that processors can and do stipulate the timing and location of deliveries in the rationalized fishery, by deciding which plants will accept golden king crab deliveries, and when they will do so. Harvesters contend that this gives processors effective control over season duration. In some cases, harvesters suggested that their flexibility to time deliveries has been limited by processing plant closures (or refusals to take golden king crab deliveries during certain periods or after certain dates). Harvesters also suggested that the processing sector has likely achieved some efficiency gains through consolidation of processing at fewer plants under the program.

Both sides agreed that further processing consolidation may allow for additional processor efficiency gains. Since consolidation in some locations is constrained by caps, it was suggested that removal of processing caps could be considered. Harvesters also suggested that the rise in fuel costs in the fishery have limited their gains in recent years.

Harvesters suggested that both sectors have quota costs under the rationalization program and the arbitration program was not intended nor designed to address quota costs arising from individual choices and transactions by participants in either sector. Therefore, harvesters consider quota costs irrelevant to the development and application of the arbitration formula and standard. Harvesters have in part relied on consolidation to address these costs.

The committee agreed that the standard establishes the historical division of first wholesale revenues as only a starting point for establishing an ex-vessel price formula and that the various other considerations included in the standard could justify deviating from that percentage when appropriate. The group also agreed that issues with respect to deriving the historic division of revenues should be explored prior to considering adjustments arising from other circumstances.

Overall, the group generally agreed that a fair application of the standard should enable persons making reasonable business decisions should be able to succeed in the fishery. However, the formula should not be applied to ensure that any individual should be absolutely protected by the standard, but that application of the standard at the sector level should protect the sector as a whole. Further, harvesters agree with this general principle should be applied to protect harvesting and processing operations, as opposed to quota investors, and therefore do not believe that it justifies taking either sector's quota acquisition costs into account when setting a price in arbitration. For this reason and others, application of the arbitration standard may not create a circumstance under which all participants in the fishery are profitable in any given year.

Given the relatively narrow range of percentages that seem to be supported by the available data and concerns related to formulas that have been generated under the standard, the committee agreed to consider other issues that might be relevant under the standard. The committee agreed that identifying a list of relevant issues could be used to facilitate discussions of the standard. The following list identifies issues raised by one or more committee members. Listing an issue does not imply that the committee agreed that the issue had merit or was properly addressed by the committee.

- 1) Differential pricing of Western fishery crab and Eastern fishery crab – these differences could arise from differences in quality and size of crab and from added harvesting and processing costs that might arise from the West region landing requirement.
- 2) The need for pricing that protects both harvesters and processors during periods of relatively low market prices, along with a commensurate recognition that a party that accepts less than its share of the historic division of revenues when first wholesale prices are low should be able to recoup some of the costs associated with providing that protection during periods of high market prices
- 3) A concern that establishing a price based on a division of first wholesale revenues may result in an incentive for processors to move product quickly (including presales of products) to avoid holding and marketing costs. Consideration could be given to establishing a distribution of returns from marketing that creates incentives for processors to exert reasonable marketing efforts. In developing such incentives it should also be recognized that holding and timing of sales of product are affected by several factors beyond the incentives arising under the standard. This concern might be addressed by development of a system that provides for shared risks or a system that results in early season final ex vessel price settlements under which subsequent risks and rewards are borne by the processor.
- 4) Harvester risks, including the risk of failing to fully harvest IFQ allocations could be a relevant consideration under the standard.
- 5) Any formula should recognize the golden king crab fishery operations independent of operations in other fisheries, rather than as ancillary operations that may be subsidized by operations in other fisheries.
- 6) In considering the health of the harvesting and processing sectors, the party applying the standard should consider the sector generally (as opposed to each individual). The committee members acknowledge that each sector is made up of a variety of different participants, including vessel and plant operators some of which lease shares, quota holders that hire custom processing services, recipients of initial allocations, and new entrants. However, committee members did not reach agreement that any specific class of participants should receive special consideration under the standard.
- 7) The application of a formula dependent on first wholesale prices could justify the development of a system for verifying those prices.
- 8) Harvesters contend that the system should be developed in a manner that provides for comparison of market performance across processors to ensure that processors have an incentive to perform at a reasonable level in the first wholesale market.
- 9) The standard could consider changes in cost structures that might affect returns from the fishery for either sector. Changes that might dictate a change in how the standard is applied could be defined.
- 10) The committee acknowledged that the arbitration system is intended as a backstop for failed price negotiations. Consequently, it may be expected that prices will vary across processors for a number of reasons including differences in market prices and cost factors. These discrepancies may result in prices above and below the price that may be dictated by strict application of a

formula. Discrepancies, however, are not intended to simply provide leeway for either side to simply demand a higher (or lower) price, but to support reasonable price fluctuations that arise from vagaries in the fisheries and markets. Chronic poor performance or failure to exercise good business judgment from a participant should not justify price adjustments.

Processors expressed their opinion that the arbitration formula, as the backstop for all negotiations, needs adjustment in their favor. Harvesters responded that at current price levels, the revenues generated by the fishery were adequate for all parties to make a profit, and that processors had not presented evidence sufficient to convince the harvesters that a regulatory modification of the existing arbitration formula and standard is needed. Processors responded by asserting that they were not able to operate profitably at low price levels, presenting evidence from one processor to support this contention. As such, processors believe that an adjustment to the formula is needed to provide protection at those levels. Harvesters responded that the standard already provided protection, as deviation from the formula to protect the financial health and stability of the harvesting and processing sectors is explicitly contemplated under the standard.

Harvesters stated that a single flat percentage may not adequately address the problem identified by the processors. If first wholesale prices are low, even at relatively low percentages, a processor may not receive sufficient revenue to cover operating costs. An alternative may be to have the harvesters' historical percentage of first wholesale revenue adjusted downward at low first wholesale prices. This would allow processors a margin at low prices (as they would pay a low percentage of first wholesale revenues). As prices increased a larger share would be paid to harvesters to make up for the relatively low percentage paid in the low price market. However, processors rejected this proposal.

It was noted that custom processing is an added cost and that IPQ holders who have crab custom processed by others may not be able to make money in low price years, if custom processing costs are high. While harvesters believe quota acquisition and custom processing costs to be generally irrelevant for purposes of setting a price in arbitration, they noted that applying a low percentage in low price years could alleviate this problem.

Both sides believe that verifiable supporting information is needed to support any calculations for making adjustments in the formula. In addition, it was suggested that the focus in developing accommodations in the formula should be on differences that have arisen since the program was implemented, as those are most relevant to the adjustments.

The group discussed the application of the formula to value added products. Harvesters clarified that the formula should be applied to traditional product form (i.e., cluster) prices only (allowing processors to gain any additional revenues from value added production), provided that the value added production does not affect harvester costs. If a harvesters costs were affected (for example, by requiring smaller deliveries), harvesters would need to negotiate the distribution of those added costs (or added revenues from the value added production).

Both sides agreed that any consensus formula generated by this group could be delivered to the Council and possibly to the formula arbitrator as comments on the formula that operates as a backstop. If accepted by the formula arbitrator, this process could generate a formula to be used to effectively change the backstop. Participants in the fishery are free to express their opinions concerning the formula to the arbitrator, which might include lending their support to adoption of the consensus formula. Sector

representatives suggested that this arrangement is unlikely to pose any antitrust risk, as recommendations would be provided to the Council and the Council would have the discretion of whether to make recommendations to the formula arbitrator.

The committee discussed several different percentage formulas, with the two sides each advancing many proposals over the course of several meetings. This report includes only the last offers of the two sides (see Attachment B). The processors' last offer included arbitration system modifications, restrictions on IFQ transfers and a price formula. The committee had previously discussed many of these measures, some of which did not appear to be contested by harvesters. Processors' position was that formula modifications would address some of their issues, but that other aspects of their offer were important to resolving their concerns with the arbitration system. As a result, processors stated that the price formula offer is contingent on the acceptance of other arbitration provisions by harvesters, including a provision that would prohibit IFQ transfers among vessels within a cooperative after entry of a contract between that vessel and the IPQ holder.

The processors last offer provides for a percentage of first wholesale revenues to be paid to harvesters that generally decreases as first wholesale prices increase. This percentage is a flat 48.8 percent at first wholesale prices of \$5 and below. From \$5 to \$8 the percentage decreases to 47.38 percent of the first wholesale price. These percentages are generally consistent with a previous offer from the harvesters. The processor offer differs substantively from the previous harvester proposal between \$8 and \$10. From \$8 to \$8.70, the percentage gradually decreases to 46.69 percent, then remains constant at 46.69 percent from \$8.70 to \$9.30, from \$9.30 to \$10 the percentage increases back to 47.38 percent. At prices above \$10, the percentage would remain 47.38. In addition, the processors proposed for a \$0.12 reduction in ex-vessel price for all landings in the West region. They stated that this adjustment is intended to equally share the custom processing costs. Harvesters rejected this offer.

Harvesters' last offer is a variation on John Sackton's final formula for the 2012-2013 season. That variation would fix the percent at 48.51 percent of first wholesale price, for any price of \$4.80 and below. From \$4.90 to \$9.80, the percent would decrease to 47.29, as set out in John Sackton's formula. For prices above \$9.80, the percent would remain 47.29.

Over the course of several meetings, the two sides have discussed the possible difference in recovery rates between the Eastern fishery and Western fishery. The processors brought to the meeting annual recovery rates collected from processors in the fishery that suggest a difference in recovery rates of approximately 1.282 percent. The processors contend that this difference is relevant for establishing a price differential between the East and West fisheries. Harvesters contend that the processor assertions regarding recovery rate differentials are inaccurate and contain mathematical errors. Further, harvesters noted that processors have not offered any evidence that recovery rates in either region had dropped since rationalization, and therefore, any regional recovery rate differential that may exist is subsumed in the historical price differential for landings from the two areas.

In addition, harvesters proposed an adjustment of the ex-vessel price for West designated WAG that is processed in the West. That price generated by applying the formula would be adjusted down by \$.048 per round pound delivered. Harvesters estimated this adjustment on the following basis:

A \$0.25 per finished pound higher custom processing fee in the West region is assumed. This difference is offset \$0.17 for the incremental increase in sales tax paid by harvesters (i.e., Adak

sales tax is \$.17 higher than Dutch Harbor per finished pound). The price adjustment increment is therefore \$0.08 on a finished pound basis. Applying an assumed recover rate of 60 percent to determine the adjustment to the round pound price, results in the \$0.048 adjustment. ($\$0.08 \times .60 = \0.048 .)

The meeting was adjourned when processing sector participants rejected this offer as the chair (based on the discussions) concluded that no progress beyond these two proposals would be possible and that no further meetings would be needed prior to reporting to the Council in October.

Additional issues discussed by the group

While committee's purpose was to address perceived problems with the golden king crab price formula, as noted above, processor proposals included a variety of other elements that were stipulated as conditions to any agreement on a price formula. These included:

- a. An explicit structure for defining lengthy season agreements, which would set a deadline for initiating arbitration based on the timing of landings and product sales. Harvesters agreed in concept that under some circumstances, it may be appropriate to set an arbitration initiation deadline in a lengthy season agreement that is earlier than the end of the crab fishing year, but believe such an arrangement should be negotiated on a case by case basis, rather than set by regulation. Further, harvesters noted that lengthy season agreements can be entered into only with both parties' consent, so processors can insist on earlier arbitration dates as a condition to entering into a lengthy season agreement under the current rules, and some of them have done so. The processor proposal specifically provided:

Once an IPQ holder (a) receives 50% of the matched IFQ and sells 50% of that product (25% of the total match), the IPQ holder shall notify the IFQ holder (and make a price proposal); the IFQ holder then has 30 days to initiate arbitration.

- b. The identification of delivery windows, with price adjustments based on the date of landing to ensure that processing capacity is available and preferred markets can be accessed. Harvesters noted that processors have the ability to dictate delivery timing and location under the current arbitration system rules, and often do so as a condition to accepting IPQ matches during the voluntary match period. Harvesters believe that to the extent any price adjustments related to delivery timing and location are appropriate, they should be negotiated.
- c. Price adjustments based on the lease of IFQ, as lease payments are argued to limit the ability of harvesters to agree to lower ex vessel prices. Harvesters believe that IFQ lease payments are not relevant for purposes of setting prices in arbitration. Harvesters said that they determined the ex-vessel prices they seek based on crab market conditions, not IFQ lease rates, and that ex-vessel prices (and other considerations such as the cost of vessel operations) drive IFQ lease rates, rather than the converse. Harvesters also noted that custom processing arrangements and IPQ leasing are comparable to IFQ leases in nature, and if arbitration takes IFQ leasing into account, it should take those arrangements into account as well.
- d. Processor initiation of arbitration should be permitted by regulation. Harvesters do not agree that processors should be allowed to initiate price arbitration. Harvesters believe

processors have sufficient recourse under the current advance and settlement pricing approach, as processors stipulate the advance price, which is less than the estimated final price, and hold the harvesters' share of crab sales proceeds pending agreement on a final price. Processors can therefore effectively force harvesters to initiate arbitration by either delaying their final price settlement offer, or by offering a price below that which harvesters consider acceptable. Processors believe that the shared margin arrangement lends itself to processor initiated arbitration. Harvesters believe that processor initiation of performance arbitration (as is currently permitted in regulation) should address this concern, is acceptable, and can be addressed in any contract between the parties.

- e. Processors contend that harvesters should be required to pay a penalty for failure to delivery matched IFQ, equal to the gross revenues that would have been generated by the related product sales. Harvesters strongly object to any form of penalty for failure to deliver matched quota. Harvesters note that they have very strong incentives to catch and deliver all available IFQ, as they only are paid for pounds delivered, and the actual damages processors suffer if they fail to do so are lost profits, which would be far less than the lost gross revenues and that contract law provides an adequate remedy.
- f. Processors suggested that multiyear agreements could be developed, as an alternative to annual negotiations and the potential for arbitration to ensure stability. Harvesters expressed concern that multiyear agreements could be considered to establish an affiliation with an IPQ holder that would prevent harvesters from using the arbitration system.
- g. Processors suggested that they should be able to recover overpayments relative to those derived by applying the formula defining revenue division. Harvesters do not accept this proposition.
- h. Processors proposed additional regulatory restrictions on transfers of matched IFQ. Harvesters rejected this proposal.

Harvesters suggested that a provision for the issuance of B shares in the event that no processor applies for their IPQ should be adopted. In the absence of such a provision, all Class A IFQ would be undeliverable. This element would be needed, particularly if a formula is adopted that increases the percentage of first wholesale price that is paid to the harvester at low first wholesale prices. In these circumstances, harvesters believe the provision could be applied, if a PQS holder elected not to apply for IPQ to avoid a loss. The group reached a consensus supporting a regulatory change adopting this provision.

Committee members expressed interest in the development of a regulatory provision for the publication of arbitration results. Both sides agreed to work together to address legal/antitrust issues that might arise from the release of decisions. A delay in the release of the decisions is believed to be useful for addressing some of those concerns.

Measures to address incentives to pursue greatest value

Both sectors expressed concerns that an advance and settlement payment structure under which the ex-vessel price is calculated as percentage of actual first wholesale price reduces the incentive for processors to aggressively seek the best market opportunities, as processors must absorb all carrying and marketing costs while sharing a percentage of any gains from those expenditures with harvesters. Some participants pointed to a transaction this year that deviates from the formula established under the standard as an example of how agreeing to terms other than the formula can improve the circumstances of both sides

(and improve market incentives). Participants also suggested that lengthy season agreements may affect these incentives in some cases.

In discussions, two possible methods of pricing that could be used to create an incentive for processors to pursue the highest price for their crab products were discussed. The first method suggested was a **shared margin arrangement**. Under such an arrangement, certain costs of operations (which could include processing costs, broker fees, cold storage, transportation, fees and taxes, the cost of money and delivery down time costs) would be shared by the parties (i.e., harvester and processor). In addition, certain aspects of operations (such as market choices or certain production decisions) could be subject to joint decision making of the parties. Specific shared margin arrangements would likely depend on the circumstances and the parties. For that reason, along with antitrust considerations, these arrangements would need to be negotiated independently by individual processors and cooperatives.

The second method of addressing incentives would be an **index pricing arrangement**. Under this arrangement, parties would agree prior to fishing that the price for a landing would be established based on a public index price on a particular date rather than the processor's product sales price. For example, the price could be the Uner Barry price for red king crab 20-24 count on the date of landing. An index that is unlikely to be affected by any single processor's performance in the market. The use of the index removes the disincentive for pursuing the highest market price that arises, if a processor's first wholesale price is used to determine the ex vessel price. Under the much of the current pricing, the processor's price is used to determine the ex vessel price. By using the processor's price, every incremental increase in price realized on the processor's sale of crab is shared with the harvester. Using an index for pricing shifts all revenues above the index (and any decrease in revenues below the index) to the processor. The processor also bears any cost of carrying the crab to wait for a better market. The processor, therefore, has an incentive to realize the greatest net gain from the sale, since all revenues and costs are realized by the processor alone. As with the shared margin arrangement, the index pricing arrangement could be negotiated by the parties. The use of an index pricing arrangement would avoid any need for reviews of processor prices (which have been controversial in applying the historical division of first wholesale revenues standard to date). Instead the index price would rely on a publicly published price for determining an estimated first wholesale price.

Processors suggested that an index price arrangement could be applied by an offer from one side (e.g., harvesters) identifying an index and formula, which the other side (e.g., the processor) could then choose to accept on a delivery by delivery basis. Effectively, the harvesters would make a standing offer that could be accepted (or rejected) by the processor at the time of each delivery. If the offer is not accepted, the delivery price would be subject to negotiation and the standard arbitration process.

While processors believe that both the shared margin and index price agreements may have merit, they believe that the arbitration system needs adjustments to provide an appropriate backstop for the development those agreements. Harvesters do not agree. Harvesters assert that processors have not provided any justification for a regulatory adjustment to the existing arbitration formula and standard. Harvesters also assert that a catcher/processor operating in the fishery regularly obtains first wholesale prices for its products that are substantially higher than the prices attained by shoreside processors. They believe that some processors' failure to aggressively market golden king crab has hurt markets generally and other processors. Harvesters argue that some processors market crab to long term, reliable customers at lower prices, rather than to markets that may have the greatest return for crab sales, and do not believe

that changing the arbitration formula or standard to protect that activity is appropriate. Harvesters believe that better processor marketing efforts would alleviate any perceived processor revenue shortfalls.

West region landings

Participants agreed that West regionalization has complicated operations for both sectors and will require separate consideration of factors affecting those deliveries. Low output from other fisheries delivering to West region plants and their remote locations can limit the ability to efficiently operate in the region. In addition, transportation is costly and limited, which could limit access to certain markets. These factors will be considered by the workgroup separately from the consideration of factors that generally arise in the fisheries.

Processors suggested that possible adjustments from Eastern and Western fishery deliveries include:

- 1) Product mix adjustments (quality – ratio of #1 and #2) – the group discussed whether this adjustment could be avoided by simply focusing on the first wholesale price of deliveries of Western fishery crab – the group generally agreed that using the first wholesale prices of deliveries from Western fishery landings would address this differential.
- 2) Recovery rate adjustment applied to all West (WAG) fishery prices regardless of the location of landing – Processors have suggested that this adjustment should be based on approximately 1-2 percent difference in recovery rates across the two fisheries (resulting in a reduction in ex vessel price of approximately \$0.05 per round pound). Harvesters contend that the recovery rate for WAG has not dropped since rationalization, and therefore any adjustment for differential recovery rates is already addressed by the historical first wholesale percentage.
- 3) Cost differences for West region deliveries – which could include holding costs, processing costs, and transportation costs. Processors suggest that the difference is approximately \$0.25 per pound, which should be split evenly between the parties through a \$0.125 downward price adjustment to West region deliveries. Harvesters noted that custom processing fees are charged based on finished pounds, and therefore the appropriate ex-vessel price adjustment would be calculated by multiplying the custom processing fee differential by the recovery rate. Harvesters developed a competing proposal that acknowledges a difference in prices in the Eastern and Western fisheries, with the adjustment determined by the location of delivery. Under the proposal, deliveries of Western fishery catch:
 - to an East region plant would be subject to a \$0.075 premium,
 - to a West region plant would be subject to a \$0.075 discount.

These adjustments would be intended to address the different costs of processing in the different regions. Harvesters suggested that additional operating costs and losses in the harvest sector are relevant, as well as are additional higher tax rates on deliveries in the West region. In addition, harvesters cited losses from the stranding of in excess of \$1 million worth of quota during the 2006-2007 season because no processing capacity was available to accept deliveries of West region IFQ in that year. The participants agreed that higher processing costs should be shared costs, rather than borne by one side.

Other issues

The group agreed that any proposals discussed by the workgroup should not affect or influence the outcome of the formula arbitration process, unless a consensus is reached on all elements that is forwarded through the Council. In addition, all participants agreed that any consensus on or discussion of a pricing

formula in this workgroup should not be construed as supporting the application of the pricing formula or its structure to any other fisheries.

Attachment A

COAR Report historical first wholesale and ex vessel prices (1990-2010)

| Year | Processors | First wholesale price | PRR* | Ex vessel price | Annual division |
|---------|------------|-----------------------|----------|-----------------|-----------------|
| 1990 | 10 | \$7.0704 | 0.602335 | \$3.2002 | 45.26% |
| 1991*** | 3 | \$5.9100 | 0.4258 | \$3.0500 | 51.70% |
| 1992 | 4 | \$5.1033 | 0.093965 | \$2.1318 | 41.77% |
| 1993 | 8 | \$4.5164 | 0.533248 | \$2.4212 | 53.61% |
| 1994 | 8 | \$6.1816 | 0.861967 | \$3.4908 | 56.47% |
| 1995 | 7 | \$5.9438 | 0.562323 | \$2.9393 | 49.45% |
| 1996 | 9 | \$5.1619 | 0.590898 | \$2.1806 | 42.24% |
| 1997 | 6 | \$4.6528 | 0.58512 | \$2.2909 | 49.24% |
| 1998 | 7 | \$4.1263 | 0.523448 | \$1.9258 | 46.67% |
| 1999 | 6 | \$7.1151 | 0.56857 | \$3.2728 | 46.00% |
| 2000 | 6 | \$7.2405 | 0.585066 | \$3.3888 | 46.80% |
| 2001 | 5 | \$7.0645 | 0.659854 | \$3.3355 | 47.22% |
| 2002 | 5 | \$7.3784 | 0.588593 | \$3.4212 | 46.37% |
| 2003 | 6 | \$7.7718 | 0.591336 | \$3.5519 | 45.70% |
| 2004 | 5 | \$5.8447 | 0.518523 | \$3.0754 | 52.62% |
| 2005 | 5 | \$5.9290 | 0.567116 | \$2.7373 | 46.17% |
| 2006 | 5 | \$4.2728 | 0.327069 | \$1.9175 | 44.88% |
| 2007 | 5 | \$5.3355 | 0.637223 | \$2.1638 | 40.56% |
| 2008 | 5 | \$6.7860 | 0.587736 | \$3.5825 | 52.79% |
| 2009 | 5 | \$5.0415 | 0.59717 | \$2.4452 | 48.50% |
| 2010 | 7 | \$7.6637 | 0.731629 | \$3.8020 | 49.61% |

*PRR Calculation took the lbs bought in coar_buy (which were all wholefish), subtracted whole fish in coar_prod at 1 for 1 then divided the the shellfish products by the difference.

**Query filtered out Catcher Processors and areas A-D and Z

*** Prices from Sackton report.

Note: The rationalization program was implemented for the 2005-2006 season.

Attachment B

Last offers from the two sectors

| First wholesale price | Sackton 2012-13 | Processor proposal | Harvester proposal | Difference (\$) | First wholesale price | Sackton 2012-13 | Processor proposal | Harvester proposal | Difference (\$) |
|-----------------------|-----------------|--------------------|--------------------|-----------------|-----------------------|-----------------|--------------------|--------------------|-----------------|
| \$4.10 | 48.74 | 48.8 | 48.51 | \$0.012 | \$7.60 | 47.87 | 47.4 | 47.87 | -\$0.036 |
| \$4.20 | 48.7 | 48.8 | 48.51 | \$0.012 | \$7.70 | 47.83 | 47.39 | 47.83 | -\$0.034 |
| \$4.30 | 48.67 | 48.8 | 48.51 | \$0.012 | \$7.80 | 47.8 | 47.39 | 47.8 | -\$0.032 |
| \$4.40 | 48.63 | 48.8 | 48.51 | \$0.013 | \$7.90 | 47.77 | 47.38 | 47.77 | -\$0.031 |
| \$4.50 | 48.6 | 48.8 | 48.51 | \$0.013 | \$8.00 | 47.74 | 47.38 | 47.74 | -\$0.029 |
| \$4.60 | 48.57 | 48.8 | 48.51 | \$0.013 | \$8.10 | 47.71 | 47.28 | 47.71 | -\$0.035 |
| \$4.70 | 48.54 | 48.8 | 48.51 | \$0.014 | \$8.20 | 47.68 | 47.18 | 47.68 | -\$0.041 |
| \$4.80 | 48.51 | 48.8 | 48.51 | \$0.014 | \$8.30 | 47.65 | 47.08 | 47.65 | -\$0.047 |
| \$4.90 | 48.48 | 48.8 | 48.48 | \$0.016 | \$8.40 | 47.62 | 46.99 | 47.62 | -\$0.053 |
| \$5.00 | 48.45 | 48.8 | 48.45 | \$0.017 | \$8.50 | 47.6 | 46.89 | 47.6 | -\$0.060 |
| \$5.10 | 48.43 | 48.79 | 48.43 | \$0.018 | \$8.60 | 47.57 | 46.79 | 47.57 | -\$0.067 |
| \$5.20 | 48.4 | 48.77 | 48.4 | \$0.019 | \$8.70 | 47.54 | 46.69 | 47.54 | -\$0.074 |
| \$5.30 | 48.38 | 48.76 | 48.38 | \$0.020 | \$8.80 | 47.52 | 46.69 | 47.52 | -\$0.073 |
| \$5.40 | 48.36 | 48.74 | 48.36 | \$0.021 | \$8.90 | 47.49 | 46.69 | 47.49 | -\$0.071 |
| \$5.50 | 48.34 | 48.73 | 48.34 | \$0.021 | \$9.00 | 47.47 | 46.69 | 47.47 | -\$0.070 |
| \$5.60 | 48.32 | 48.58 | 48.32 | \$0.015 | \$9.10 | 47.44 | 46.69 | 47.44 | -\$0.068 |
| \$5.70 | 48.29 | 48.44 | 48.29 | \$0.009 | \$9.20 | 47.42 | 46.69 | 47.42 | -\$0.067 |
| \$5.80 | 48.27 | 48.29 | 48.27 | \$0.001 | \$9.30 | 47.4 | 46.69 | 47.4 | -\$0.066 |
| \$5.90 | 48.26 | 48.15 | 48.26 | -\$0.006 | \$9.40 | 47.38 | 46.79 | 47.38 | -\$0.055 |
| \$6.00 | 48.24 | 48 | 48.24 | -\$0.014 | \$9.50 | 47.35 | 46.89 | 47.35 | -\$0.044 |
| \$6.10 | 48.22 | 47.94 | 48.22 | -\$0.017 | \$9.60 | 47.33 | 46.99 | 47.33 | -\$0.033 |
| \$6.20 | 48.2 | 47.88 | 48.2 | -\$0.020 | \$9.70 | 47.31 | 47.09 | 47.31 | -\$0.021 |
| \$6.30 | 48.19 | 47.82 | 48.19 | -\$0.023 | \$9.80 | 47.29 | 47.18 | 47.29 | -\$0.011 |
| \$6.40 | 48.17 | 47.75 | 48.17 | -\$0.027 | \$9.90 | 47.27 | 47.28 | 47.29 | -\$0.001 |
| \$6.50 | 48.15 | 47.69 | 48.15 | -\$0.030 | \$10.00 | 47.25 | 47.38 | 47.29 | \$0.009 |
| \$6.60 | 48.14 | 47.64 | 48.14 | -\$0.033 | \$10.10 | 47.23 | 47.38 | 47.29 | \$0.009 |
| \$6.70 | 48.12 | 47.59 | 48.12 | -\$0.036 | \$10.20 | 47.21 | 47.38 | 47.29 | \$0.009 |
| \$6.80 | 48.11 | 47.53 | 48.11 | -\$0.039 | \$10.30 | 47.19 | 47.38 | 47.29 | \$0.009 |
| \$6.90 | 48.1 | 47.48 | 48.1 | -\$0.043 | \$10.40 | 47.18 | 47.38 | 47.29 | \$0.009 |
| \$7.00 | 48.08 | 47.43 | 48.08 | -\$0.046 | \$10.50 | 47.16 | 47.38 | 47.29 | \$0.009 |
| \$7.10 | 48.05 | 47.42 | 48.05 | -\$0.045 | \$10.60 | 47.14 | 47.38 | 47.29 | \$0.010 |
| \$7.20 | 48.01 | 47.42 | 48.01 | -\$0.042 | \$10.70 | 47.12 | 47.38 | 47.29 | \$0.010 |
| \$7.30 | 47.97 | 47.41 | 47.97 | -\$0.041 | \$10.80 | 47.11 | 47.38 | 47.29 | \$0.010 |
| \$7.40 | 47.94 | 47.41 | 47.94 | -\$0.039 | \$10.90 | 47.09 | 47.38 | 47.29 | \$0.010 |
| \$7.50 | 47.9 | 47.4 | 47.9 | -\$0.038 | \$11.00 | 47.07 | 47.38 | 47.29 | \$0.010 |

Harvester Representative Comments on the Golden King Crab
Work Group Minutes and Report

September 24, 2012

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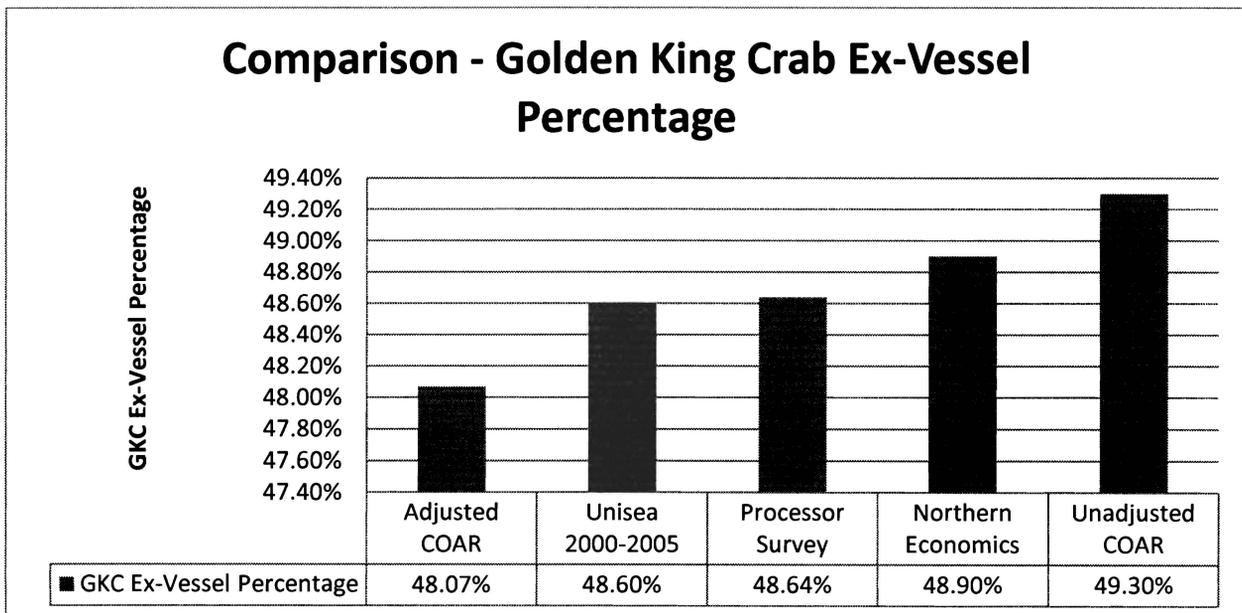
I. Background

The North Pacific Fishery Management Council formed a workgroup to examine the golden king crab price formula that is developed through the arbitration system by the non-binding price formula arbitrator. In the course of preparing data for the meetings, crab harvesters assembled a variety of data that was presented to the committee. The workgroup report¹ discusses this data and notes the following points:

- “Multiple data sources using processor reported data discussed by the workgroup suggested that, on average, the ex-vessel price that reflects the historical division of revenues in the fishery is between 48 and 49 of the first wholesale price. . .”
- “No data inconsistent with this interpretation were presented.”

II. Available Data Sources and Indications of Their Reliability

A number of different data summaries provide information on the historical division of revenues between harvesters and processors. The original source data was initially compiled by crab processors. Presumably these crab processors had direct access to the underlying documents. The data can be graphically summarized as follows:



¹ Report of the Golden king crab arbitration workgroup to the North Pacific Fishery Management Council, October 2012

1. Revised COAR data (48.07% ex-vessel percentage)

- a. Background- Notwithstanding the many indications of accuracy (please see discussion below), COAR data have been criticized by some. As a part of the Committee's process, a NPFMC economist reviewed the COAR data and adjusted the underlying data for some apparent errors. Please see Appendix A for the actual data summary.
- b. Indications of reliability- COAR data are inherently reliable. However, the review and adjustment provided by Council staff provide an added level of assurance.

2. UniSea Data (48.6% ex-vessel percentage)

- a. Background- UniSea, Inc., a large golden king crab processor, provided its own historical ex-vessel prices and first wholesale prices to harvesters shortly after the inception of the program.
- b. Indications of reliability- The CEO of UniSea who provided this information also indicated in his e-mail that the numbers provided were accurate and that UniSea's "accounting department would be happy to show you how they were derived." A copy of the e-mail is attached at Appendix B.

3. The Non-Binding Price Formula Arbitrator received data from crab processors and prepared his own summary of historical ex-vessel percentages (48.64% ex-vessel percentage)

- a. Background- in the 2008 golden king crab report² the Non-Binding Price Formula Arbitrator published the results of his survey of golden king crab processors. The information was provided to him by crab processors. Please see Appendix C for an extract from the 2008 report and an excel spreadsheet prepared by the Inter-Cooperative Exchange that shows the ex-vessel percentage from the survey.
- b. Indications of reliability- In the same 2008 report³ the Non-Binding Price Formula Arbitrator wrote the following with respect to his survey: "It is not complete, in the sense that it includes all companies, but it does include the annual sales data provided by the two largest sellers of golden king crab, who together account for around 80% of

² Golden King Crab Price Formula Arbitrator and Market Analyst Report (pg. 24- 25).

³ Ibid.

all processor quota. It also does not include years before 1995. However, the company data is extremely statistically robust, meeting all tests for correlation and statistical validity.”

4. Northern Economics Report- (48.9% ex-vessel percentage)

- a. Background- Northern Economics, in collaboration with Daniel Huppert, Ph.D., Gunnar Knapp, Ph.D., and Gil Sylvia, Ph.D., prepared the *2005 Aleutian Islands Brown King Crab & Non-Binding Price Formula* report. Please see Appendix D for an excerpt from the report.
- b. Indications of reliability- The authors of this report have stellar qualifications. Drs. Huppert, Knapp and Sylvia are highly respected marine economists associated with major universities.

5. Unmodified Commercial Operator Annual Report (COAR) (49.3% ex-vessel percentage)

- a. Background- the Commercial Operator Annual Report is filed with the Alaska Department of Fish & Game. Each Alaskan fish processor files this report annually. Processors report both the ex-vessel price paid to fishermen and the wholesale price they received for each type of fish and shellfish. This data is summarized and is available to the public. It allows for the computation of ex-vessel percentage. Please see Appendix E for the data summary.
 - i. Illustration- If the compiled COAR data showed that the average price paid to fishermen for golden king crab in 1995 was \$5.00 per pound and also showed that the average wholesale price by processors was \$10.00 per pound, the ex-vessel percentage of 50% can be readily computed.
- b. Indications of reliability-
 - i. Jurat- the COAR form contains a jurat and each processor signs the return under penalties of perjury.
 - ii. Statements by credible third parties support the reliability of COAR data-
 1. Source- The *2005 Aleutian Islands Brown King Crab Market Report and Non-Binding Price Formula Report*. This report was co-authored by the consulting firm Northern Economics and three highly respected marine

economists (Gunnar Knapp, Ph.D.⁴, Gil Sylvia, Ph.D.⁵, and Daniel Huppert, Ph.D.⁶).

- a. Statement- The report notes that “COAR data are widely acknowledged as being an excellent source of price and value per pound data. . .” The report notes, however, that COAR data is relatively less reliable with respect to volume. Since volume isn’t an issue in determining the ex-vessel percentage, this concern isn’t relevant to the task at hand.
2. Source- North Pacific Fisheries Management Council and National Marine Fisheries Service, *Regulatory Impact Review/Initial Regulatory Flexibility Analysis Voluntary Three-Pie Cooperative Program for the Bering Sea and Aleutian Islands Crab Fisheries* (August 2004), Appendix 1, pg 386.
 - a. Statement- The COAR database is referred to as “the best publicly collected source of price information. . .”
 - i. The RIR later expresses concern about separating one fishery from another. This issue was subsequently resolved.
- iii. Consistency with other data bases- COAR data can be verified through comparison to other data bases.
 1. Comparison of COAR ex-vessel prices in other crab fisheries to the Alaska Business Tax return and CFEC return data bases. John Sackton published ex-vessel prices from the Alaska Business Tax return data base and the Commercial Fisheries Entry Commission data bases in his 2007 draft report⁷. The ex-vessel prices from these data bases are almost identical to COAR. This corroborates the accuracy of COAR data. Although it involves difference fisheries, it nonetheless corroborates the accuracy of COAR data generally.

⁴ Dr. Knapp is a professor at University of Alaska Anchorage.

⁵ Dr. Sylvia is a professor at Oregon State University.

⁶ Dr. Huppert is a professor (emeritus) at the University of Washington.

⁷ *Draft King Crab, Opilio, and Bairdi Non-Binding Price Formulas* (August 5, 2007), pg. 20.

- a. Over a 13 year period, the difference between these three data bases was significantly less than 1%.
 - i. Note: the ABT is also signed under penalties of “unsworn falsification.”

III. Comments on Data Supporting the Historical Division of Revenues

The following comments are offered to summarize the data:

1. Original source of data- All the data introduced at committee meetings by harvesters was based upon source data *originally* submitted by processors. For example, processors provided information that underlies COAR. Additionally, UniSea itself provided its own historical ex-vessel percentages, and processors (apparently RAS and Westward Seafoods) provided the data utilized by John Sackton in his survey.
2. Provision of data at committee meetings- Harvesters introduced all of the historical evidence of ex-vessel percentages into the record at committee meetings. Processors were advised repeatedly that they should provide relevant information; however, processors failed to produce any evidence over the five-month period that the committee meetings spanned.
 - a. A presumption should be drawn against processors- since processors that were represented on the Committee had evidence as to the historical division of revenues but *chose* not to introduce it, it should be presumed that evidence in their possession would show even higher ex-vessel percentages. Otherwise, they presumably would have introduced it.
3. Overall Evaluation of the Data: The best documented data in the North Pacific- although golden king crab is a relatively minor fishery, harvesters believe that the body of evidence supporting the historical division of revenues is the most complete record of any fishery in the North Pacific.

IV. Are There “Market Distortions” in the Data?

An argument has been advanced that the underlying data has market distortions. Specifically, the following arguments have been set forth:

1. First flawed argument- It has been argued that in the five or six years preceding rationalization (i.e., 1999-2004 or 2000-2004) that intense competition drove up prices.

a. This argument is belied by actual evidence- If this claim were true we would expect to find that ex-vessel percentages were higher during the period of alleged intense competition that immediately preceded rationalization. In fact, ex-vessel percentages were *lower* during both the five year and six year periods preceding rationalization. Please see F for a detailed calculation. The following chart illustrates the actual ex-vessel percentages over the five-year period preceding rationalization⁸:

| Period | 5-year Comparison |
|-----------|----------------------|
| 2000-2004 | 47.74% |
| 1990-1999 | 48.24% |

2. Second flawed argument- The second argument that processors have advanced is that Royal Aleutian Seafoods (RAS) had golden king crab markets where it acted as a sole supplier with no competition. This argument asserts that RAS achieved a large market share in some years by outbidding other companies because it could easily pass along its higher costs to its exclusive pool of customers.

a. Flaws in argument- The argument is premised on the fact that Royal Aleutian Seafoods (RAS) paid both higher prices to fishermen and received higher prices from its customers. In essence, this means that both the numerator (ex-vessel price) and denominator (first wholesale price) are higher than average. There are multiple flaws inherent in this argument:

i. Lack of data- there is simply no data that has been provided to support that RAS either had higher first wholesale prices or paid fishermen higher ex-vessel prices.

ii. Flawed mathematics- Even if RAS paid higher ex-vessel prices and received higher first wholesale prices (as the argument suggests) the ex-vessel *percentage* it paid would have been mathematically unaffected.

1. Illustration- Assume that other processors paid an ex-vessel percentage of 50% (\$5.00 ex-vessel and \$10.00 first

⁸ Source: COAR data as revised by Council staff for all years except 1991 (data from 1991 is from the non-binding price formula arbitrator).

wholesale). Also assume that RAS paid a 10% higher ex-vessel price (\$5.50) and received a 10% higher first wholesale value (\$11.00). Since both the numerator and denominator increased proportionately, its ex-vessel percentage would be identical to those of its competitors ($\$5.50/\$11.00=50\%$).

- iii. Overall theoretical conceptual flaw- All markets have some participants that are relatively more successful (presumably like RAS⁹) and some that are relatively less successful (like RAS's peers). *Both* the successful and less successful participants must be included in any analysis in order to give a picture of the overall market. Otherwise we would be analyzing an incomplete picture of the historical division of revenues.
3. Third flawed argument- This argument suggests that fishermen negotiated high prices from processors who were forced to compete in order to purchase golden king crab on a load-by-load basis.
 - a. Overall conceptual flaw- These facts don't suggest a "distorted" market. A normally functioning marketplace involves buyers who compete with one another to purchase product from knowledgeable sellers.

V. Do Product Recovery Rate Differences between the EAG and WAG Fisheries Indicate That an Adjustment Should Be Made to the Formula?

It has been suggested that ex-vessel percentages should be discounted for WAG deliveries. Processors assert that product recovery rates are lower for crab harvested in the Western Aleutians than crab harvested in the Eastern Aleutians, and therefore an adjustment should be made. This contention is problematic for a number of reasons:

1. Logical inconsistency- The underlying premise of this approach is flawed. It makes no more sense to take a discount for WAG crab than it does for processors to pay a premium for EAG crab since EAG crab is alleged to have higher recoveries. The mere fact that a *relative* difference exists doesn't suggest that one-sided adjustment be made to the formula.
2. Additional flaw in logic- Using the flawed logic of this proposal, even if recoveries had greatly improved since rationalization (and therefore

⁹ No data has been presented to support the assertion that RAS sold for higher prices than its peers. However, this is presumed to be the case for the sake of argument.

processors were making significantly more money than prior to rationalization), harvesters should be subject to a discount for WAG if *any* difference between EAG and WAG remained.

3. Inconsistency with the rationalization standard: The rationalization standard already incorporates differences in historic yield.
 - a. Even if there is a difference between EAG recoveries and WAG recoveries, we don't know whether there has been a change *since* rationalization. Such a change would be the only basis under the standard for an adjustment.
 - b. The underlying requirement to harvest crab in the Western region predates the rationalization program by many years. Therefore, this difference doesn't relate to the rationalization program.
4. Inconsistency with the historical pricing- Fishermen provided testimony at the golden king crab arbitration workgroup meetings to the effect that prior to rationalization processors had paid the same price for WAG crab as for EAG crab. Therefore, a taking a discount for WAG crab would be inconsistent with the historical division of revenues.
5. Insufficient data- Information provided to date is insufficient in at least two respects:
 - a. Data presented thus far doesn't show the differences between individual processors. Therefore, assuming there's a difference in recoveries, there's no way to gauge whether the differences relate to the crab itself or whether it relates to inefficiencies of some WAG processors.
 - b. There's no indication of the total number of pounds included in the data provided thus far. The data provided also fails to identify the particular processors and pounds that are included in each year. Therefore, it might represent an insignificant sample size.
6. Mathematical errors in data presented- Data presented to the committee contained an obvious mathematical error. Please see Appendix G for the data summary provided by NPCA and the margin of error.
 - a. If there is an obvious error on the face of the summary document, it's quite possible that the underlying calculations are similarly inaccurate.
7. Any such adjustment would be more than offset by additional harvester costs of WAG- Even if these flawed premises were to be accepted, harvesters' have additional fuel costs in the West of 35 cents per finished pound. This

would greatly exceed the proposed discount related to any product recovery issues.

8. Economic flaw- This proposal is flawed on an economic basis. It proposes to shift the burden of any processor inefficiencies to harvesters, even though harvesters have no control over them.
 - a. In this regard, it is indistinguishable from harvesters demanding a discount for slow fishing rates in the WAG fishery.

Conclusion

The system appears to be working well. Processors concede that they are making money. Only two arbitrations have been held during the entire seven-year history of the golden king crab rationalized fishery. Neither of the two major processors (Westward and Royal Aleutian) has filed for arbitration in this fishery. In fact, APICDA, a recent investor in the fishery (that merely arranges for others to process its crab) is the only IPQ holder that has ever filed for arbitration.

In short, the proposal put forth by the processing sector is a “solution in search of a problem.”

Attachment A

COAR Report historical first wholesale and ex vessel prices (1990-2010)

| Year | Processors | First wholesale price | PRR* | Ex vessel price | Annual division |
|---------|------------|-----------------------|----------|-----------------|-----------------|
| 1990 | 10 | \$7.0704 | 0.602335 | \$3.2002 | 45.26% |
| 1991*** | 3 | \$5.9100 | 0.4258 | \$3.0500 | 51.70% |
| 1992 | 4 | \$5.1033 | 0.093965 | \$2.1318 | 41.77% |
| 1993 | 8 | \$4.5164 | 0.533248 | \$2.4212 | 53.61% |
| 1994 | 8 | \$6.1816 | 0.861967 | \$3.4908 | 56.47% |
| 1995 | 7 | \$5.9438 | 0.562323 | \$2.9393 | 49.45% |
| 1996 | 9 | \$5.1619 | 0.590898 | \$2.1806 | 42.24% |
| 1997 | 6 | \$4.6528 | 0.58512 | \$2.2909 | 49.24% |
| 1998 | 7 | \$4.1263 | 0.523448 | \$1.9258 | 46.67% |
| 1999 | 6 | \$7.1151 | 0.56857 | \$3.2728 | 46.00% |
| 2000 | 6 | \$7.2405 | 0.585066 | \$3.3888 | 46.80% |
| 2001 | 5 | \$7.0645 | 0.659854 | \$3.3355 | 47.22% |
| 2002 | 5 | \$7.3784 | 0.588593 | \$3.4212 | 46.37% |
| 2003 | 6 | \$7.7718 | 0.591336 | \$3.5519 | 45.70% |
| 2004 | 5 | \$5.8447 | 0.518523 | \$3.0754 | 52.62% |
| 2005 | 5 | \$5.9290 | 0.567116 | \$2.7373 | 46.17% |
| 2006 | 5 | \$4.2728 | 0.327069 | \$1.9175 | 44.88% |
| 2007 | 5 | \$5.3355 | 0.637223 | \$2.1638 | 40.56% |
| 2008 | 5 | \$6.7860 | 0.587736 | \$3.5825 | 52.79% |
| 2009 | 5 | \$5.0415 | 0.59717 | \$2.4452 | 48.50% |
| 2010 | 7 | \$7.6637 | 0.731629 | \$3.8020 | 49.61% |

PRR - LAM RATIONALIZATION
 Avg. = 48.07%

*PRR Calculation took the lbs bought in coar_buy (which were all wholefish), subtracted whole fish in coar_prod at 1 for 1 then divided the the shellfish products by the difference.

**Query filtered out Catcher Processors and areas A-D and Z

*** Prices from Sackton report.

Note: The rationalization program was implemented for the 2005-2006 season.

GAR

Greg White

From: Terry Shaff [terry.shaff@unisea.com]
Sent: Thursday, November 10, 2005 9:33 AM
To: 'Greg White'
Subject: RE: follow-up on crab history

Greg,

The numbers I sent earlier were for UniSea. Those are the ones we have the best access to and had already pulled the numbers together for our reference. They are actuals from our system and our accounting department would be happy to show you how they were derived.

The Royal Aleutian equivalent numbers are hard to come by. They had a quite crude data base system that is making it difficult to sort out history. It appears that they did not distinguish between FOB and CIF sales, did a profit sharing with some boats and custom processing of some crab for others.

Given the way crab prices were negotiated in the past, their purchase prices should be the exact same as UniSea history. A price was set for the industry. And market prices are market prices. They are always very standard across the board. RAS did a limited amount of fresh in the past but that was only on CDQ crab which is a totally different structure.

Terry

From: Greg White [mailto:gwhite@wtcpa.net]
Sent: Thursday, November 10, 2005 7:47 AM
To: Terry Shaff
Subject: follow-up on crab history

Hi Terry,

Did you get my earlier e-mail re: crab history? I wanted to know if the numbers you sent were UniSea's or Royal Aleutian's?

Thanks,

Greg White
4209 21st Avenue West, Suite 301
Seattle, WA 98199
Phone:(206)286-8556
Fax: (206)284-4114

This message contains information which may be confidential and privileged. Unless you are the addressee (or authorized to receive for the addressee), you may not use, copy or disclose to anyone the message or any information contained in the message. If you have received the message in error, please advise the sender by reply e-mail, and delete the message. Thank you.

7/23/2007

APPENDIX B

Greg White

From: Terry Shaff [terry.shaff@unisea.com]
Sent: Monday, November 07, 2005 11:24 AM
To: Greg White (gwhite@wtcpa.net)
Subject: Crab History 3yr/5yr
Attachments: Crab History 2000-2004.xls

Greg, this is the UniSea history for the last 3 and 5 years. I had Robin put it together from our actual numbers.

Terry

<<Crab History 2000-2004.xls>>

Robin

Figure 4. shows the company data based regression formula superimposed on the COAR regression formula.

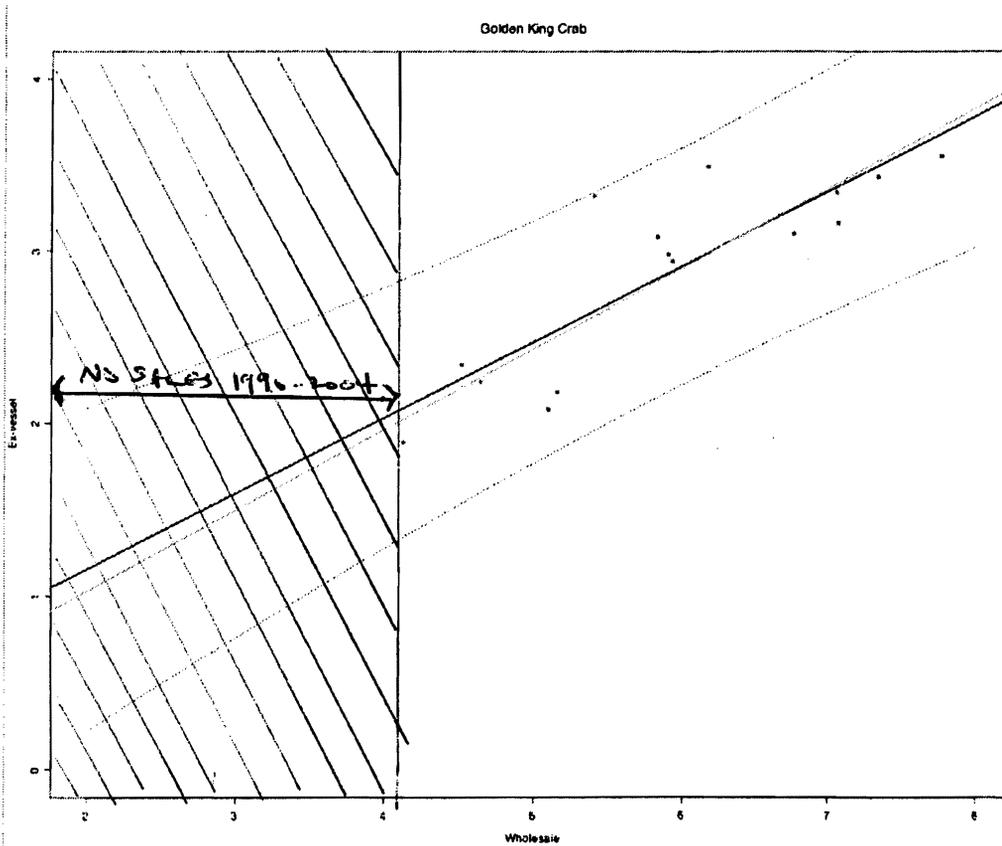


Figure 4: Company data regression plotted against non-binding price formula.

The company data used in this plot is historical company data. It is not complete, in the sense that it includes all companies, but it does include the annual sales data provided by the two largest sellers of golden king crab, who together account for around 80% of all

processor quota. It also does not include years before 1995. However, the company data is extremely statistically robust, meeting all tests for correlation and statistical validity.

The plot shows that at lower wholesale price levels, companies tended to pay lower ex-vessel values than in the non-binding price formula, and that at higher wholesale prices, they paid slightly higher wholesale values.

In the mid-range, between wholesale price values of \$5.50 to \$7.00, the ex-vessel payments calculated from company data, and from COAR data, are virtually the same.

This suggests that despite the problems in this COAR data set the non-binding price formula derived from COAR is reasonably close to data derived from other sources. It is likely that the market timing issues cancel each other out to some degree over the course of the historical period.

Nevertheless, the fact that COAR data is not suitable for price formulation is important because it reinforces the importance of both the statistical mean, and the variability around that mean described in the confidence bounds.

Resource economists who deal with commodity pricing issues say that the only true way to estimate future raw material pricing is through a set of simultaneous equations that measure supply and demand, and include cost factors which are critical to price formation. Their simplest rule is that no business can survive if it consistently sells, or is forced to sell, its products below its cost. This applies to both harvesters and processors.

When faced with pressure to sell below costs, either from weak demand, or from an increase in costs that cannot be recovered (also a form of weak demand) businesses must adjust costs, get external subsidies, or stop producing.

The crab rationalization program rejected the supply/demand/cost model for creating the non-binding price formula for two reasons. One was that the data simply was not available at reasonable cost and effort. The second was that the program wanted to allow market pressure to continue for both innovation and efficiencies in the crab industry. For this reason, the program was built around a model where each party received its historical share of revenue, not their historical share of rents.

But whether intended or not, the crab program opened the possibility for a business to be forced to sell below its costs in the event that a contract arbitrator set a disputed raw material price retroactively above cost after the final product had already been sold.

Calculation of Ex-Vessel Percentage Using Processor Survey

| | |
|--------------------------------------------|--------------------|
| Estimated first wholesale value | \$ 10.00 |
| Formula percentage | <u>48.77%</u> |
| Result | \$ 4.88 |
| Formula subtractive element | <u>\$ (0.0127)</u> |
| Ex-vessel price | \$ 4.864 |
| Ex-vessel percentage from processor survey | <u>48.64%</u> |

Data source: John Sackton's 2008 processor survey

2005 Aleutian Islands Brown King Crab Market Report & Non-Binding Price Formula

This starting price of \$2.27 per round pound would also be the Final Price if the 2005 FOB Wholesale Price is less than \$4.63/processed lb. At prices above \$4.63/processed lb., the Final Price would increase by 0.815 cents for each 1 cent increase in the FOB wholesale price in dollars per round lb. In terms of wholesale prices per processed pound, ex-vessel prices would increase 1 cent for each 0.489 cent increase in the FOB wholesale price per processed pound, assuming a 60 percent yield.

| Non-Binding Price Formulas | |
|-----------------------------------|---------------------------------------------------------------------------|
| Starting Price: | = \$2.27 per pound |
| Final Price | = Whichever of the following is higher: |
| Starting Price | = \$2.27 |
| | OR |
| "Sharing Formula" Price | = $0.815 \times (\text{2005 FOB Wholesale Price in } \$/\text{round lb})$ |

Table ES-3 shows how starting ex-vessel prices, final ex-vessel prices, processor margins per round lb, and the distribution of revenue would change if the wholesale price varies from the predicted price. Note that as long as the first wholesale price is above the minimum set in the non-binding price formula, the historical distribution of first wholesale revenues is preserved.

Table ES-3 2005 Brown King Crab Non-Binding Price Formula Results at Various Wholesale Prices

| 2005 average FOB wholesale price per processed lb | 2005 average FOB wholesale price per round lb. | Final wholesale price as a percent of predicted wholesale price | Final ex-vessel price per round lb. | Post-season price adjustment per round lb. | Processor Margin per round lb. | Fisherman share of wholesale value | Processor share of wholesale value |
|---------------------------------------------------|------------------------------------------------|-----------------------------------------------------------------|-------------------------------------|--------------------------------------------|--------------------------------|------------------------------------|------------------------------------|
| \$4.05 | \$2.43 | 70.0% | \$2.27 | \$0.00 | \$0.17 | 93.1% | 6.9% |
| \$4.20 | \$2.52 | 72.5% | \$2.27 | \$0.00 | \$0.25 | 89.9% | 10.1% |
| \$4.34 | \$2.61 | 75.0% | \$2.27 | \$0.00 | \$0.34 | 86.9% | 13.1% |
| \$4.49 | \$2.69 | 77.5% | \$2.27 | \$0.00 | \$0.43 | 84.1% | 15.9% |
| \$4.63 | \$2.78 | 80.0% | \$2.27 | \$0.00 | \$0.51 | 81.5% | 18.5% |
| \$4.78 | \$2.87 | 82.5% | \$2.34 | \$0.07 | \$0.53 | 81.5% | 18.5% |
| \$4.92 | \$2.95 | 85.0% | \$2.41 | \$0.14 | \$0.55 | 81.5% | 18.5% |
| \$5.07 | \$3.04 | 87.5% | \$2.48 | \$0.21 | \$0.56 | 81.5% | 18.5% |
| \$5.21 | \$3.13 | 90.0% | \$2.55 | \$0.28 | \$0.58 | 81.5% | 18.5% |
| \$5.36 | \$3.21 | 92.5% | \$2.62 | \$0.35 | \$0.59 | 81.5% | 18.5% |
| \$5.50 | \$3.30 | 95.0% | \$2.69 | \$0.42 | \$0.61 | 81.5% | 18.5% |
| \$5.65 | \$3.39 | 97.5% | \$2.76 | \$0.50 | \$0.63 | 81.5% | 18.5% |
| \$5.93 | \$3.56 | 102.5% | \$2.90 | \$0.64 | \$0.66 | 81.5% | 18.5% |
| \$6.08 | \$3.65 | 105.0% | \$2.97 | \$0.71 | \$0.67 | 81.5% | 18.5% |
| \$6.22 | \$3.73 | 107.5% | \$3.04 | \$0.78 | \$0.69 | 81.5% | 18.5% |
| \$6.37 | \$3.82 | 110.0% | \$3.11 | \$0.85 | \$0.71 | 81.5% | 18.5% |
| \$6.51 | \$3.91 | 112.5% | \$3.19 | \$0.92 | \$0.72 | 81.5% | 18.5% |
| \$6.66 | \$4.00 | 115.0% | \$3.26 | \$0.99 | \$0.74 | 81.5% | 18.5% |
| \$6.80 | \$4.08 | 117.5% | \$3.33 | \$1.06 | \$0.76 | 81.5% | 18.5% |
| \$6.95 | \$4.17 | 120.0% | \$3.40 | \$1.13 | \$0.77 | 81.5% | 18.5% |
| \$7.09 | \$4.26 | 122.5% | \$3.47 | \$1.20 | \$0.79 | 81.5% | 18.5% |
| \$7.24 | \$4.34 | 125.0% | \$3.54 | \$1.27 | \$0.80 | 81.5% | 18.5% |
| \$7.38 | \$4.43 | 127.5% | \$3.61 | \$1.34 | \$0.82 | 81.5% | 18.5% |
| \$7.53 | \$4.52 | 130.0% | \$3.68 | \$1.42 | \$0.84 | 81.5% | 18.5% |
| \$7.67 | \$4.60 | 132.5% | \$3.75 | \$1.49 | \$0.85 | 81.5% | 18.5% |
| \$7.82 | \$4.69 | 135.0% | \$3.82 | \$1.56 | \$0.87 | 81.5% | 18.5% |
| \$7.96 | \$4.78 | 137.5% | \$3.89 | \$1.63 | \$0.88 | 81.5% | 18.5% |
| \$8.11 | \$4.86 | 140.0% | \$3.96 | \$1.70 | \$0.90 | 81.5% | 18.5% |

Note: Shaded cells show the formula results at the predicted 2005 FOB wholesale price per processed pound of \$5.79. The un-shaded bolded cells show the results at the projected lower bound of the predicted FOB wholesale prices—this lower bound represents the starting ex-vessel price for fishermen

Division of Commercial Fisheries

Title: 1990-2007 Golden King Crab COAR Buying, excluding Southeast Alaska

For: John Sackton, jsackton@seafood.com

Contact: Lorraine Mullins; lorraine.mullins@alaska.gov; 907.465.6131

Data Source: COAR (Commercial Operator Annual Report) Database; Run 6/19/2008

Note: All - Except* = all COAR areas except Southeast Alaska - areas A1, A2, B, C, & D

CAPRs (Catcher Processors) & DMCPs (Direct Marketer Catcher Processors) are excluded.

| Year | Category | Sub-Category | Count | Price | Count | Price | Percentage |
|------|---------------|------------------------------|-------|--------|-------|--------|---------------|
| 1990 | All - Except* | All - Except CAPRs and DMCPs | 923 | \$3.20 | 10 | \$7.07 | 45.27% |
| 1991 | All - Except* | All - Except CAPRs and DMCPs | 923 | \$3.05 | 7 | \$5.91 | 51.69% |
| 1992 | All - Except* | All - Except CAPRs and DMCPs | 923 | \$2.13 | 7 | \$5.10 | 41.77% |
| 1993 | All - Except* | All - Except CAPRs and DMCPs | 923 | \$2.42 | 9 | \$4.52 | 53.59% |
| 1994 | All - Except* | All - Except CAPRs and DMCPs | 923 | \$3.49 | 11 | \$6.18 | 56.45% |
| 1995 | All - Except* | All - Except CAPRs and DMCPs | 923 | \$2.94 | 8 | \$5.94 | 49.45% |
| 1996 | All - Except* | All - Except CAPRs and DMCPs | 923 | \$2.18 | 8 | \$5.16 | 42.25% |
| 1997 | All - Except* | All - Except CAPRs and DMCPs | 923 | \$2.29 | 7 | \$4.65 | 49.24% |
| 1998 | All - Except* | All - Except CAPRs and DMCPs | 923 | \$1.93 | 7 | \$4.13 | 46.67% |
| 1999 | All - Except* | All - Except CAPRs and DMCPs | 923 | \$3.27 | 6 | \$6.77 | 48.36% |
| 2000 | All - Except* | All - Except CAPRs and DMCPs | 923 | \$3.39 | 7 | \$5.41 | 62.62% |
| 2001 | All - Except* | All - Except CAPRs and DMCPs | 923 | \$3.34 | 6 | \$7.06 | 47.22% |
| 2002 | All - Except* | All - Except CAPRs and DMCPs | 923 | \$3.42 | 6 | \$7.34 | 46.63% |
| 2003 | All - Except* | All - Except CAPRs and DMCPs | 923 | \$3.55 | 6 | \$7.77 | 45.70% |
| 2004 | All - Except* | All - Except CAPRs and DMCPs | 923 | \$3.08 | 6 | \$5.84 | 52.62% |
| | | | | | | | <u>49.30%</u> |

Analysis of Historical Division of Revenues
1990-1999 and 2000-2004

| | | |
|----------------------------|--------|-----------------------------------------------------|
| 1990 | 45.26% | |
| 1991 | 51.70% | |
| 1992 | 41.77% | |
| 1993 | 53.61% | |
| 1994 | 56.47% | |
| 1995 | 49.45% | |
| 1996 | 42.24% | |
| 1997 | 49.24% | |
| 1998 | 46.67% | |
| 1999 | 46.00% | 48.24% (Prior period from 1990-1999) |
| 2000 | 46.80% | |
| 2001 | 47.22% | |
| 2002 | 46.37% | |
| 2003 | 45.70% | |
| 2004 | 52.62% | 47.74% (Five-year period preceding rationalization) |
| Average for 15-year period | 48.07% | |

Data source: COAR data after adjustment by Council staff.



REVISED 08/05/2012 with additional data

Data includes APICDA, Westward and RAS for most (but not all) years

RECENT PRODUCT RECOVERY RATES

AVERAGE SPREAD 1.282% *s/B 1.06832*

RANGE 0.51% TO 1.72%

| | CY 2006/7 | CY 2007/8 | CY 2008/9 | CY 2009/10 | CY 2010/11 | CY 2011/12 |
|----------------------|-----------|-----------|-----------|------------|------------|------------|
| EAG Aggregate | 60.11% | 60.51% | 59.97% | 61.24% | 59.91% | 60.47% |
| WAG Aggregate | 58.97% | 59.49% | 59.46% | 60.33% | 58.80% | 58.75% |
| Spread | 1.14% | 1.02% | 0.51% | 0.91% | 1.11% | 1.72% |



September 23, 2012

The Golden King Crab Arbitration Workgroup

Report By Processor Representatives: Larry Cotter (APICDA), Brett Reasor (Unisea), Mark Johanson (Westward Seafoods)

Overview

The North Pacific Fishery Management Council appointed a Workgroup and tasked it with a very focused goal:

The Council will form a workgroup to develop means of establishing the golden king crab formula.

The Council took this action based on significant testimony and analysis presented by NPCA member companies. On several occasions, Chairman Duncan Fields reminded both sides that it was better to address those problems through the Workgroup process, rather than have them kicked back to the Council.

After six meetings, the harvest sector representatives did not agree to significantly modify a single aspect of the current binding arbitration process, including the price formula.

The Workgroup tried to work within the confines of the existing binding arbitration standard, but in the end it was too difficult to get the harvesters past the limitation of "Historic Division of Revenues". As noted below, the Workgroup discussed alternative ideas, but there is no incentive for the harvest sector to move away from status quo. In the long run the GKC fisheries need to operate profitably on their own. Price formation should be divorced from the historical data and, instead, should be viewed in light of current market conditions.

The Benefits of the Workgroup Process

COAR Corrections. Early in the Workgroup process, a discussion of the problems surrounding COAR data took place. This is not a new issue: the State of Alaska has formally cautioned the Price Formula Arbitrator about the problems associated with COAR, and the Price Formula Arbitrator(s) have acknowledged those problems and the impact on their work.

Dr. Fina attempted to clean up the COAR data for the committee. In doing so, he identified two significant errors and attempted to correct them. When those corrections are applied to the Price Formula for the previous years under this program, it illustrates that the processors may have overpaid harvesters approximately One Million Dollars in these fisheries.

In spite of Dr. Fina's best efforts, serious problems still exist within the COAR data, as evidenced by the illogical Recover Rates that are generated by the data. The average Recovery Rate should be between 59.5% and 61%; in 13 out of 20 years examined, it fell well outside these bounds.

Detailed Disclosure of PQS/IPQ Revenue Declines and Losses. One committee member released detailed financial summaries to document the losses incurred under the current price formula process. Other PQS representatives provided specific, written examples of the sorts of revenue declines and losses they have experienced due to season elongation and fleet consolidation (notably, costs associated with long periods of downtime and missed and market timing). As evidenced by the data presented, processing sector representatives made proposals to address these issues. Harvest sector representatives initially agreed that these were valid issues, but later in the process none of the proposals were accepted, nor were counter-proposals made by the harvest sector representatives to address the issues.

Agreement to Proceed With A Regulation Requiring that Arbitration Results Be Published. This was one of the several structural changes requested by the NPCA last December, and although it is not the most important it should help add an element of consistency to the process.

Agreement to Remove the EAG Processing Use Cap. This would be done in a manner consistent with the processing use cap regulations established for the other major crab fisheries.

Important Program Characteristics Were Identified. Although the Workgroup failed to agree on solutions, in some instances the dialogue helped define certain terms and concepts; most notably:

The "Backstop". The "Backstop" is the default price formula and binding arbitration process that harvesters can resort to if no other agreement is in place. It was clearly recognized early on that it was necessary to change the "Backstop"; otherwise there was no incentive for the harvest sector to enter into a new price formula agreement, shared risk/reward agreements or other relationships. In the end, the harvesters did in fact resist all changes to the "Backstop".

"Maintaining Healthy Sectors". This is both a program goal and binding arbitration standard. Harvest sector representatives have consistently argued against evidence provided by PQS/IPQ holders and conclusions drawn by the Price Formula Arbitrator that this standard is not being met. Harvester sector representatives have also tried to cloud the issue by equating IPQ holders who use Custom Processing agreements (and still incur all costs and market risks) with QS/IFQ holders who are sitting on the beach with no ownership in a vessel and no operating capital risk; thus maintaining the position that the only PQS holders that should be afforded Net Revenue are PQS holders that have operating plants, and that they should be operating close to their variable costs, leaving little or no margin.

"Historic Division of Revenues". Processing representatives and the Price Formula Arbitrator have documented that the historic division of revenues has been between the low 40% to the mid 50% range; yet harvesters continue to insist that the only acceptable range is between 48% and 49%. In addition significant dialogue took place about both the COAR errors and the context in which these ranges were established: during a race for history in both sectors that created atypical markets which are not sustainable in the long-term.

Discussions About Alternative Revenue Sharing Plans. A significant amount of time went into discussions and analysis of alternative revenue sharing plans. The discussion reached an impasse because the harvest sector stated that they would only consider new approaches to price formation if they saw some upside over the current system (the “Backstop”), and they were unwilling to change the “Backstop”.

One specific example of this came out during the meeting: in 2011/12 ICE entered into a “margin sharing” agreement with one PQS/IPQ holder which at that time resulted in the highest ex-vessel prices ever paid; later in the season at least one other PQS/IPQ holder paid a higher price based on the Price Formula, and ICE then complained they had “lost \$100,000”. **This illustrates the failure of the current system.**

Some of The Reasons This Process Was Not Successful

The Committee Structure

It was NPCA’s understanding that the Committee was supposed to be composed of frontline stakeholders, and made it’s appointments in accordance with this understanding. The harvesters however appointed two members who are not involved in the actual prosecution of the Golden King Crab fisheries, and who have a wider responsibility to ICE members in other fisheries who feared that any agreement at the GKC level would become a precedent for other fisheries. On more than one occasion the harvest sector representatives stated that they “...could not respond to any ideas under consideration until they took it to the full ICE board.”

Early “Agreements” That Were Not Honored

During the first few meetings, the harvest sector representatives expressed support for specific proposals made by processing representatives, but in the end the harvest sector representatives would not reaffirm their support for any of the proposals, nor make any counter-offer. Those proposals included:

Delivery Windows: Season elongation and fleet consolidation (as documented in the Five Year Review) have extended the operating period for processors, and in some cases processing labor sits idle for several days between deliveries. Market timing is also critical to a processor. Initially the processing sector representatives provided some analysis of the costs associated with this down time and a modest proposal to discount deliveries outside of established delivery windows. And initially, the harvest sector agreed to the concept. They have since rejected the concept and instead have tried to shift the responsibility for delivery timing to the processing sector, by claiming that processors somehow “force” them to deliver at specific times. The reality is that the fleet has consolidated from around 17 vessels to just three, and dramatically slowed the pace of the fishery.

Equal Access to the Binding Arbitration Process. There are two reasons this has become a significant issue: first, the binding arbitration system was planned as a safety net for the “last man standing” who was not otherwise afforded the protection of a Coop or other remedies; second, because some of the proposals made by harvesters themselves include cost sharing aspects which a processor should be allowed to arbitrate - just as a harvest can arbitrate the performance of a processor under the current system.