MEMORANDUM

TO: Council, SSC, and AP Members
FROM: Chris Oliver, Executive Director

DATE: April 6, 2002
SUBJECT: Crab Rationalization

ACTION REQUIRED
(a) Initial review of the analysis of the crab rationalization alternatives.
(b) Discuss process and suite of alternatives for the EIS.

BACKGROUND

At its June 2001 meeting, the North Pacific Fishery Management Council (Council) adopted a suite of alternatives, elements and options for analysis of a rationalization program for the Bering Sea and Aleutian Islands (BSAI) crab fisheries. After status reports and reviews at its December 2001 and February 2002 meetings, the Council amended its motion to its current form (Item C-5(a)) and scheduled this item for initial review at this meeting. A document was provided to the Council family prior to the meeting. If the document is deemed to be sufficient, selection of a preferred alternative on the proposed crab rationalization alternatives would be scheduled for the June 2002 Council meeting.

The proposed action would develop an IFQ or cooperative program to manage the BSAI crab fisheries. A change in management from the current License Limitation Program (LLP) may be necessary to alleviate problems of resource conservation, bycatch and handling mortality, excessive harvesting capacity, lack of economic stability, and safety that have arisen because of the race to fish that occurred under the open access fishery prior to the LLP and under the current LLP management structure.

Final action for this package is unlike most final actions taken by the Council, since Congress may need to modify their moratorium on IFQ programs (and perhaps jurisdiction over inshore processors) before the Council could submit either an IFQ or cooperative alternative to the Secretary of Commerce (SOC). Once the Council’s preferred alternative is identified, it would then need to be melded into the crab EIS, that is also currently being developed, as the preferred alternative. It is expected that this can be completed during the summer of 2002 for action by the Council in October, so that the formal EIS/RIR/IFRA package could be submitted to the SOC by the end of this year (assuming Congressional action allowing the Council to move forward at that time).

The analysis considers three overriding alternative management structures for the BSAI crab fisheries; status quo (or continued management under the LLP), an IFQ program, or a cooperative program. The IFQ program alternative includes options defining either a one-pie harvester only IFQ program or two-pie program, which would include both harvester shares and processor shares. The cooperative program alternatives include two structures that could be selected. The Voluntary Cooperative alternative is a program that would allocate shares to harvesters and processors and allow each harvester to join a cooperative with one or more other harvesters associated with one or more processors. The Plurality Assignment Cooperative alternative is a program that would allow each harvester to join a cooperative associated with the processor that it delivered.
the most crab to during a specified qualifying period. Harvesters that join a cooperative would receive an allocation based on qualifying catch history. Harvesters that elect to forgo joining a cooperative would be limited to participating in an open access fishery. This program alternative includes several different options that would protect processor interests to varying degrees and that would define movement between cooperatives.

**Initial review of the analysis of the crab rationalization alternatives**

The current draft of the analysis of the crab rationalization alternatives is similar in format and content to the February 2002 draft. To assist in review of the document, a summary of the changes in the current draft from the February 2002 draft is provided at the end of this summary.

**Introduction (Section 1)**

At its June 2001 meeting, the North Pacific Fishery Management Council adopted a suite of alternatives, elements and options for analysis of a rationalization program for the Bering Sea and Aleutian Islands (BSAI) crab fisheries. After a status report and pre-initial review at its December 2001 and February 2002 meetings, the Council amended its motion to its current form and scheduled this item for initial review at its April 2002 meeting. The document is the initial review draft of the analysis of those alternatives. If the document is deemed to be sufficient, selection of a preferred alternative for the proposed rationalization of the BSAI crab fisheries would be scheduled for the June 2002 Council meeting.

The proposed action would develop an IFQ or cooperative program to manage the BSAI crab fisheries. A change in management from the current License Limitation Program (LLP) may be necessary to alleviate problems of resource conservation, bycatch and handling mortality, excessive harvesting capacity, lack of economic stability, and safety that have arisen under the race to fish that has occurred LLP management.

Final action for this package is unlike most final actions taken by the Council, since Congress may need to modify their moratorium on IFQ programs (and perhaps jurisdiction over inshore processors) before the Council could submit either an IFQ or cooperative alternative to the Secretary of Commerce (SOC). Once the Council's preferred alternative is identified, it would then need to be melded into the crab EIS that is also currently being developed as the preferred alternative. It is expected that this can be completed during the summer of 2002 for action by the Council in October, so that the formal EIS/RIR/IRFA package could be submitted to the SOC by the end of this year (assuming Congressional action allowing the action by that time).

The analysis considers three overriding alternative management structures for the BSAI crab fisheries; status quo (or continued management under the LLP), an IFQ program, and a cooperative program. The IFQ program alternative includes options defining either a one-pie, harvester only IFQ program or a two-pie program, which would include both harvester shares and processor shares. Two cooperative program alternatives are analyzed. The Voluntary Cooperative alternative is a program that would allocate shares to harvesters and processors and allow each harvester to join a cooperative with one or more other harvesters associated with one or more processors. The Plurality Assignment Cooperative alternative is a program that would allow each harvester to join a cooperative associated with the processor that delivered the most crab to during a specified qualifying period. Harvesters that join a cooperative would receive an allocation based on qualifying catch history. Harvesters that elect not to join a cooperative would be limited to participating in an open access fishery. This program alternative includes several different options that would protect processor interests to varying degrees and that would define movement between cooperatives. The analysis examines several different aspects of the proposed programs and their impacts on the fisheries.
Background (Section 2)

As a foundation for the analysis of alternatives, the analysis contains an extensive background section that describes the current conditions in the different fisheries under consideration for rationalization. The section includes subsections describing the affected environment, fishery biology, fishery management, the harvesting sector, the processing sector, community and social impacts, ex vessel prices, and various market and economic conditions. Table E1 shows the maximum GHL, the minimum GHL, and closure years (if any) for the fisheries under consideration for rationalization.

Table E1: Maximum and Minimum GHLs for various crab fisheries and years the fishery was closed

<table>
<thead>
<tr>
<th>Fishery</th>
<th>Maximum GHL (millions of pounds)</th>
<th>Minimum GHL (millions of pounds)</th>
<th>Closures (Years/Season)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Western Aleutian Islands (Dutch Harbor)</td>
<td>3.2</td>
<td>3.0</td>
<td></td>
</tr>
<tr>
<td>Eastern Aleutian Islands (Adak) Golden (Brown) King Crab</td>
<td>2.7</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Combined red and blue king crab.

Table E2 reports the weighted average annual ex-vessel price of the various crab fisheries under consideration. These data were derived from ADF&G fish tickets. The data in the report generally show that the mid-1990s were in general strong years for ex-vessel prices. Ex-vessel prices also increased in 1999 and 2000 (relative to the 1997 and 1998) except in the Bristol Bay red king crab fishery.

Table E2: Weighted average annual ex-vessel prices from ADF&G fish tickets (prices have not been adjusted for inflation)

<table>
<thead>
<tr>
<th>Year (Fishing Season)</th>
<th>WAI golden king¹</th>
<th>Adak red king¹</th>
<th>Bristol Bay red king²</th>
<th>BS C. opilio²</th>
<th>BS C. bairdi²</th>
<th>EAI golden king crab²</th>
<th>Pribilof red king³</th>
<th>Pribilof blue king³</th>
<th>St. Matthew blue king³</th>
</tr>
</thead>
<tbody>
<tr>
<td>1998-1999</td>
<td>$ 2.04 closed</td>
<td></td>
<td>$ 6.26</td>
<td>$ 0.66</td>
<td>closed</td>
<td>$ 1.87</td>
<td>$ 2.34</td>
<td>$ 2.39</td>
<td>$ 1.87</td>
</tr>
<tr>
<td>1999-2000</td>
<td>$ 3.14 closed</td>
<td></td>
<td>$ 4.81</td>
<td>$ 0.68</td>
<td>closed</td>
<td>$ 3.22</td>
<td>closed</td>
<td>closed</td>
<td>closed</td>
</tr>
<tr>
<td>2000-2001</td>
<td>$ 3.15 closed</td>
<td></td>
<td>$ 4.14</td>
<td>$ 1.85</td>
<td>closed</td>
<td>$ 3.50</td>
<td>closed</td>
<td>closed</td>
<td>closed</td>
</tr>
</tbody>
</table>

1) Fishing seasons span two years
2) The fishing seasons that took place in one calendar year are identified by the first year listed in the year column.

Table E3 is a summary of the first wholesale prices derived from Commercial Operator Annual Report data. These prices were calculated by dividing the total first wholesale value reported by the processor by the total pounds of the product form produced.
Table E3: First Wholesale Crab Prices by Species and Product Form, 1991-2000 (prices have not been adjusted for inflation)

<table>
<thead>
<tr>
<th>Species</th>
<th>Product</th>
<th>1998</th>
<th>1999</th>
<th>2000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Red King Crab</td>
<td>Shellfish Sections</td>
<td>$5.52</td>
<td>$11.25</td>
<td>$9.11</td>
</tr>
<tr>
<td></td>
<td>Whole</td>
<td>$3.93</td>
<td>$10.69</td>
<td>$7.74</td>
</tr>
<tr>
<td>Blue King Crab</td>
<td>Shellfish Sections</td>
<td>$4.80</td>
<td></td>
<td>Conf.</td>
</tr>
<tr>
<td></td>
<td>Whole</td>
<td></td>
<td>Conf.</td>
<td></td>
</tr>
<tr>
<td>Golden King Crab</td>
<td>Shellfish Sections</td>
<td>$4.24</td>
<td>$6.90</td>
<td>$7.22</td>
</tr>
<tr>
<td></td>
<td>Whole</td>
<td>$4.90</td>
<td>$3.79</td>
<td>$4.60</td>
</tr>
<tr>
<td>C. bairdi</td>
<td>Shellfish Sections</td>
<td>$4.81</td>
<td>$4.23</td>
<td>$5.83</td>
</tr>
<tr>
<td></td>
<td>Whole</td>
<td>$2.95</td>
<td>$3.71</td>
<td>$3.33</td>
</tr>
<tr>
<td>C. opilio</td>
<td>Shellfish Sections</td>
<td>$2.03</td>
<td>$2.92</td>
<td>$4.16</td>
</tr>
<tr>
<td></td>
<td>Whole</td>
<td>$2.05</td>
<td>$1.06</td>
<td></td>
</tr>
</tbody>
</table>


The harvesting and processing activity in the BSAI crab fisheries contributes to the economies of numerous communities in Alaska, Washington, and Oregon. Table E4 shows the distribution of value of harvests by region of vessel ownership to the extent feasible given data confidentiality considerations. Table E5 shows the regional distribution by value of processing by processing location. Mobile processors (for which community or regional attribution of processing location is problematic) comprise a significant proportion of total processing effort, and confidentiality restrictions allow local fixed processor totals for only two communities. As these tables suggest, the social and economic links to harvesting and processing sectors vary greatly by community and region, as does engagement with the fisheries through support service sector activities.

Table E4: Average Annual Value of Harvest for IFQ Crab Vessels in Various Fisheries Categories, by Fisheries Category and Community of Vessel Owner – Alaska, Washington, and Oregon

<table>
<thead>
<tr>
<th>Fisheries Category</th>
<th>Anchorage</th>
<th>Homer</th>
<th>King Cove</th>
<th>Sand Point</th>
<th>Kodiak</th>
<th>Other Alaska</th>
<th>Seattle</th>
<th>Other Washington</th>
<th>Newport</th>
<th>Other Oregon</th>
<th>Grand Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bristol Bay/Red King Crab</td>
<td>$24,246</td>
<td>$1,059</td>
<td>$15,529</td>
<td>$13,113</td>
<td>$1,150</td>
<td>$1,151</td>
<td>$2,281</td>
<td>$2,281</td>
<td>$3,377</td>
<td>$9,503</td>
<td>$11,293</td>
</tr>
<tr>
<td>Bering Sea Orange Crab</td>
<td>$27,053</td>
<td>$2,957</td>
<td>$13,878</td>
<td>$16,714</td>
<td>$2,564</td>
<td>$4,440</td>
<td>$2,282</td>
<td>$2,282</td>
<td>$2,564</td>
<td>$5,023</td>
<td>$21,715</td>
</tr>
<tr>
<td>Bering Sea Terror Crab</td>
<td>$1,124</td>
<td>$908</td>
<td>$267</td>
<td>$190</td>
<td>$267</td>
<td>$267</td>
<td>$190</td>
<td>$190</td>
<td>$267</td>
<td>$267</td>
<td>$190</td>
</tr>
<tr>
<td>Bering Sea Exit group</td>
<td>$1,124</td>
<td>$908</td>
<td>$267</td>
<td>$190</td>
<td>$267</td>
<td>$267</td>
<td>$190</td>
<td>$190</td>
<td>$267</td>
<td>$267</td>
<td>$190</td>
</tr>
<tr>
<td>Other IFQ Crab group</td>
<td>$6,833</td>
<td>$133</td>
<td>$333</td>
<td>$333</td>
<td>$333</td>
<td>$333</td>
<td>$333</td>
<td>$333</td>
<td>$333</td>
<td>$333</td>
<td>$333</td>
</tr>
<tr>
<td>Alaska Totals</td>
<td>$3,124</td>
<td>$176</td>
<td>$1,124</td>
<td>$1,124</td>
<td>$1,124</td>
<td>$1,124</td>
<td>$1,124</td>
<td>$1,124</td>
<td>$1,124</td>
<td>$1,124</td>
<td>$1,124</td>
</tr>
</tbody>
</table>

Notes: (*) = data that may be suppressed due to confidentiality concerns (b) Average annual community harvest values are computed using E894000 that is, including years where fisheries were closed (*IFQ crab fishery and group vessel counts are not available for some vessels fish several fisheries.
Source: Summarized from the NPFRC Bering Sea Crab Data Base / 2001_1
Table E5: Total Value in Dollars of Crab Processed, 1991-2000, by City/Port Category and QF/QF Crab Fishery

<table>
<thead>
<tr>
<th>City/Port Category</th>
<th>AK Port</th>
<th>AK PUD</th>
<th>Elvis</th>
<th>Elvis Cyclone</th>
<th>Elvis Tanner</th>
<th>Dutch Brown</th>
<th>Pribilof Blue</th>
<th>Pribilof Red</th>
<th>Same Blue</th>
<th>Grand Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>OP</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>$23,691,864</td>
</tr>
<tr>
<td>Fishing</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>$23,465,500</td>
</tr>
<tr>
<td>Kodiac</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>$23,197,392</td>
</tr>
<tr>
<td>Unalaska</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>$23,510,520</td>
</tr>
<tr>
<td>Chuk South</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>$21,954,618</td>
</tr>
<tr>
<td>South Combined</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>$21,689,415</td>
</tr>
<tr>
<td>Nome</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>$21,353,618</td>
</tr>
<tr>
<td>Grand Total</td>
<td>$252,611,882</td>
<td>$252,611,882</td>
<td>$252,611,882</td>
<td>$252,611,882</td>
<td>$252,611,882</td>
<td>$252,611,882</td>
<td>$252,611,882</td>
<td>$252,611,882</td>
<td>$252,611,882</td>
<td>$252,611,882</td>
</tr>
</tbody>
</table>

Notes: 1. * means the data is suppressed due to confidentiality. (a) OP is the order processing error, which is assigned to one QF/QF and is not realigned. (b) "Fishing" are only processed which can be specifically or part locations. (c) "Chuk South" includes all stations except Kodiac and Unalaska. (d) "North" includes St. George, St. Matthew, and St. Paul. Because of confidentiality, only St. Paul data is provided. (e) Order Overall Totals is Grouped North and other analysis can be provided.

Source: Situated Primers, NPFMC, Clamming Sea Crab Data Base. 2003.

Biology, Management, Environmental, and Safety Implications (Section 3.2).

The analysis includes an extensive discussion of the biological, management, environmental, and safety impacts of rationalization of the BSAI crab fisheries. This section examines the appropriateness of the different fisheries for rationalization, potential changes in deadloss, size limits, incidental catch, seasons, pot limits, the potential impacts of overlapping seasons of different species, and the effects of rationalization on rebuilding programs. The section also examines the environmental factors including the impacts of rationalization on endangered species and marine mammals. The section concludes with discussions of the division of management authority between State and federal managers and the impacts of rationalization on safety in the fishery. The analysis in this section was provided to Council staff by representatives of State of Alaska ADF&G and NMFS.

The analysis suggests that the Bering Sea C. opilio, Bristol Bay red king crab, Bering Sea C. bairdi, Pribilof blue king crab, Pribilof red king crab, St. Matthew blue king crab, and the two Aleutian Islands golden king crab be included in the rationalization program. The Aleutian Islands red king crab, the Aleutian Islands C. bairdi, the Pribilof golden king crab, and Bering Sea Tanneri fisheries are suggested for exclusion from rationalization.

Rationalization should have environmentally-friendly impacts on the crab stocks and their habitat as long as concerns over highgrading and ghost fishing from lost pots do not evolve. Managers are concerned that highgrading may occur when the high prices are removed from the fishery. Fishermen will be more likely to keep only the highest valued catch since any catch landed will be counted against their quota. Therefore, keeping second quality crab (especially when there are large differences in ex-vessel price) might not maximize profits. Under the current low GHISs and race-for-fish management system all marketable crab are currently being retained. The State of Alaska feels that new regulations will likely need to be developed to protect the biological integrity of the stock. They also indicate that onboard observer coverage and dockside sampling are needed to determine if changes in fishery selectivity occur and the mechanisms that cause those changes. Pot limits may be relaxed in a rationalized fishery. For pot limits to be changed the BOF would need to be petitioned or a proposal would need to be submitted to the BOF requesting that pot limits be modified.

Seasons for the different species proposed for inclusion in the rationalization program are considered. The primary biological objective in scheduling seasons is avoidance of mating and molting. Table E6 shows the molting and mating seasons for the different species being considered for rationalization. The analysis also considers the use of concurrent seasons for species included in the rationalization program. An advantage of multispecies fisheries is the potential decrease in mortality of discards. As crab fishing seasons are
lengthened the possibility of gear conflicts with trawl and longline vessels increase. Those conflicts would need to be monitored to ensure that they were not increasing to an unacceptable level.

Table E6: Bering Sea Crab Fishery Molting/mating time periods as determined by the Crab Plan Team in September 2001

<table>
<thead>
<tr>
<th>Species</th>
<th>Molting/mating time period</th>
</tr>
</thead>
<tbody>
<tr>
<td>C. opilio</td>
<td>May 15 to July 31</td>
</tr>
<tr>
<td>C. bairdi</td>
<td>April 1 to July 31</td>
</tr>
<tr>
<td>blue king crab</td>
<td></td>
</tr>
<tr>
<td>red king crab</td>
<td>February 1 to July 31</td>
</tr>
<tr>
<td>red king crab (Norton Sound)</td>
<td>September 15 to October 31</td>
</tr>
<tr>
<td>golden king crab</td>
<td>January 1 to December 31</td>
</tr>
</tbody>
</table>

The analysis also supports provisions which would create no allowance for overages or underages on the principle that overages and underages should be fully avoidable in a rationalized fishery. The analysis also supports full accounting of deadloss. The analysis suggests that the slower pace of a rationalized fishery will improve sorting of crab by gear, thereby decreasing handling mortality and deadloss.

The analysis states that the rationalized fisheries would need to be managed with TACs instead of the current GHL management. TAC management would provide certainty of allocations necessary to realize the full benefits of rationalization. The allocation of a minor open access fishery, as proposed in the Plurality Assignment cooperative program alternative, could also be problematic for managers that are required to monitor a small GHL in an open access fishery. The more precise management under a TAC (without provision for overages) could also aid rebuilding efforts in the fisheries.

Monitoring participants in a rationalized fishery would be challenging due, in part, to the extended seasons. The analysis supports the use of Vessel Monitoring Systems (VMS). VMS would not only improve monitoring activities of participants but also would improve data collection. ADF&G has suggested that the costs of this system could be borne by either participants in the fisheries or the federal government. Additional monitoring of landings may also be required. Observer requirements and the disbursement of costs of these requirements will also need to be assessed in a rationalized fishery.

The analysis assesses the need to maintain a minimum fleet size to ensure that harvests reach an optimum level. Caps on ownership could be used to ensure that fleets are maintained at a size necessary to maintain harvests in the event excessive stocks require additional harvesting power.

The section includes a discussion of the interaction of State and federal management and monitoring of the fisheries. Limitations of delegation of management authority by the federal government may require that NMFS assume responsibility for allocations of quota in the fisheries. Setting of TACs (or GHLs), regulating fishing activity, and collecting harvest data for monitoring harvest limits and enforcement of regulations are currently conducted by the State and could, for the most part, continue to be subject to State management in a rationalized fishery. Further detail on the joint management of the fisheries is provided in this section.

The section concludes with a discussion of the implications of rationalization on safety in the fisheries.
The Allocation of Harvest Shares (Section 3.3).

This section of the analysis examines the different alternatives for allocating harvest shares. The analysis examines the rules that define eligibility to receive an initial allocation and the calculation of those allocations. Both proposed options would base eligibility on whether a vessel has met the requirements for an LLP license. Table E7 shows the number of endorsed LLP licenses in the fisheries and the estimated number of vessels that would qualify for a crab endorsed LLP license and hence an initial allocation in each fishery being considered for rationalization.

Table E7: LLP licenses and the Estimated Number of Vessels that Qualify for LLP licenses endorsed for BSAI Crab Fisheries.

<table>
<thead>
<tr>
<th>Fishery</th>
<th>Number of Permanent LLP Licenses</th>
<th>Number of Interim LLP Licenses</th>
<th>Number of Vessels Estimated to Qualify for an LLP License</th>
</tr>
</thead>
<tbody>
<tr>
<td>WAI (Adak) Golden King Crab</td>
<td>27</td>
<td>14</td>
<td>23</td>
</tr>
<tr>
<td>WAI (Adak) Red King Crab</td>
<td>24</td>
<td>22</td>
<td>23</td>
</tr>
<tr>
<td>Bristol Bay Red King Crab</td>
<td>360</td>
<td>89</td>
<td>266</td>
</tr>
<tr>
<td>Bering Sea C. Opilio</td>
<td>290</td>
<td>99</td>
<td>256</td>
</tr>
<tr>
<td>Bering Sea C. Baird</td>
<td>250</td>
<td>92</td>
<td>256</td>
</tr>
<tr>
<td>EAI (Dutch Harbor) Golden King Crab</td>
<td>27</td>
<td>14</td>
<td>20</td>
</tr>
<tr>
<td>Pribilof Blue King Crab</td>
<td>110</td>
<td>48</td>
<td>84</td>
</tr>
<tr>
<td>Pribilof Red King Crab</td>
<td>110</td>
<td>48</td>
<td>122</td>
</tr>
<tr>
<td>St. Matthew Blue King Crab</td>
<td>154</td>
<td>59</td>
<td>180</td>
</tr>
</tbody>
</table>

Source: NMFS Alaska Region RAM Office and State of Alaska ADF&G Fish ticket files.

The sum of permanent and interim licenses is the maximum number of vessels that could qualify. The “number of vessels estimated to qualify for an LLP license” is the minimum number that could qualify, as that does not include vessels that rely on Amendment 10 exemptions for qualification, which define limited exemptions and circumstances when activities from multiple vessels may be combined to meet the qualification criteria. The consisteny of the different allocation options with the current LLP management is discussed. The section also includes quantitative analysis of the allocations under the different qualifying year options for each fishery. The analysis shows that the allocations in the Bering Sea C. opilio, Bristol Bay red king crab, Bering Sea C. bairdi, Pribilof blue king crab, St. Matthew blue king crab, and Western Aleutian Islands (Adak) red king crab are very similar under all of the qualifying year options. In the Pribilof red king crab fishery, the allocation to the leading four vessels varies somewhat under the different options. In the two Aleutian Islands golden king crab fisheries (particularly in the Western subdistrict), the allocations under the various options show greater variation. Graphical representations of the allocations and descriptive statistics appear in the section. Graphs included in this section show groupings of four vessels to protect confidential data. The same vessels are not always in the same groups for the different allocation options. The portion of the total allocation to catcher/processors in each fishery under each option is also shown.

The IFO Program Elements (Section 3.4).

This section analyzes the options for development of an IFQ program. The section includes analyses of the various measures that define the rights to own, purchase, and use harvest shares in the different fisheries. The section includes an analysis of the two-pie IFQ alternative, including the initial allocation, transfer rights, and ownership and use caps on processor shares and limits on vertical integration.

Harvest Shares

The analysis examines use and ownership caps on harvest shares in the different fisheries at the initial allocation. These caps are intended to limit consolidation of harvest shares, in part, to ensure competition in the harvest sector. This analysis is limited by the poor availability of vessel and LLP license ownership information. Based on available data, no persons would exceed a 5 percent ownership cap in the Bering Sea...
C. opilio, Bristol Bay red king crab, Bering Sea C. bairdi, or St. Matthew blue king crab fisheries. Four persons would exceed the 5 percent cap in the Pribilof blue king crab fishery. Data concerning the number of persons exceeding an 8 percent or 5 percent cap in the Pribilof red king crab fishery cannot be shown because of confidentiality restrictions on the release of data. Several persons would exceed a 1 percent cap in all of these fisheries. In the Western Aleutian Islands golden king crab fishery, the number of persons exceeding a 40 percent, 20 percent, or 10 percent cap cannot be shown because of confidentiality restrictions on the release of data. In the Eastern Aleutian Islands golden king crab fishery, no persons would exceed the 40 percent cap. The number of persons exceeding the 20 percent cap in this fishery cannot be shown because of confidentiality restrictions on the release of data. If the allocation in Aleutian Islands golden king crab fisheries is based on the combined participation in both areas, no persons would exceed the 40 percent cap and the number of persons exceeding the 20 percent cap cannot be shown because of confidentiality restrictions on the release of data.

Processing Shares

A complete analysis of the two-pie IFQ program is also contained in this section. Program elements including the initial allocation of shares, transfer rights, and ownership and use caps are examined. Two options for allocating processing privileges to catchers/processors are proposed. Under the first, catchers/processors would be allocated processing shares in the same manner as those shares are allocated to other processors. Alternatively, catchers/processors could be allocated a “catcher/processor share” that includes both harvest and processing privileges.

Option under which catchers/processors are allocated processing shares

If catchers/processors are allocated processing shares, in the Bering Sea C. opilio, the Bristol Bay red king crab, and the Bering Sea C. bairdi fisheries slightly more than 30 processors will receive an allocation. The leading four processors would receive an average allocation of between 12 and 14 percent depending on which qualifying year option is selected. The average allocation would be less than 5 percent and the median1 allocation would be approximately 1 percent or less. In the Pribilof red king crab, Pribilof blue king crab, and St. Matthew blue king crab fisheries approximately 15 processors would receive allocations. The leading four processors would receive on average less than 20 percent of the total allocation. The median allocation would be less than 5 percent. In the two Aleutian Islands golden king crab fisheries, between 8 and 13 processors would receive an initial allocation. The four largest processor allocations would be between 20 and 25 percent of the total allocation. In the Eastern Aleutian Islands fishery, the median allocation would be between approximately 4 and 8 percent of the total allocation. In the Western Aleutian Islands fishery, the median allocation would be less than one percent.

Ownership and use caps on processor shares are analyzed based on the initial allocations. These caps are intended to limit consolidation of processing shares, in part, to ensure competition in the processing sector. The analysis is limited because of confidentiality restrictions on the disclosure of data. The analysis shows that with the exception of the Western Aleutian Islands (Adak) golden king crab fishery, no processors would exceed a 50 percent cap based on the initial allocation. In the Bering Sea C. opilio, the Bristol Bay red king crab, the Bering Sea C. bairdi, the Pribilof red king crab, and the Pribilof blue king crab fisheries, no processors would exceed a 30 percent cap. A complete analysis of the caps appears in this section.

The section also examines vertical integration in the crab fisheries by analyzing the allocation of harvest shares to persons affiliated with processors. The Council has proposed limiting processor ownership of harvest shares to 8, 5, and 1 percent of the total allocation of harvest shares to restrict vertical integration in the fisheries. In the Bering Sea C. opilio, the Bristol Bay red king crab, and the Bering Sea C. bairdi fisheries

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1 The median allocation is the allocation at the midpoint of the distribution, for which half of the allocations would be larger and half of the allocations would be smaller.
in excess of 40 vessels are affiliated with processors (including independently owned catcher/processors). Under almost all of the allocation options between 4 and 5 processors would exceed a 1 percent cap on harvest share ownership in these fisheries. No processors would exceed a 5 percent cap in the Bering Sea C. opilio or the Bering Sea C. bairdi fisheries. In the Aleutian Islands golden king crab fisheries, between 1 and 4 processors would receive harvest share allocations depending on the allocation option selected. In the Western subdistrict, the number of processors exceeding any caps cannot be shown because of confidentiality restrictions. In the Eastern subdistrict, no processors would exceed either an 8 or 5 percent cap. Under the option that would determine the allocation based on combined harvests in the two subdistricts, the number of processors exceeding any caps cannot be shown because of confidentiality restrictions. In the Pribilof red king crab and Pribilof blue king crab fisheries, between 4 and 6 processors would receive an allocation of harvest shares. In the Pribilof red king crab fishery, no processors would exceed an 8 percent cap. No further information on the caps can be disclosed for this fishery. In the St. Matthew blue king crab fishery, 11 processors would receive an allocation of harvest shares. No processors would exceed either an 8 or 5 percent cap in this fishery. The number of processors exceeding the 1 percent cap cannot be disclosed. In the Western Aleutian Islands red king crab fishery, three processors would receive an initial allocation of harvest shares. No information concerning the number of processors exceeding the proposed share caps can be disclosed for this fishery.

Option under which catcher/processors are allocated catcher/processor shares

Cooperative Program Alternatives (Section 3.5). This section examines the cooperative program alternatives advanced in the Council motion. The section begins with a brief discussion of the cooperative alternatives that the Council has considered and excluded from analysis. These cooperative program options were deemed unsuitable for the crab fisheries. These options would potentially distort allocations from the historical participation, providing limited share protection to both harvesters and processors.

More importantly, the section examines the Voluntary Cooperative program and Plurality Assignment Cooperative program currently under consideration. The Voluntary Cooperative program would allocate harvest and processing shares similar to those under the IFQ program alternatives. The program would permit harvest share holders to form cooperatives associated with one or more processors holding a processing allocation. The program is intended to provide maximum flexibility, allowing the development of cooperative arrangements between participants that see an advantage to creating those arrangements. These agreements could help to ensure that more of each person’s allocation is more fully harvested. This would be accomplished though pooling remaining shares at the end of a season so one vessel from the cooperative could be sent out to “mop-up” the remaining quota. This has been done in the BSAI pollock cooperatives, where the percentage of the TAC being left unharvested each year is very low relative to the halibut and sablefish IFQ programs.

Under the Voluntary Cooperative program share allocations would be made to both harvesters and processors regardless of whether cooperative agreements are entered. Because of this allocation system there would be no “open access” fishery. Persons that do not elect to join a cooperative would still receive a protected allocation.

The second cooperative program (the Plurality Assignment Cooperative program) would permit each harvester to enter a single cooperative associated with the processor to which he/she delivered the most pounds of crab during the qualifying period. Allocations are made to each cooperative based on the catch history of its members. Allocations of harvesters that do not join a cooperative are made to an open access fishery that is fished competitively by harvesters that do not join cooperatives. Because of the eligibility rules and a requirement that a cooperative have at least two members, over half of the processors that received deliveries from the crab fisheries during the qualifying period (but were not the recipient of the most catch from at least two harvesters) would not be able to associate with a cooperative in the first year of the program. Also under a 1994-99 qualifying period, five vessels would not be eligible to join a cooperative because they were the only vessel qualified to form a cooperative with their primary processor. These
vessels would be required to participate in an open access fishery the first year of the program. Each year, participants in the open access fishery would become eligible to join a cooperative associated with the processor to which it delivered the most crab in the open access year.

The all-or-nothing allocation of catch history to processors under this alternative could result in disparities between processing history and processor allocations. Historical data show that many catcher vessels made deliveries to multiple processors over the qualifying period. For example in the Bristol Bay red king crab for the open season from 1993-1999, a total of 255 vessels had qualifying landings. Only 163 of the vessels delivered at least 50 percent of their catch to the same processor. That means that only about 64 percent of catcher vessels delivered at least half of their catch to one processor. Under the Plurality Assignment Cooperative all the catch would be assigned for delivery to a single processor. To lessen the impact of requiring all of the catch to be assigned to a specific processor, alternatives are included that would require a cooperative to deliver a set percentage (ranging between 10 and 100 percent) of its allocation to its associated processor. Members of the catcher vessel sector have indicated that requiring only 80 percent of the catch to be delivered to the cooperative’s processor would benefit harvesters, in terms of bargaining power and maintaining traditional markets, much more than requiring a 90 percent delivery rate. Processors on the other hand feel that as the percentage decreases from 100 percent they tend to be in a much weaker position to negotiate prices and make long term plans for their operations.

This program is difficult to characterize because several options have been proposed with vary degrees of connection between harvesters in a cooperative and the associated processor. The most stringent option would require delivery of all or most of a cooperatives allocation to an associated processor. The most lenient option would not require any deliveries to the associated processor. Similarly, the program has options defining the ability of harvesters to move between cooperatives. These range from unrestricted movement, subject only to the approval of the cooperative to which the harvester is moving, to options that require a year in the open access fishery.

The alternatives for allocation of shares to vessels under the cooperative program are the same as under the IFQ alternatives. Therefore, the discussion of quota allocations is only covered in the section on IFQ allocations.

**Regionalization (Section 3.6)** - This section examines the two alternatives that would establish a regionalization program. Regionalization of the fisheries is intended to protect community interests. The first alternative would divide the fishery into north and south regions, creating a requirement that landings and processing activity be distributed between the regions in accordance with historic participation patterns. Estimates of the distribution of shares under the alternatives are provided. North allocations in the Pribilof red king crab and Pribilof blue king crab, and St. Matthew blue king crab fisheries exceed 50 percent of the fishery. The allocations, however, vary by more than 10 percent in the Pribilof blue king crab fishery and by more than 5 percent in the Pribilof red king crab fishery depending on whether the allocation is made under the years designated for allocating regional shares or the years designated for determining processor allocations. The significance of this difference is that use of different years for determining regional allocations and processor allocations could result in some processors being allocated shares for use in a region in which they have no processing history or facilities. In the Bering Sea C. opilio fishery the allocation to the north would be approximately 40 percent of the fishery. In the Bering Sea C. bairdi fishery the north allocation would be less than 5 percent under the only applicable regionalization option. Allocation of shares under the processor allocation option would allocate more than 20 percent to the north, because this allocation would be based on activity in the C. opilio fishery. In the Bristol Bay red king crab fishery, the allocation to the north would be less than 10 percent under either the regionalization options or the processor allocation option. In the Aleutian Islands golden king crab fisheries, the north would receive no allocation.

The second regionalization alternative would create a link between processing activity and communities in which processing historically occurred. Under this option, processing would be permitted to relocate from a community only with permission of the community. In this draft, analysis of this option is strictly
qualitative. The allocation of shares to communities has the potential to impose hardships on both harvesters and processors. Determining the appropriateness of this option requires balancing these potential hardships against the potential benefit to communities of establishing a link between the processing activity and communities. Small allocations could burden processors by requiring that they either run processing facilities with small processing allocations or forgo processing a portion of their allocation. In addition, coordinating deliveries of crab to communities to exactly match the community allocation could be very challenging. Inability to reach an exact match would result in a portion of the GHL (or TAC) going unprocessed (and unharvested).

Binding Arbitration (Section 3.7) - This section examines two alternative binding arbitration agreements proposed by industry to govern ex-vessel price determinations between harvesters and processors. The two agreements differ only in that one would provide for an administrator to oversee the binding arbitration process. The administrator would appoint the arbitrator in cases where the two sides cannot agree on an arbitrator. Therefore the administrator would have substantial power in the process. The literature on binding arbitration suggests that implementing a binding arbitration process increases the conflicts between the two sides, and suggests that better outcomes are reached when two sides reach a negotiated agreement.

Options for Skippers and Crew (Section 3.8) - This section examines five options that are intended to protect skipper and crew interests. The first option would make an initial allocation of quota shares to skippers and/or crew. The allocation would be intended to provide those actively working in the fishery with an interest in the fishery. Several options for determining the allocation have been proposed. Eligibility would be based on either landings, verifiable by ADF&G fish tickets (or affidavits in the case of crew), or a point system, under which points are awarded based on participation verified by fish tickets or affidavit. Allocations could be made equally to all eligible participants or could be based on landings or points or some combination of these measures. Quantitative analysis of the option is limited by available data.

The second option would provide skippers and crew with a first-right-of-refusal on a portion of each share allocation when those shares are first transferred. The third option would designate a portion of each initial allocation as “owner on board” shares, which require the quota share owner to be on board the vessel fishing the quota. Both the first-right-of-refusal and the owner on board requirements are intended to provide a method of entry to skippers and crew that wish to have an interest in the fishery. The third option would protect skippers and crew by guaranteeing their historical crew share and prohibiting vessel and quota share holders from reducing crew shares to cover the cost of participation in a share based fishery. This option is based on a system in the Canadian groundfish fishery. Preliminary research on this option suggests that enforcement of the provision could be problematic. The last option would create a low interest loan program to fund the purchase of quota shares by skippers and crew. This option would establish a program similar to that in the halibut and sablefish fishery.

CDQ Allocations (Section 3.9) - This section examines options for changing the allocations to CDQ groups in the different fisheries proposed for inclusion in the rationalization program. The analysis examines the allocations to both the CDQ groups and non-CDQ participants. Based on the GHL in the most recent fisheries, assuming the option for the highest CDQ allocation is adopted, the allocations to CDQ groups could range from a high of 3.3 million pounds in the Bering Sea C. opilio fishery to approximately 150 thousand pounds in the Pribilof red and blue king crab fisheries combined. These allocations would result in a decrease of approximately 13 thousand pounds and 1.3 thousand pounds per vessel from eligible non-CDQ participants in these fisheries.

Other Management and Allocation Issues (Section 3.10) - This section examines various management implications of the rationalization program, including the effects of rationalization on other fisheries, the possible need to continue AFA sideboards to limit activities of AFA participants in the BSAI crab fisheries, options that would specify the duration of the rationalization program and schedule periodic review of the program, and the need for a cost recovery program to cover the cost of management of the rationalized fisheries.
Crab rationalization may increase the opportunities for BSAI crab vessels to participate in other fisheries. LLP data indicates that 253 of the crab vessels hold at least one groundfish endorsement (this includes the 42 AFA catcher vessels). These vessels would be allowed to participate in groundfish fisheries using that license. However the options for many of these vessels are limited in groundfish. Groundfish endorsements are area specific and licenses are expected to have gear endorsements added in the next year. Pacific cod endorsements are expected to be added to BSAI groundfish licenses as a result of Amendment 67 (47 pot catcher vessels are expected to qualify for a cod endorsement). Pacific cod is the most likely candidate for expansion by the crab fleet. However, the restrictions currently in place for the cod fishery limit the expansion that can occur in that fishery. The quota is already split among fixed, trawl, and jig gear vessels and Amendment 67 limits new entry. However, Amendment 64, which further allocates the quota among the fixed gear components, sunsets at the end of 2003. There may be more concern in the GOA cod fisheries where fewer restrictions are placed on entry. If the GOA cod fishery is a concern it could be protected as part of this program, the GOA rationalization program, or by a trailing amendment to this package.

Increases in participation of BSAI crab vessels in State managed fisheries, including the GOA crab and the State of Alaska GOA cod fishery, could be limited by State regulations. The State waters cod fisheries are often managed with pot limits and vessel size restrictions. Those limits either make the fisheries unavailable or less attractive to large crab vessels. The GOA crab fisheries have had relatively low GHI’s, when open in recent years. The pot limits applied to those fisheries may also make them less attractive to large BSAI crab vessels.

Including AFA vessels/processors in the quota allocation process may eliminate the need for harvesting processing sideboards in the BSAI crab fisheries. The allocation alternatives would result in AFA vessel harvests and processing allocations similar to the caps. Limits on the amount of quota AFA vessels and processors can purchase after the initial allocation could prevent them from using BSAI pollock monies to increase their share holdings. These limits could also be accomplished through the ownership caps being considered.

A cost recovery program is mandated for all new IFQ programs. The maximum fee that can be levied against the fleet is 3 percent of the ex-vessel value for harvest IFQ programs. However, the possible processor allocations raise the question of whether cost recovery should apply to processors under a two-pie IFQ program. Since they are benefitting from an allocation that would have management costs associated with it, should they be included in a cost recovery program to pay for its management?

**Economic Effects of Rationalization (Section 3.11)** - This section compares the different rationalization alternatives, giving particular attention to the differences in competition and bargaining power of harvesters and processors under the different program alternatives.

**Effects of Rationalization on Products and Consumers (Section 3.12)** - This section examines potential changes in products and other effects on consumers of rationalization of the fisheries. The analysis draws on prior experiences in North Pacific fisheries as well as conversations with participants in the industry. The expected slower pace of the fishery and less compacted delivery times should allow processors to improve sorting and grading of crab and improve employee training. Improved product grading could benefit both participants in the fisheries and consumers. Also expanding season lengths should decrease storage costs and allow consumers to purchase a fresher product as harvests can be better timed to market demand. Freezing techniques could also be modified to make more use of plate and blast freezers which would result in a higher quality product.

**The Effects of the Crab Vessel Buyback Program (Section 3.13)** - This section of the analysis examines the effects of the vessel buyback program on the rationalization program. We have assumed that the buyback program will purchase vessels, LLP licenses, and catch history. The analysis is qualitative because the participation in this voluntary program cannot be quantitatively predicted.
The buyback program will tend to increase the allocation of the harvesters that remain in the fishery by the percentage of qualifying catch that was removed from the quota share pool. Because the buyback program is specific to harvesters, it will cause a redistribution of processor “allocations” under the Plurality Assignment Cooperative. Processors that have more of their fleet bought out (in terms of cooperative allocation) relative to other processors would be worse off as a result of the buyback. Also, because catcherprocessors are not part of the buyback, they will receive a larger harvest allocation under all of the rationalization alternatives. Depending on whether processing allocations to catcherprocessors are based on their harvest allocations or their processing history, buyback could either allow them to process their entire harvest and increase their processing allocations or prevent catcherprocessors from processing their entire allocation and have no effect on their processing allocations.

This section concludes with a brief discussion of the issue of stranded capital in the processing sector and the potential for a buyback of capital from the processing sector. The lack on limits to entry pose a problem for any program intended to remove capital from that sector. In addition, quantifying stranded capital in the sector is difficult because some of the facilities that support crab processing can also be used in other fisheries.

**Foreign Ownership (Section 3.14)** - This section examines the potential allocation of harvest and processing allocations to foreign owned interests in the BSAI crab rationalization program. Since vessel ownership data are not available, foreign ownership of that sector cannot be determined. The AAF, however, requires a minimum of 25 percent U.S. ownership of vessels operating in U.S. fisheries, providing an upper limit on foreign vessel ownership. Processor foreign ownership is available from prior analyses. If processor shares are allocated, foreign-owned companies are estimated to receive between 35 and 50 percent of the allocations in each fishery.

**Custom Processing (Section 3.15)** - This section analyzes custom processing in crab fisheries in recent years. From 1995 to 2000, between 8 and 11 percent of all crab processed in the regions that process crab from the BSAI fisheries was custom processed. Approximately 6.7 percent of *C. opilio* and approximately 8.6 percent of all red king crab processed during those years was custom processed.

**Data Collection Program (Section 3.16)** - This section outlines a data collection program for the BSAI crab fisheries that is intended to provide the Council with information necessary to evaluate the success of the proposed rationalization program. The proposed program would collect the following data, which could be used to evaluate the success of the program in addressing the problems identified in the Council’s problem statement:

- Firm ownership (including ownership of quota, vessels, and processors)
- Trip operating characteristics (including data on pots and pot lifts, days fished, discards, deadloss, gear losses, crew sizes, trip length)
- Harvesting and processing employment data (including crew sizes, shares, and wages)
- Production and operating costs and revenues
- Prices and quantities of landed and processed products
- Prices and quantities of share exchanges

A complete evaluation of the program will require data for periods prior to the implementation of the program, as well as data from periods after the program is implemented. The analysis also includes discussions of data collection mechanisms, data verification, and some issues of confidentiality that must be resolved for an effective data collection program.

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2 These allocation estimates do not include allocations in the Aleutian Island golden king crab fisheries, for which data cannot be released because of confidentiality requirements.
Consistency with Other Applicable Laws (Section 4) - This section examines the consistency of the proposed rationalization program with applicable laws, including the National Standards and Fishery Impact Statement requirements of the Magnuson-Stevens Act and Executive Order 12866.

Regulatory Flexibility Act (Section 5) - This section analyzes the impacts of the proposed rationalization program on small entities, as defined by the Regulatory Flexibility Act (the RFA). The proposed action could affect between 300 and 400 small entities in the harvest sector and between 50 and 60 small entities in the processing sector. Although the impacts of the program are difficult to predict, it is possible that allocation of shares could benefit small vessels that compete with larger vessels in the current fishery. Small allocations (based on limited success in crab fisheries historically), however, could limit the benefits. The effects of the proposed rationalization on small entities that process crab is also difficult to predict and will depend on the specific rationalization program adopted and the position of the processor in the current fishery. Class B harvest shares (that do not require a corresponding processing share) could provide an opportunity for entry and growth of small entities, if they are able to compete with larger processors. Several small governmental jurisdictions could also be affected by the proposed rationalization program. The impacts on communities will depend largely on the type of program adopted. If free movement of processing activity is allowed communities that are able to attract additional processing activity will benefit from the program at the expense of communities that are unable to retain processing activity. A rationalization program that restricts movement of processing activity is likely to benefit those communities that would lose processing activity in a program without community protections. These gains would come at the expense of communities that would attract processing in a program that permits free movement of processing activity.

Summary of Changes in the March 2002 Crab Rationalization Alternatives, Initial Review Draft,

- The revised problem statement is included in this draft on page 1.

- The analysis of community and social impacts in Section 2.6 has been revised to incorporate quantitative analyses of the community and regional distribution of harvest and processing effort under the rationalization alternatives.

- Several additional subsections are included in Section 3.2. These include analyses of the FMP issues to consider under rationalization (3.2.11), environmental impacts of the alternatives (3.2.12), Endangered Species and Marine Mammal Act implications (3.2.13), and stock rebuilding implications (3.2.14).

- The quantitative analysis of processor shares has been separated into two subsections. The first subsection (3.4.3.1) considers the scenario under which catcher/processors are allocated processing shares under the same rules that govern their distribution to shore based and floating processors. The second subsection (3.4.3.2) considers the scenario under which catcher/processors are allocated catcher processor shares, which include both a harvest privilege and a processing privilege.

- An analysis of the Alternative Regionalization/Community Protection option by NOAA General Counsel has been added to Section 3.6.

- An analysis of the options for binding arbitration by NOAA General Counsel has been added to Section 3.7.

- The analysis of the new owner on board options are included in section 3.8.2.

- The analysis of sideboard options is included in subsection 3.10.1, which analyzes the effects of rationalization on other fisheries.
- An analysis of the economic effects of rationalization appears in Section 3.11. This section includes analysis of the net benefits of rationalization, distributional effects of rationalization, opportunities for entry in a rationalized fishery, and the effects of rationalization on different vessel classes.

- An analysis of stranded capital in the processing sector and the potential for a processor buyback program is included in Section 3.13.

- An analysis of foreign ownership in both the harvest and processing sectors is contained in Section 3.14.

- An analysis of custom processing is contained in Section 3.15.

- An analysis of the proposed data collection program is contained in Section 3.16.

- Section 4 provides an analysis of the consistency of rationalization with National Standards of the Magnuson-Stevens Act, a Fisheries Impact Statement, and the conclusion with respect to Executive Order 12866.

- Section 5 provides the Initial Regulatory Flexibility Analysis.

- Appendix 2-6, on community and social impacts, has been revised to include additional quantitative and qualitative analyses.

- Appendices 3-4A and 3-4B have been revised to reflect recent additions to the binding arbitration agreement proposed by industry.

- The comparison of rationalization alternatives, which comprised Appendix 3-7, has been removed from the analysis. This document will be available on request from the Council office. A summary of this paper and other analyses of the economic impacts of rationalization of North Pacific fisheries appears in Section 3.11.

In addition to the specific additions and changes discussed above, several minor modifications are made throughout the analysis. These include updating of quantitative analyses because of new data availability, corrections to quantitative and qualitative analyses, and editorial changes. Community distributions under the regionalization options (in Section 3.6) have changed substantially because of new data.

"Efficiency and Equity Choices in Fishery Rationalization Policy Design," a report prepared for the State of Alaska Department of Fish and Game by Scott C. Matulich and Michael Clark was mailed to you. Dr. Matulich has prepared an addendum to that report, which is included in your notebooks (Item C-5(b)).

NMFS staff will be presenting a discussion paper (Item C-5(c)) on the process and schedule for the subsequent crab FMP EIS, including a discussion of the structure of alternatives to be included in that EIS.
Draft Council Motion for Item C-5 BSAI Crab Rationalization
February 10, 2002

C-5 BSAI Crab Rationalization

BSAI Crab Rationalization Problem Statement

Vessel owners, processors and coastal communities have all made investments in the crab fisheries, and capacity in these fisheries far exceeds available resources. The BSAI crab stocks have also been highly variable and have suffered significant declines. Although three of these stocks are presently under rebuilding plans, the continuing race for fish frustrates conservation efforts. Additionally, the ability of crab harvesters and processors to diversify into other fisheries is severely limited and the economic viability of the crab industry is in jeopardy. Harvesting and processing capacity has expanded to accommodate highly abbreviated seasons, and presently, significant portions of that capacity operate in an economically inefficient manner or are idle between seasons. Many of the concerns identified by the NPFMC at the beginning of the comprehensive rationalization process in 1992 still exist for the BSAI crab fisheries. Problems facing the fishery include:

1. Resource conservation, utilization and management problems;
2. Bycatch and its associated mortalities, and potential landing deadloss;
3. Excess harvesting and processing capacity, as well as low economic returns;
4. Lack of economic stability for harvesters, processors and coastal communities; and
5. High levels of occupational loss of life and injury.

The problem facing the Council, in the continuing process of comprehensive rationalization, is to develop a management program which slows the race for fish, reduces bycatch and its associated mortalities, provides for conservation to increase the efficacy of crab rebuilding strategies, addresses the social and economic concerns of communities, maintains healthy harvesting and processing sectors and promotes efficiency and safety in the harvesting sector. Any such system should seek to retain parity between the harvesting and processing sectors, including healthy, stable and competitive markets.

Alternative Rationalization Programs

The Council adopted elements and options for analysis of alternative rationalization programs for the BSAI crab fisheries. The alternative models under consideration include several IFQ-style and cooperative-style rationalization models that may be structured as either harvester-only or harvester-processor programs depending on the Council’s choice of options. Additional features may be included to address coastal community and skipper/crew issues. The following elements and options apply to any rationalization model under consideration as applicable:

1. Harvesting Sector Elements

1.1 Crab fisheries included in the program are the following fisheries subject to the Federal FMP for BSAI:

- Bristol Bay red king
- Brown king (Al Golden king)
- Adak red king
- Dutch Harbor red king
- Pribilof Islands blue king
- St. Matthew blue king
- Pribilof Islands red king
- Opilio (EBS snow crab)
- E Al tanner
- W Al tanner
- Bairdi (EBS tanner)

Other FMP species not included here are discussed under item L at the end of the alternatives section.
Options:

A) Exclude the E AI tanner, W AI tanner, Dutch Harbor red king crab, and W AI red king crab.

B) Federal waters shall be closed to the harvest of Eastern (Dutch) and Western AI Tanner crab and Eastern (Dutch) and Western AI red king crab until such time as the State of Alaska develops a fishery management plan and harvest strategies that includes provisions to conserve the stocks and prevent overcapitalization.

1.2 Persons eligible to receive an initial allocation of QS must be:

Option 1. Any person that holds a valid, permanent, fully transferrable LLP license; or

Option 2 A person, defined as a U.S. citizen that owns a MarAd certified and/or USCG documented BSAI crab vessel that: (i) was used to satisfy the General Qualification Period (GQP) and Endorsement Qualification Period (EQP) landings requirements of the License Limitation Program (LLP), and (ii) either was used to satisfy the Recent Participation Period (RPP) landings requirement of Amendment 10 or meets the exemption requirements of Amendment 10.

Suboption: A person who has purchased an LLP, with GQP, EQP, and RRP qualifications to remain in a fishery is eligible to obtain a distribution of QS on the history of either the vessel on which the LLP is based or on which the LLP is used, NOT both.

1.3 Categories of QS/IFQs

1.3.1 Crab Fishery Categories - QS/IFQs will be assigned to one of the crab fisheries included in the program as identified in paragraph 1.1, except Dutch Harbor red king, E AI tanner, and W AI tanner. (Note also that the Adak red king crab fishery has been closed for several years.)

1.3.1.1 Brown king crab (AI golden king crab) option.

Option 1. Split into two categories: Dutch Harbor brown king crab and Western Aleutian Islands brown king crab

1.3.2 Harvesting sector categories - QS/IFQs will be assigned to one of the following harvesting sector categories:

(a) catcher vessel (CV), or
(b) catcher/processor (CP)

QS-IFQ for the Catcher/Processor sector is calculated from the crab that were both harvested and processed onboard the vessel. This shall confer the right to harvest and process crab aboard a catcher processor in accordance with section 1.7.2.

1.3.3 Processor delivery categories - QS/IFQs for the CV sector may be assigned to processor delivery categories if processor quota shares (PQs) are included in the program. Two processor delivery categories (options for the percentage split between class A/B shares for initially allocated QS appear under the Processing Sector Elements):

(a) Class A - allow deliveries only to processors with unused PQs
(b) Class B - allow deliveries to any processor

1.3.4 Regional Categories - QS/IFQs for the CV sector may be assigned to regional categories if Regionalization is included in the program. Two regions would be defined as follows (see Regionalization Elements for a more detailed description of the regions):

(a) North Region - All areas on the Bering Sea north of 56° 20' N. Latitude.
(b) South Region - All areas on the Bering Sea south of 56° 20' N. Latitude and on the Gulf of Alaska
1.4 Initial allocation of QS

1.4.1 Calculation of initial QS distribution will be based on legal landings excluding deadloss.

(a) Calculation of QS distribution. The calculation is to be done, on a vessel-by-vessel basis, as a percent of the total catch, year-by-year during the qualifying period. Then the sum of the yearly percentages, on a fishery-by-fishery basis, is to be divided by the number of qualifying years included in the qualifying period on a fishery-by-fishery basis to derive a vessel's QS.

(b) Basis for QS distribution.

Option 1. For eligibility criteria in paragraph 1.2, Option 1, the distribution of QS to the LLP license holder shall be based on the catch history of the vessel on which the LLP license is based and shall be on a fishery-by-fishery basis. The underlying principle of this program is one history per vessel. However, the initial allocation of quota share will allow stacking or combining of valid, permanent, fully transferable LLP licenses and of histories of vessels as permitted under the LLP.

Option 2. For eligibility criteria in paragraph 1.2, the distribution of QS to the LLP license holder shall be based on the catch history of the vessel (including replacement vessels) on which the LLP license and endorsements are based and shall be on a fishery by fishery basis. The catch history upon which the fishing quota shares are derived, must have been earned on vessels that are currently MarAd certified and/or USCG documented fishing vessels. The initial allocation of quota share will allow stacking or combining of LLPs and histories that satisfied (i) the GQP and EQP landings requirements of the LLP, and (ii) either the RPP landings requirement, or one or more of the specific exemption requirements of Amendment 10 to the LLP.

Option 3: In cases where the fishing privileges (i.e. moratorium qualification or LLP license) of an LLP qualifying vessel have been transferred, the distribution of QS to the LLP shall be based on the aggregate catch histories of (1) the vessel on which LLP license was based up to the date of transfer, and (2) the vessel owned or controlled by the LLP license holder and identified by the license holder as having been operated under the fishing privileges of the LLP qualifying vessel after the date of transfer. Only one catch history per LLP License.

Suboption: Persons who have an purchased LLP, with GQP, EQP, and RPP qualifications to remain in a fishery may obtain a distribution of QS on the history of either the vessel on which the LLP is based or on which the LLP is used, NOT both.

1.4.2 Qualifying Periods for Determination of the QS Distribution:

1.4.2.1 Opilio (EBS snow crab)

Option 1. 1994 - 1999 (6 seasons)

(a) Best 5 seasons

Option 2. 1992 - 1999 (8 seasons)

(a) Best 7 seasons

Option 3. 1995 - 1999 (5 seasons)

(a) All seasons

(b) Best 4 seasons

Option 4. 1996 - 2000 (5 seasons)

(a) Best 4 seasons
1.4.2.2 Bristol Bay red king crab
Option 1. 1993 – 1999 (5 seasons, closed in '94 and '95)
  (a) All seasons
  (b) Best 4 seasons
Option 2. 1992 – 1999 (6 seasons)
  (a) All seasons
  (b) Best 5 seasons
Option 3. 1996 – 2000 (5 seasons)
  (a) Best 4 seasons

1.4.2.3 Bairdi (EBS tanner crab)
Option 1. 1992 – 1996 (5 seasons)
  (a) All seasons
  (b) Best 4 seasons
Option 2. 91/92* – 1996 (6 seasons)
  (a) Best 5 seasons
Option 3. Based on a 50/50 combination of Bristol Bay red king crab and opilio harvests.
*The biological season extended over a calendar year

1.4.2.4 Pribilof red king crab
Option 1. 1993 – 1998
  (a) Best 4 seasons
Option 2. 1994 – 1998
  (a) All seasons
  (b) Drop one season¹

1.4.2.5 Pribilof blue king crab
Option 1. 1993 – 1998
  (a) Best 4 seasons
Option 2. 1994 – 1998
  (a) All seasons
  (b) Drop one season

1.4.2.6 St. Matthew blue king crab
Option 1. 1993 – 1998
  (a) Best 4 seasons
Option 2. 1994 – 1998
  (a) All seasons
  (b) Drop one season

1.4.2.7 Brown king crab (based on biological season)
(Options apply to both Dutch Harbor and western Aleutian Island brown king crab)
Option 1. 92/93 – 98/99 (7 seasons)
  (a) All seasons
  (b) Drop one season
Option 2. 95/96 – 98/99 (4 seasons)
  (a) All seasons
  (b) Drop one season
Option 3. 96/97 – 98/99 (3 seasons)
  (a) All seasons
  (b) Drop one season

¹All potential recipients would drop their worst season during the qualifying period.
Option 4.  96/97 - 2000/01 (5 seasons)
   (a) Best 4 seasons

Suboption: Award each initial recipient QS based on:
   (a) GHL split Dutch Harbor/western Aleutian Island brown king crab
   (b) historical participation in each region.

1.4.2.8 Adak Red King Crab
Option 1. 1992 - 1996
   (a) All seasons
   (b) Best 2 seasons
   (c) Not appropriate for rationalization

1.5 Annual allocation of IFQs:

1.5.1 Basis for calculating IFQs:
   Option 1. GHL
   Option 2. Convert GHL to a TAC and use the TAC as the basis.

1.6 Transferability and Restrictions on Ownership of QS/IFQs:

1.6.1 Persons eligible to receive QS/IFQs by transfer:
   Option 1.
      (a) All persons or entities eligible to document a U.S. fishing vessel are eligible to own
          or purchase harvester QS and IFQs
      (b) Persons or entities with 75% U.S. ownership
          Suboption: Initial recipients of harvesting quota share are grandfathered
   Option 2.
      US citizens who have had at least (5 options):
      a. 30 days of sea time*
      b. 150 days of sea time*
      c. 365 days of sea time*
          Suboption: Initial recipients of harvesting quota share are grandfathered
   Option 4.
      Entities that have a U.S. citizen with 20% or more ownership and at least
      a. 30 days of sea time*
      b. 150 days of sea time*
      c. 365 days of sea time*
          Suboption: Initial recipients of harvesting quota share are grandfathered

*Definition of sea time (3 options):
   Option 1.  Sea time in any of the US commercial fisheries in a harvesting capacity
   Option 2.  Sea time in a harvesting capacity in any commercial fishery of the State of Alaska or
               the Alaska EEZ
   Option 3.  Sea time in any BSAI crab fishery

1.6.2 Leasing of QS (Leasing is equivalent to the sale of IFQs without the accompanying QS.)
   Leasing is defined as the use of IFQ on vessel which QS owner holds less than 5-50% ownership of
   vessel or on a vessel on which the owner of the underlying QS is present:
   Option 1. Leasing QS is allowed with no restrictions
   Option 2. Leasing QS is not allowed
   Option 3. A brown king crab QS holder may annually swap with any other brown king crab QS holder,
               on a pound for pound basis, IFQ in one district for IFQ in the other district.
1.6.3 Separately and distinctly, QS Ownership Caps - apply to all harvesting QS categories pertaining to a given crab fishery with the following provisions:
(a) initial issues that exceed the ownership cap would be grandfathered;
(b) apply individually and collectively to all QS holders in each crab fishery;
(c) percentage-caps options for the Bristol Bay red king crab, Opilio, Bairdi, Pribilof red king crab, Pribilof blue king crab and St. Matthew blue king crab fisheries (a different percentage cap may be chosen for each fishery):
   Option 1: 1% of the total QS pool for the fishery
   Option 2: 5% of the total QS pool for the fishery
   Option 3: 8% of the total QS pool for the fishery
(d) percentage-caps ranging from 10%-40% for the Dutch Harbor and western Aleutian Island brown king crab (a different percentage cap may be chosen for each fishery or may be applied to the combined fisheries if not categorized separately).
Suboption: No initial issuance shall exceed the cap specified. Any amount of QS that would be issued to a person in excess of the cap shall be distributed to other qualified persons receiving an allocation in the fishery:
   a) equally or
   b) proportionally.
(e) percentage-caps ranging from 10%-30% for Akak red king crab (if QS for this fishery are issued).
(f) In the opilio fishery, the cap can be reduced to 0.5% of the total QS pool in the event the GHL increases to over 400 million pounds (with those over this cap prior to the reduction grandfathered).

1.6.4 Controls on vertical integration (ownership of harvester QS by processors):
Option 1: No controls
Option 2: A cap of 1%, 5% or 8%, with grandfathering of initial allocations
Option 3: An entity that owns PQS may not own harvester QS in addition to those harvester QS that were issued to the PQ holder in the initial allocation.
Vertical integration ownership caps on processors should be analyzed using both the individual and collective rule and the threshold ownership rule using 10%, 25%, and 50% minimum ownership standards for inclusion in calculating the cap. PQS ownership caps are at the company level.

1.7 Use of IFQs

1.7.1 Use by harvesting sectors - IFQs must be used in accordance with the privileges defined for the associated QS category. The following provisions also apply:
(a) “A” class CV-IFQs may be processed by either a shoreside processor or a catcher/processor so long as sufficient processor shares are held by the processor.
(b) “B” class CV-IFQ’s may be processed by either a shoreside processor or a catcher/processor.
(c) “A” or “B” class CV-IFQs initially issued to a catcher/processor shall not be regionally or community designated.
(d) “A” or “B” class CV-IFQ purchased or obtained by catcher/processors shall retain their regional or community designation.
(e) No allowance of the use of purchased class B share IFQ crab on catcher processor vessels.

1.7.2 Catcher/Processor shares:

1.7.2.1 Catcher/Processors shall be granted “A” and “B” class CV-QS in the same manner as catcher vessels.

1.7.2.1.1 Catcher/Processors shall be granted CP-QS in the same manner as catcher vessels.
1.7.2.2 Catcher/Processors shall be granted PQ’s based on their processing history.

1.7.2.3 Allowances for Catcher/Processors:
Option 1. Catcher/Processors are prohibited from purchasing additional PQs from shore based processors but are free to acquire PQs from other Catcher/Processors.

Option 2. Catcher/Processors shall be allowed to purchase additional PQs from shore based processors as long as the shares are processed within 3 miles of shore in the designated region.

Option 3. Catcher/Processors may purchase additional CV-QS but cannot process unless sufficient unused IFQs are held.

Option 4. Catcher/Processors may sell processed or unprocessed crab. Depending on the type of model (one-pie, two-pie, etc.), unprocessed crab may be delivered to:
   (a) processors that hold unused IFQs, or
   (b) any processor

Option 5. Only catcher processors that both caught and processed crab onboard their qualifying vessels in any BSAI crab fishery during 1998 or 1999 will be eligible for any CP QS in any IFQ or Coop program.

Option 6. CP-QS initially issued to a catcher/processor shall not be regionally or community designated.

1.7.2.4 Transfers to shore-based processors:
   (a) Catcher/Processors shall be allowed to sell PQ’s to shore based processors.
   (b) When CP-PQ shares without a regional designation are sold to a shore based processor, the shares become designated by region.
   (c) Catcher/Processors shall be allowed to sell CP/QS to shore based processors.
   (d) When CP/QS shares, without a regional designation, are sold to a shore based processor, the shares become CV and PQ shares designated by region.

1.7.3 Catch accounting under IFQs - All landings including deadloss will be counted against IFQs. Options for treatment of incidental catch are as follows:
Option 1. No discards of legal crab will be allowed and sufficient IFQs for legal crab must be available.

Option 2. No discards of "marketable" crab will be allowed for opilio crab and sufficient IFQs for "marketable" crab must be available. (Legal size for opilio is 3.1 inches but the industry standard is 4 inches.)

Option 3. No discards of opilio crab with a carapace of 4 inches or greater in width.

Option 4. Discards of incidentally caught crab will be allowed. (This option would allow, for example, incidental catch of baird crab in a red king crab fishery to be discarded without counting against baird IFQs.)

1.7.4 Use caps on IFQs harvested on any given vessel:
Option 1.
   a) fleet average percent of the catch
   b) highest single vessel percentage of the catch

Time periods considered for determining the catch shall be:
   a) the IFQ qualifying years;
   b) the IFQ qualifying years plus the years from the end of the qualifying period through the year of the final Council action.
Option 2. No use caps

1.8 Other Optional Provisions
   1.8.1 Options for skippers and crews members:
   Option 1.

I. Percentage to Captains and/or crew:
   A range of percentages for initial allocation from 0% to 20% should be analyzed.
   (i.e. 0%, 10%, 20%)
   A crewman is defined as a US citizen who held a commercial fishing landing permit or crew license during the qualifying period.

II. Species specific:
   As with vessels.

III. Eligibility:
   (a) Determined on a fishery by fishery basis by 1) having at least one landing in the qualifying years used by the vessels and 2) having recent participation in the fishery as defined by at least one landing per year in the fishery in the last two years prior to adoption of a rationalization program by the Council.
   (b) As a second option, eligibility could be determined by a point system modeled after that used by the State of Alaska in SE Alaska for limited entry in the Dungeness, King, and Tanner crab fisheries there.
   (c) Eligibility will include:
      1. Skippers only
      2. All crew

IV. Qualification period:
   As with vessels.

V. Distribution per Captain:
   i) Shares based on landings (personal catch history based on ADF&G fish tickets).
   ii) Shares distributed equally among qualified participants.
   iii) Distribution based on a point system
   iv) A mix of one or more of the above, with a range of 0-50% distributed equally and the balance based on landings and/or points

VI. Distribution for All Crew:
   i) Shares distributed equally among qualified participants.
   ii) Distribution based on a point system
   iii) A mix of one or more of the above, with a range of 0-50% distributed equally and the balance based on points

VII. Transferability criteria:
   (1) Sale of QS
      a) QS is fully transferable
      b) QS is only transferable to active participants
   (2) IFQ leasing
      a) IFQ is fully leaseable
      b) IFQ is only leaseable to active participants
      c) IFQ is leaseable to smaller, distant fisheries (i.e. St. Mathew, Pribilof and Adak King Crab)
      d) No leasing of IFQ

Use it or lose it would apply to all skipper/crew QS, with a one year hardship provision. If the skipper/crew QS holder does
not maintain active status in the fishery they would be required to transfer their QS to another active participant in the fishery.

An active participant is defined by participation in at least one delivery in the subject crab fishery in the last year as evidenced by ADF&G fish ticket or affidavit from the vessel owner.

VIII. Skipper/Crew on Board requirements

2) No onboard requirement for skipper/crew with QS

b) Initial issues of QS would not be required to be onboard the vessel, subsequent transferees would be required to be onboard the vessel when harvesting QS.

c) Requirement for skipper/crew to be onboard vessel when harvesting QS.

Option 2: First Right of Refusal on Quota Share Transfers

1) A range of 0-20% of initially issued QS would be designated as crew shares, these shares would remain as a separate class of QS. Transfer of initially issued QS must include transfer of 0-20% crew shares for which there will be a first right of refusal for eligible crew to buy. The owner of the QS being offered for sale would have to give notice to NMF's RAM division of the impending sale. RAM in turn could then notify the fleet of the available QS. After this initial transfer crew QS will be available for transfer to any active participant in the fishery.

2) If a qualified buyer cannot be found then 50% of the 0-20% crew QS offered for sale would have to be gifted to a pool available to qualified buyers and the remaining 50% of the 0-20% could then be offered for sale on the open market to any buyer.

3) The crew pool of QS would be overseen by RAM. The proceeds from the sale of this QS by auction to the highest qualified bidder would go into a dedicated low interest loan program for crew.

4) Time frame for the first right of refusal is 1-3 months.

5) Eligibility of a U.S. citizen to purchase crew shares would be defined by participation in at least one delivery in the subject crab fishery in the last year as evidenced by ADF&G fish ticket or affidavit from the vessel owner.

Option 3. Protection of traditional and historical crew share percentages with no sunset based on the Canadian Groundfish Development Authority Code of Conduct.

Option 4. A low-interest rate loan program for skipper and crew purchases of QS would be established or made part of the existing loan program for IFQ purchases.

Option 5. Owner On Board Option

A. A portion (range of 5-50%) of the quota shares initially issued to fishers/harvesters would be designated as “owner on board.”

B. All initial issues (individual and corporate) would be grandfathered as not being required to be aboard the vessel to fish shares initially issued as “owner on board” shares.

C. Shares transferred to initial issues in the first (range of 3-7 years) of the program would be considered the same as shares initially issued.

D. “Owner on board” shares transferred by initial issues, after the grace period, would require the recipient to be aboard the vessel to harvest the IFQ/ITQ.
e. In cases of hardship (injury, medical incapacity, loss of vessel, etc.) a holder of "owner on board" quota shares may, upon documentation and approval, transfer or lease his or her shares for the term of the hardship/disability or a maximum of (Range 1-3 years)
f. Shares issued to CDQ groups are exempt from owner on board requirements

1.8.2 Overage Provisions:
(a) Allowances for overages during last trip:
   Option 1. 1%
   Option 2. 3%
   Option 3. 5%
(b) Any overage would be deducted from the QS holder's IFQs (during the next season) at:
   Option 1. same amount as average
   Option 2. twice the amount as average

1.8.3 AFA vessels option: Eliminate AFA harvester sideboard caps on crab species upon implementation.

1.8.4 Discussion in the analysis of season opening dates under an IFQ program and the potential for concurrent seasons and multi-species fishing to reduce bycatch.

1.8.5 Sideboards.
Vessels that qualify for QS in the rationalized crab fisheries would be limited to their catch history in GOA fisheries. The years used for qualification or the distribution of QS in the rationalized crab fisheries would be the same years used to establish catch histories in the GOA fisheries. The Council also requests that the Board of Fish address sideboard issues in State Waters fisheries.

2. Processing Sector Elements

2.1 Eligible Processors - processors (including catcher-processors) eligible to receive an initial allocation of processing quota shares (PQs) are defined as follows:
   (a) U.S. Corporation or partnership (not individual facilities) that
   (b) processed crab for any crab fishery included in the IFQ program during 1998 or 1999.

2.2 Categories of Processing Quota Shares
2.2.1 Crab fishery categories - processing quota shares may be issued for the following crab fisheries:
   Bristol Bay red king
   Brown king (Al Golden king)
   Adak red king
   Dutch Harbor red king
   Pribilof Islands blue king
   St. Matthew blue king
   Pribilof Islands red king
   Opilio (EBS snow crab)
   E Aï tanner
   W Aï tanner
   Bairdi (EBS tanner)

2.2.2 Regional categories - processing quota shares will be categorized into two regions if regionalization is adopted (see Regionalization Elements for description of regions):
   (a) Northern Region - All areas on the Bering Sea north of 56° 20' N. Latitude
   (b) Southern Region - All areas on the Bering Sea south of 56° 20' N. Latitude and all areas on the Gulf of Alaska
2.3 Initial allocation of processing quota shares

Option 1. Processing quota shares shall be initially issued to Eligible Processors based on three-year average processing history for each fishery, determined by the buyer of record listed on ADF&G fish tickets, as follows:

(a) 1997 - 1999 for Bristol Bay red king crab
(b) 1996 - 1998 for Pribilof red king crab
(c) 1996 - 1998 for Pribilof blue crab
(d) 1996 - 1998 for St. Matthew blue crab
(e) 1997 - 1999 for opilio crab
(f) Baird crab based on 50/50 combination of processing history for BBRKC and opilio
(g) 1996/97, 1997/98 and 1998/99 seasons for brown king crab
(h) The council shall/may determine, if the 4 species not included are appropriate for PQs, Dutch Harbor red king, E AI tanner, W AI tanner, and Adak red king

Option 2. Processing quota shares shall be initially issued to Eligible Processors based on the processing history for Opilio, BBRKC or brown king crab, determined by the buyer of record listed on ADF&G fish tickets, using the best 4 seasons during the 1996 - 2000 seasons.

Option 3. If an eligible processor is no longer active in the crab fisheries, the history of the processor will be allocated to open access delivery (Class B) shares but will retain its regional designation.

2.4 Percentage of season's GHL or TAC for which IPQs are distributed:

2.4.1 IPQs will be issued for a portion of the season's GHL or TAC for each species to provide open access delivery processing as a means to enhance price competition:

Option 1 100% GHL (or TAC) would be issued as IPQs
Option 2 90% GHL (or TAC) would be issued as IPQs - the remaining 10% would be considered open access delivery.
Option 3 80% of GHL (or TAC) would be issued as IPQs - the remaining 20% would be considered open access delivery.
Option 4 70% of GHL (or TAC) would be issued as IPQs - the remaining 30% would be considered open access delivery.
Option 5 0% - no processing shares

2.5 Implementation of the open access delivery processing portion of the fishery:

Catcher vessel QS/IPQs are categorized into Class A and Class B shares. Purchases of crab caught with Class A shares would count against IPQs while purchases of crab caught with Class B shares would not. Crab caught with Class B shares may be purchased by any processor on an open-access delivery basis.

2.6 Transferability of processing shares - provisions for transferability include the following:

(a) Processing quota shares and IPQs would be freely transferable, including leasing
(b) IPQs may be used by any facility of the Eligible Processor (without transferring or leasing)
(c) Processing quota shares and IPQs categorized for one region cannot be transferred to a processor for use in a different region.

2.7 Ownership and use caps - different percentage caps may be chosen for each fishery:

2.7.1 Ownership caps

The three-year average shall be the three-year aggregate pounds purchased by each Eligible Processor in a fishery divided by the three-year aggregate pounds purchased by all Eligible Processors in that fishery.
Option 1. Based on maximum share for processors by fishery plus a percentage of 5%, 10% or 15%.
Option 2. Ownership cap equal to largest share issued to processor at initial issuance.
Option 3. Range of caps from average to maximum with grandfather clause.

PQS ownership caps should be analyzed using both the individual and collective rule and the threshold ownership rule using 10%, 25%, and 50% minimum ownership standards for inclusion in calculating the cap. PQS ownership caps are at the company level.

2.7.2 Use caps
Option 1. Annual use caps ranging from 30% - 60% of the GHL (or TAC) by fishery.
Option 2. Annual use caps of quota share equal to the largest PQ holder's share in each specific fishery.

2.8 Other Optional Provisions:
2.8.1 The crab processing caps enacted by Section 211(c)(2)(A) of the AFA would be terminated.

2.8.2 Penalties - Eligible Processors must fully utilize their processing quota shares in the season while a fishery is open or lose the amount that is not utilized for one season in the next season.
(a) Distribution of unused quota:
   Option 1. Distributed to other processors proportionally
   Option 2. Distributed to other processors equally
   Option 3. Allocate to open season delivery
   Suboption 1. If QS is reclassified from Class A to Class B:
      a) reclassification of Class A QS will be distributed proportionally among all Class A QS holders
      b) reclassification of Class A QS will be distributed equally among all Class A QS holders
      c) reclassification of the unused Class A QS to B class
   All three options for reclassification of these temporary B QS should require a regionalization designation to maintain the appropriate regional allocations. Additionally, include discussion of reasons a processor may not use its quota, including physical inability (e.g., plant breakdown); harvesters being unable to deliver when the processor is able to process; bona fide price disagreement; concern over exceedance of processor quota allotment (when there is only a small amount of processor quota remaining); and bonafide dispute over quality of the crab.

(b) Hardship provisions

2.8.3 Option for use of a private sector managed (non-governmental), binding arbitration process, for failed price negotiations, between fishermen and processors. To the extent that this may be a key design feature in a two pie IFQ program, the analysis should consider the mechanics and applicability to a two pie IFQ program.

Considerations for analysis of binding arbitration:
Individuals and groups of fishermen holding QS will negotiate independently and separately with individual processing companies holding PQs at any time, before season openings, the earlier the better, to seek best market prices;
Only required if negotiations fail to achieve acceptable price to both parties;
Private-sector financed and managed and conducted on a company-by-company basis;
Individuals, groups and companies that request binding arbitration jointly bear the cost;
Requires statutory definition, along with harvesting and processing quota shares;
Harvesting and processing sectors must agree to participate;
Agreements on price settlements are binding and will likely require an enforcement mechanism (i.e. contracts or statement of agreement between parties);

Biological seasons, overlap of the biological seasons, crab quality, weather and other considerations need to be contemplated in development of the process framework;

Need to establish criteria for pool of arbitrators

Elements of the binding arbitration process:

Requires independent market analyses for specified BSAI king, tanner (Bairdi) and snow (Opilio) crab species by a designated market analyst to be chosen by industry (fishermen and processors);

Arbitrator, chosen by industry (fishermen and processors) before start of negotiations, sits in on presentation of market analysis but does not sit in on negotiations;

Need to establish and adhere to deadlines for:
(a) Presentation of market analysis to industry (i.e. 8 to 10 weeks prior to season opening)
(b) Agreement on date to go to arbitration
   (1) Pre season
   (2) In season
(c) Agreement on deadline for price settlement
   (1) Date certain
   (2) or based on % of GHL caught

Arbitration will require the parties to submit best price and arbitrator picks one or the other price, but does not split the difference or other options

Options to establish a price:

Option 1. Prices established are a minimum price, based on market analysis, with processors agreeing to pay at least the minimum price (allows variability on prices between companies).

Option 2. Formula approach similar to some Bering Sea pollock operations, where the fleets share in the percentage of the sale price of the products. In this case, the arbitrator would decide the formula percentage.

3. Regionalization Elements

3.1 Two regions are proposed:
(a) Northern Region - All areas on the Bering Sea north of 56° 20' N. Latitude. (This region includes the Pribilof Islands and all other Bering Sea Islands lying to the north. The region also includes all communities on Bristol Bay including Port Heiden but excludes Port Moller and all communities lying westward of Port Moller.)
(b) Southern Region - All areas on the Bering Sea south of 56° 20' N. Latitude and all areas on the Gulf of Alaska (This region includes all parts of the Alaska Peninsula westward of and including Port Moller. All of the Aleutian Islands are included in the South Region as are all ports and communities on the Gulf of Alaska.)

Suboption: Regional categories for deliveries of Aleutian Islands brown king and Adak red king crab split into a "Western" (west of 174 degrees West longitude) and "Eastern" (east of 174 degrees West) area with an option that up to 50% of W AI brown king crab must be processed in the W AI region.

3.2 Regional categorization of processing and/or harvesting quota shares

3.2.1 Categorization will be based on all historical landings. Periods used to determine regional percentages are as follows (two options):
Option 1. 1995 - 1999
Option 2. 1997 - 1999

3.2.2 Options for the harvesting sector:
Option 1. all CV quota shares are categorized by region
Option 2. only Class A CV quota shares are categorized by region

3.2.3 Options for the processor sector:
Option 1. Processing quota shares and IPQs are categorized by region
Option 2. Regional restrictions apply to deliveries made on an open access delivery basis

3.2.4 Once assigned to a region, processing and/or harvesting quota shares cannot be reassigned to a different region.

3.2.5 Options for addressing potential mismatch of harvesting and processing shares within the region.
1. The base years for determining processing shares and the base period for determining the share assigned to each region shall be the same.
2. If the cumulative harvester quota associated with each region differs from the total regional share, by species, the harvester share, by species, shall be adjusted, up or down, in the following manner:
   a. The adjustment shall apply only to harvesters with share in both regions.
   b. The adjustment shall be made on a pro rata basis to each harvester, so that the total share among those harvesters, by region, equals the total share assigned to each region.
3. The adjustment shall only be on shares that carry a regional designation; Class B quota would be excluded from the adjustment.

3.3 Delivery and processing restrictions - the following provisions apply to the delivery and processing of crab with IFQs or IPQs that are categorized by region:
(a) Crab harvested withcatcher vessel IFQs categorized for a region must be delivered for processing within the designated region
(b) Crab purchased with IPQs categorized for a region must be processed within the designated region.

3.4 Alternative Regionalization/Community Protection Option: Processing history may establish the region of origin (in which history was established) with permission of the community in which the crab was processed in the base period. The processing QS may change regions with negotiated agreement between processors and the originating communities. These agreements will be filed with the Secretary of Commerce 30 days prior to the quota share leaving the community.

Processing history may leave an eligible community of origin in which the history was established with permission of the eligible community. The processing QS may change communities with negotiated agreement between the processor and the originating (eligible) community; these agreements will be filed with the Secretary of commerce thirty days prior to the quota share leaving the eligible community.

"Eligible communities" shall be defined as any community in which aggregate (community) landings exceeded 0.8% of the species for which processor QS is awarded during the qualifying period.

"Community landings" for closed fisheries will be determined using a formula that mirrors "processor option one" as defined in the current analysis.
4. Community Development Allocation (based on existing CDQ program):
   Option 1. No change from existing program
   Option 2. Expand existing program to all crab fisheries under this analysis.
   Option 3. Increase for all species of crab to 10%
   Option 4. Increase for all species of crab to 12.5%
   Option 5. For the Aleutian Islands brown king crab fishery, the percentage of resource not utilized (difference between actual catch and GHL) during base period is allocated to the community of Adak.

5. Program Duration and Review
   The following options apply to all program elements:
   Option 1. Program review after 2 years and every 5 years thereafter to objectively measure the success of the program, including benefits and impacts to harvesters (including vessel owners, skippers and crew), processors and communities by addressing concerns, goals and objectives identified in the Crab Rationalization problem statement and the Magnuson Stevens Act standards. This review should include analysis of post-rationalization impacts to coastal communities, harvesters and processors in terms of economic impacts and options for mitigating those impacts.
   Option 2. Program review every 5 years to objectively measure the success of the program, including benefits and impacts to harvesters (including vessel owners, skippers and crew), processors and communities by addressing concerns, goals and objectives identified in the Crab Rationalization problem statement and the Magnuson Stevens Act standards. This review should include analysis of post-rationalization impacts to coastal communities, harvesters and processors in terms of economic impacts and options for mitigating those impacts.
   Option 3. No program review
   Option 4. Sunset in 5 or 7 years

6. Cooperative model options:

6.1 Coop model with the following elements and options:

State Voluntary Cooperative: The purpose of the voluntary cooperative for BSAI crab fisheries is to allow harvesting, processing and community interests to share in the benefits of a rationalized fishery, enhanced by formal cooperation between buyers and sellers. A cooperative structure encourages entities with common and mutual interests to approach those interests through a common perspective.

1) Individual harvesting and processing histories are issued to both catcher and processors.
   (Harvesters under Section 1.3.2 a) which meet program qualifications. Processors under Section 2.1, 2.3, and 2.4 (Options 1-4) which meet qualifications of the program).

3) Cooperatives may be formed through contractual agreements among fishermen who wish to join into a cooperative with one or more processors holding processor history for one or more species of crab. Fleet consolidation within this cooperative may occur either by internal history leasing and vessel retirement or by history trading within the original cooperative or to a different cooperative.

5.3) There must be at least 2 or more unique vessels/owners to form a coop with a processor. Vessels are not restricted to deliver to a particular plant or processing company.

Suboption: There must be at least 4 or more unique vessels engaged in one or more crab fisheries to form a coop with a processor. Vessels are not restricted to deliver to a particular plant or processing company.
4) New processors may enter the fishery by acquiring processor history from an initial issuee. Cooperative formation with a new processor lacking processing history requires the new processor to offer both an adequate payment to the vessel and to the originating plant where the prior processing history resided.

5) Custom processing would continue to be allowed within this rationalization proposal.

6) Provide an opportunity for communities. Processing history may leave the region of origin (in which history was established) with permission of the community in which the crab was processed in the base period. The processing QS may change regions with negotiated agreement between processors and the originating communities. These agreements will be filed with the Secretary of Commerce 90 days prior to the quota share leaving the community.

Processing history may leave an eligible community of origin in which the history was established with permission of the eligible community. The processing QS may change communities with negotiated agreement between the processor and the originating (eligible) community; these agreements will be filed with the Secretary of commerce thirty days prior to the quota share leaving the eligible community.

"Eligible communities' shall be defined as any community in which aggregate (community) landings exceeded 0-8% of the species for which processor QS is awarded during the qualifying period.

"Community landings" for closed fisheries will be determined using a formula that mirrors "processor option one" as defined in the current analysis.

7) Regional Categories:
   Option 1. No regional categories.
   Option 2. Harvester cooperatives' regional categories for deliveries of Bering Sea crab as in paragraph 1.3.4.
   Option 3. Harvester cooperatives' regional categories for deliveries of Aleutian Islands brown king and Adak red king crab split into a "Western" (west of 174 degrees West longitude) and "Eastern" (east of 174 degrees West) area.

8) Duration of coop agreements.
   Option 1. 2 years
   Option 2. 4 years
   Option 3. 6 years

9) Community Development Allocation (under existing CDQ program)
   Option 1. No change from existing program
   Option 2. Expand existing program to all crab fisheries under this analysis.
   Option 3. Increase for all species of crab to 10%
   Option 4. Increase for all species of crab to 12.5%
   Option 5. For the Aleutian Islands brown king crab fishery, the percentage of resource not utilized (difference between actual catch and GHL) during base period is allocated to the community of Adak.

10) Observer requirements. For crab vessels greater than 60' in length, maintain observer coverage at:
    Option 1. Status quo.
    Option 2. 10%
    Option 3. 20%
    Option 4. 30%
11) Length of program:

Option 1. Sunset in 5 years
Option 2. Program review to objectively measure the success of the program by addressing concerns identified in the Crab Rationalization problem statement and the Magnuson Stevens Act standards.
   Suboption 1. Program review after 2 years
   Suboption 2. Program review every 3 years

12) Option for skipper and crew members: Protection of traditional and historical crew share percentages with no sunset.

13) Catch Accounting - All landings including deadloss will be counted against a vessel's quota. Options for treatment of incidental catch are as follows:

Option 1. No discards of legal crab will be allowed, and sufficient quota for legal crab must be available.
Option 2. No discards of "marketable" crab will be allowed for opilio crab and sufficient quota for "marketable" crab must be available. (Legal size for opilio is 3.1 inches, but the industry standard is 4 inches.)
Option 3. No discards of opilio crab with a carapace of 4 inches or greater in width.
Option 4. Discards of incidentally caught crab will be allowed. (This option would allow, for example, incidental catch of bairdi crab in a red king crab fishery to be discarded without counting against a vessel's bairdi quota.)

6.2 Use a co-op model that would have the following options:

1. Formation of Coop

A. There would be one co-op formed with each eligible crab processor. Coops would be formed with the processor at the company level, not the plant level. Two or more vessels are sufficient to form a co-op. The co-op would handle all species of crab.

B. Crab processor eligibility would be determined using the qualifying period identified for allocation of initial IPQs (Eligible Processors, including C/P as revised in 1.7.2.3 option 5. Processors eligible to receive an initial allocation of processing quota shares (PQs) are defined as follows: U.S. Corporation or partnership (not individual facilities) that processed crab for any crab fishery included in the IFQ program during 1998 or 1999.)

C. Each crab vessel is eligible to join only one co-op. Which co-op the vessel is eligible to join is determined based on which eligible processor that vessel delivered the highest pounds of crab to during the processor qualifying period used for 1.B above.

D. Vessels that join a co-op will have their catch history from the vessel qualifying period protected. A vessel that does not elect to join in the co-op for which it is eligible remains under an open access fishery.

E. Each vessel's catch history is determined using the formulas identified for calculation of initial quota shares selected under section 1.4 as modified above.

F. A co-op agreement would be filed annually with the Secretary of Commerce, after review by the Council, before a co-op's catch history would be set aside for their exclusive use. The processor and each boat that is eligible and elects to join the co-op must sign the agreement. Only the histories of those boats that sign will be protected.

2. Operation of Coop

A. The co-op is responsible for allocating fishing quotas for each species of crab to the co-op members. Each vessel is entitled to one vote, and decisions will be made by majority vote unless otherwise agreed to by the co-op members.
B. The processor with which the coop is formed gets

i. first right of refusal for all crab harvested by coop members, with coop free to deliver crab to another eligible processor if no agreement is reached; or
ii. a guaranteed amount of coop crab to be delivered, with the amount ranging from 10% to 100%, the remainder of which can be delivered by the coop to either
   I. any eligible processor, or
   II. any processor, eligible or not (i.e., new entrant allowed).

C. If the processor buys the coop crab, it may process the crab itself or may arrange to have it processed by any other crab processor (i.e., the processor acts as broker for coop crab if it does not wish to process).

D. In the alternative, the processor may elect to have the coop act as its own broker for crab the processor does not wish to buy, with the coop free to either sell the crab to another processor or allow individual vessels to make arrangements on their own.

E. Cooperatives may arrange to swap, purchase, or trade deliveries of crab by mutual agreement of the cooperatives concerned.

3. Movement of Vessels Between Coops

A. Three alternatives would be analyzed.
   i. Vessels are free to transfer between coops once each year, with agreement of the coop to which they are moving. Vessel catch history goes to new coop.
   ii. Vessels may move to a new coop after spending one year in the open access fishery. Coop must agree to entry of new vessel. Vessel catch history is not protected in open access, but is restored upon entering new coop.
   iii. Vessels may only leave coop with agreement of the processor. Catch history only goes with vessel if processor agrees.

B. Vessels that did not join a coop in the first year coops are formed may join the coop of the processor to which they delivered the highest pounds delivered of crab in the previous year after spending one year in the open access fishery.

4. Regionalization, Etc.
   A. All other options in the June Draft Council motion regarding regionalization, skipper/crew shares, etc. would be applied to the Lead Fishery Cooperative Model based on the options identified for analysis in those areas.

5. Taxes
   Require owners of CP vessels to pay a fee equivalent to the tax that would have been imposed had the CP operated in State waters.

Further, the Council reaffirmed its earlier policy statement that catch history in the crab fisheries beyond December 31, 1998 may not count in future rationalization programs, including a fishery cooperative system.

The Initial Council Review Draft of the plurality coop is complete. Further analysis should focus on the options for an individual quota framework - both one-pie and two-pie - for management of the BSAI crab fisheries. The analysis should include a discussion of the use of the voluntary cooperative as a fishery management tool within the individual quota framework.
The analysis should include information on the alternative fisheries that harvesters and processors have participated in, so that alternative allocation options can be better assessed based on an individual harvester or processor's dependence on a particular crab fishery.

The amount of stranded capital in the processing sector should be analyzed. Options for addressing the stranded processing capital issue, such as a processor buyback program, should also be discussed.

The effect of regionalization on ownership caps should be added to the analysis.

The analysis should include a qualitative discussion of cumulative impacts of the options on different classes of vessels.

Motion to require certain socioeconomic data from the crab catching, processing, and catcher/processors participants during implementation of the crab rationalization program. This information is to include, but not be limited to: harvest and production costs; expenditure patterns; vessel ownership data including vessel identifiers (name and address file); and employment and earnings data. Individual socioeconomic data will be collected from fishing and processing entities and tabulated by the resource agencies, and maintained in a secure and confidential manner for analysis by the State and Federal fishery management agencies and the NPFMC.

In addition, the analysis should include the customary information that meets the requirements of an IRFA, RIR, EA, etc.

Adopt by reference the recommendations on page 10 of the Final AP minutes of 2/9/02 and the SSC recommendations regarding improvements and changes to the crab rationalization document outlined in the SSC minutes of 2/7/02.

The state's current authority to set GHLs will be modified to include the setting of TACs under the BSAI Crab FMP.

Finally, the Council requested that the Analysis include to the extent possible a comprehensive qualitative and, where possible, quantitative consideration and examination of the following:

A. Processor ownership interest in BSAI crab harvesting vessels
B. CV ownership interest in processors
C. Processor ownership interest in BSAI crab fishing history
D. CV ownership interest in BSAI processing history
E. Foreign ownership interest in the BSAI crab processing sector
F. Foreign ownership in the BSAI crab harvesting sector
G. The percentage of Harvester QS that will be allocated to the processor sector as a result of processor sector ownership interest in BSAI crab harvesting vessels and BSAI crab fishing history.
H. The percentage of processor PQs that will be allocated to the harvesting sector as a result of harvesting sector ownership interests in the BSAI crab processing sector and BSAI crab processing sector history including CPs.
I. The anti-competitive impacts and economic barriers that may result from the cumulative and combined impacts of Individual Processing Quotas (IPQs) coupled with Regionalization. For example, are the combined impacts and barriers of IPQs and Regionalization different than the individual and respective impacts of IPQs or Regionalization and, if so, to what extent.
J. The general economic and social impacts and the impacts on free and open competition and markets of IPQs, including the Halverson report and Matulich report on a 2-pie IFQ-type program.
K. The impacts of IPQs on free markets and vigorous competition in the BSAI crab industry that may result from (1) processor sector ownership interest in BSAI crab harvesting vessels, (2) processor sector ownership interest in BSAI crab fishing history, and (3) the percentage of harvester QS that may be allocated to the processor sector as a result of processor sector ownership interest in BSAI crab vessels and BSAI crab fishing history.
L. Staff should provide information describing the issues related to recency and potential proxy QS from other crab fisheries for determining the initial allocations in the EAI tanner, WAI tanner, and EAI (Dutch Harbor) red king crab fisheries. The State of Alaska should be consulted on potential options which can be implemented as trailing amendments.

M. An analysis of the implications of rationalization on BSAI and GOA groundfish and other crab fisheries (including Tanneri and Pribilof Islands brown king crab fisheries) shall be included in the analysis.

N. A comprehensive section on environmental consequences (including bycatch, high grading, stock rebuilding) of the rationalization alternatives shall be included in the analysis.

O. An analysis of the impact of the crab vessel buyback on the rationalization alternatives (including the distribution of allocations and caps of harvester and processor shares and the regionalization alternatives) shall be included in the analysis.

P. The analysis shall include a discussion of the cost recovery program and its interaction with the current State fee program.

Q. The general impacts of IPQs on free markets and vigorous competition, price mechanisms, costs, distribution of rents and other competitive mechanisms:
   (1) in the BSAI crab processor sector,
   (2) in the BSAI crab harvester sector,
   (3) in the BSAI crab industry,
   (4) in the non-AFA processor sector,
   (5) in the Kodiak processor sector,
   (6) in the BSAI and GOA fishing industry,
   (7) that may result from mergers, acquisitions, combinations and concentrations in the processing sector,
   (8) that may result from foreign ownership interest in the processing sector.

R. Restrictions of ownership of Harvester QS by processing entities that have more than 25% foreign ownership interest.

S. Spillover effects on other fisheries.

T. Include a discussion of the percent of GHL purchased by non-eligible processors on an annual basis and the effect on the final QS pool.

U. Include a conceptual discussion on how co-op management might work in the harvesting and processing sectors and a comparison of IFQs/IPQs, to co-ops including the Dooley-Hall co-op structure in addressing the problem statement.

V. Conservation benefits and other implications of each component of the program (IFQ, IPQ, Regionalization Co-ops).
   Present the analysis of these issues in a consolidated section in the EA/BIR.
Implications of the Halibut and Sablefish Study for Crab Rationalization

While the halibut and sablefish study provides empirical evidence that a harvester-only IFQ redistributed wealth from processors to harvesters in those fisheries, the question remains if the results are qualitatively exportable to North Pacific crab fisheries. The halibut and sablefish fisheries are very different from the crab fisheries. Prior to IFQs, for example, as many as 5,000 vessels delivered halibut to 104 firms statewide. The report noted, however, that the processing sector was relatively concentrated, with 12 firms accounting for 71% of pre-IFQ statewide halibut purchases and nine firms accounting for 68% of statewide sablefish purchases. The crab industry structure, in contrast, appears to be quite different. There are roughly 300 LLP-qualified harvesters and at most 18 processors, excluding the LLP-qualified catcher/processors, depending on year and fishery.

The theoretical evidence provided by Matulich, Mittelhammer and Reberte (1996) and Matulich and Sever (1999) argues that season elongation from quota trading and fleet consolidation creates excess processing capacity which will be bid away by processors through higher exvessel price offers. If processors are sufficiently concentrated to exercise market power over harvesters after IFQs, then, it is conceivable processors might tacitly collude and not raise exvessel price offers to attract more crab.¹ Thus, a cornerstone of whether the qualitative conclusions of the halibut-sablefish study are exportable to crab is the degree of market concentration in the halibut, sablefish and crab fisheries. If halibut and sablefish processing were significantly less concentrated than crab processing, then the conclusions might not be exportable to crab.

¹ Of course, one would also expect to see evidence of such tacit collusion in a concentrated processing sector before the IFQ policy.
Industry concentration is typically measured as a function of the market shares of some or all of the firms in a market. The most common measure of industry market structure/concentration is the four-firm concentration index, C4, which is the share of industry sales accounted for by the four largest firms. It is, of course, arbitrary to focus attention on only the four largest firms. The U.S. government, for example, has also uses an eight-firm concentration index, C8. Another alternative to measure industry concentration is the Herfindahl-Hirschman Index (HHI), which is simply the sum of the squared market shares for each firm in the industry. This concentration index is a function of all firms’ market shares. Empirical studies produce similar results regardless of the concentration index.

The C4, C8 and HHI concentration indexes are calculated below for each of four fisheries: halibut, sablefish, Bristol Bay red king crab and BSAI opilio crab. Both halibut and sablefish are managed according to geographic management areas, respectively, along the coast of Alaska. It follows that delivery/buying markets are reasonably well defined by those harvesting areas, so that market share and concentration indexes reflect the area-specific delivery/buying patterns. Fish ticket data was used to aggregate IFQ area-specific catch delivered to the various processing/buying plants. The COAR data was then used to identify plant-parent firm ownership. Firm-level market share was calculated as the cumulative percent of area-wide catch delivered to a unique firm. These calculations were done for each of the IPHC/IFQ management areas.² Market share and concentration indexes were calculated for the two, pre-IFQ years, 1992 and 1993.

² The sablefish IFQ management areas were overlaid on state statistical areas to determine catch origin and processing/buying destination.
A similar approach was taken to measure market share and processing sector concentration for Bristol Bay red king crab and BSAI opilio crab fisheries. However, there was only one management area for each crab fishery. The two years considered were 1998 and 1999.3

Results

The three concentration indexes are presented in Table 1 for each of the four species, by year. Both a weighted average mean (where each area-specific concentration index is weighted by area-specific catch relative to statewide landings) and the statewide low and high index range are presented for halibut and sablefish. Since both Bristol Bay red king crab and BSAI opilio crab are harvested in a single area, no range is reported.

<table>
<thead>
<tr>
<th>Concentration Index</th>
<th>Halibut</th>
<th>Sablefish</th>
<th>B.B. Red King Crab</th>
<th>Opilio Crab</th>
</tr>
</thead>
<tbody>
<tr>
<td>C4 mean</td>
<td>57.1</td>
<td>54.9</td>
<td>58.6</td>
<td>66.5</td>
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<td>51.3-100</td>
<td>58.3-100</td>
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<td>77.1-100</td>
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<td>864-5128</td>
<td>708-100</td>
<td>876-9420</td>
</tr>
</tbody>
</table>

The "mean" is the statewide, weighted average processing/buying concentration index across all IFQ statistical areas in which halibut and sablefish were harvested. The "range" reports the area-specific lowest and highest concentration indexes.

3 1999 is the last year for which processing history is being considered in the initial allocation of crab quota.
There is striking similarity in buying/processing concentration across species; the buying/processing sector was concentrated in all four fisheries. The halibut industry was least concentrated. However, the top four firms still averaged in excess of 54% of the market share, by region. The top eight halibut firms captured, on average, more than three-quarters of the market, while the least concentrated catch area reflects nearly the same level of overall concentration as the average. Sablefish processing was somewhat more concentrated than halibut processing. The top four firms averaged 59-67% of the market share, depending on year. The top eight firms captured, on average, 82-89% of the market.

Processing concentration in the two crab fisheries was very similar to sablefish. The four largest buyers captured 63-65% of the market, while the top eight captured 89-94% of the market.

Not surprisingly, the Herfindahl-Hirschman Index is very consistent across species and years. It provides similar evidence of market concentration as the C4 and C8 concentration indexes.

Implications

Both halibut and sablefish processing sectors were concentrated before the introduction of IFQs (and became even more concentrated after introduction of IFQs). Despite the high degree of market concentration, halibut and sablefish processors did not exercise market power over the atomistic harvesting sectors. Ex-vessel prices paid to harvesters after IFQs more than doubled for halibut, on a 65% increase in wholesale price. Yet, quasi rents retained by processors dropped 56% after IFQs were implemented in both fisheries. IFQs liberated the halibut market, allowing more fish to be diverted into the higher-value fresh market. Sablefish
experienced no such product form change; it remains a frozen product destined for Asian markets. Accordingly, changes in the sablefish market are more likely to represent what one should expect if the Bristol Bay red king crab and BSAI opilio fisheries are rationalized with a harvester-only IFQ. In the case of sablefish, the processing sector was even more concentrated than in the halibut fishery. Nevertheless, this concentration could not avert processing quasi rents from dropping an estimated 75% in the sablefish industry following implementation of IFQs.

The empirical evidence that market shares and industry concentration are quite similar across halibut, sablefish, Bristol Bay red king crab and BSAI opilio crab fisheries suggests that market power among crab processors is unlikely to be an adequate deterrent to collapsing quasi rents under a harvester-only IFQ crab rationalization design. Differential market power in the selling sectors (during price formation) portends potentially larger redistribution of quasi rents from crab processors to harvesters. The harvesting sector was (is) more concentrated in the crab fisheries at the point of price formation by virtue of an effective, monopolistic bargaining association. Thus, if the similarly concentrated halibut and sablefish processing sectors were unable to exercise market power over harvesting sectors that were price takers, one should expect at least a qualitatively similar redistribution in crab fisheries, where countervailing power exists. Simply put, the fleet consolidation and season elongation forces that led to a redistribution of quasi rents from processors to harvesters in the IFQ halibut and sablefish fisheries will exist under a similar crab rationalization design. The extent of redistribution that would occur under a harvester-only IFQ remains an empirical question.
Preliminary Materials for the
North Pacific Fishery Management Council on the
Environmental Impact Statement for the
Fishery Management Plan for Bering Sea/Aleutian Island King and Tanner Crabs

April 3, 2002

Lead Agencies: National Marine Fisheries Service (NMFS)
Alaska Region, Juneau
In consultation with the
North Pacific Fishery Management Council (NPFMC)

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Introduction

This report provides the North Pacific Fishery Management Council (Council) with preliminary materials for making decisions for the Environmental Impact Statement (EIS) for the Fishery Management Plan for Bering Sea/Aleutian Island King and Tanner Crabs (FMP). The primary purpose of this report is to provide information to the Council in making its recommendations on the range of alternatives to be addressed in the EIS. It provides a preliminary purpose and need for the action, a description of the scope of the EIS, a summary of the comments received during the scoping public comment period, the environmental and socioeconomic issues identified during scoping and the Council process, and describe potential alternatives. Prior to drafting an EIS, the lead agency must determine the precise nature and extent of the proposed action, the range of alternatives, the specific impacts to be evaluated, and the methods used to determine their evaluation.

Included in this report are excerpts on National Environmental Policy Act (NEPA) guidance from the Council on Environmental Quality (CEQ) regulations, The NEPA Book (Bass et al. 2001) and How to Write Quality EISs and EAs (The Shipley Group 1998) to assist the Council and the public understand the NEPA requirements for an EIS and how the pieces of an EIS fit together. All excerpts are in italics. Using this guidance, we are asking the Council for input on each section to ensure that the EIS is progressing in a manner that the Council agrees with.

Purpose and Need for the Action

We are asking the Council to review and comment on this purpose and need for the proposed action.

NEPA Guidance: The statement of purpose and need helps the lead agency select the range of alternatives to be evaluated in the EIS. This section explains the underlying purpose and need to which the agency is responding in proposing the alternatives, including the proposed action (40 C.F.R. 1502.13), and the benefits that would be realized by carrying out the proposed action. Make your purpose and need an honest, full explanation of why the agency is considering an action. Explain who wants to do what and where and why they want to do it. The "need" to be addressed in the statement is the overall reason for the action while the "purpose" is a set of specific objectives to be achieved by the action. An EIS need include only those alternatives that would achieve at least some of the federal agency's objectives as set forth in the statement of purpose and need. If the purpose and need for the project are rigorously defined, the number of solutions which will satisfy the conditions can be more readily identified and narrowly limited. If properly described, it also limits the range of alternatives which may be considered reasonable, prudent, and practicable in compliance with the CEQ regulations. The federal agency's preferred alternative is the one that it believes would best fulfill the purpose and need of the action. (Bass et al. 2001, The Shipley Group 1998)

The Council is proposing a new management regime that rationalizes the crab fisheries in the Bering Sea and Aleutian Islands (BSAI). A rationalization program is a limited access program that allocates shares of the harvesting privilege of the crab resource to individuals or groups of harvesters. It may also allocate quota to process crab to processing companies. Allocating shares of the resource significantly changes how people fish and how the fisheries are managed. Thus, a rationalization program potentially impacts the human environment.
Problems facing the BSAI crab fisheries are overcapitalization and the consequent race for fish and resource conservation and management problems. The race for fish exists because harvest capacity greatly exceeds the amount of crab available for harvest. Under the current management regime, each fishery is opened on a specific date with a specified harvest limit. Fishermen compete to harvest as much crab as they can before the harvest limit is reached and the fishery closes. This race for fish causes short, unprofitable seasons, resource and conservation problems, unsafe fishing conditions, and management difficulties. These problems are illustrated by the 2001 Bristol Bay red king crab regular commercial fishery in which 232 vessels caught 7.8 million pounds of crab in 3 days and 8 hours. Due to the management difficulties of determining the harvest of so many vessels in such a short amount time, the preseason guideline harvest level of 6.6 million pounds was exceeded by 1.2 million pounds. Some vessels fished during a storm, causing significant damage to 3 vessels and the loss of one human life at sea. The management tools in the existing FMP do not provide managers with the ability to effectively solve the excess harvesting capacity and resource allocation problems in the BSAI crab fisheries.

The need for a rationalized crab management regime is explained in the Council's BSAI Crab Rationalization Problem Statement:

Vessel owners, processors and coastal communities have made investments in the crab fisheries, and capacity in these fisheries far exceeds available resources. The BSAI crab stocks have also been highly variable and have suffered significant declines. Although three of these stocks are presently under rebuilding plans, the continuing race for fish frustrates conservation efforts. Additionally, the ability of crab harvesters and processors to diversify into other fisheries is severely limited and the economic viability of the crab industry is in jeopardy. Harvesting and processing capacity has expanded to accommodate highly abbreviated seasons, and presently, significant portions of that capacity operate in an economically inefficient manner or are idle between seasons. Many of the concerns identified by the NPFMC at the beginning of the comprehensive rationalization process in 1992 still exist for the BSAI crab fisheries. Problems facing the fishery include:

1. Resource conservation, utilization and management problems;
2. Bycatch and its associated mortalities, and potential landing deadloss;
3. Excess harvesting and processing capacity, as well as low economic returns;
4. Lack of economic stability for harvesters, processors and coastal communities; and
5. High levels of occupational loss of life and injury.

The problem facing the Council, in the continuing process of comprehensive rationalization, is to develop a management program which slows the race for fish, reduces bycatch and its associated mortalities, provides for conservation to increase the efficacy of crab rebuilding strategies, addresses the social and economic concerns of communities, maintains healthy harvesting and processing sectors and promotes efficiency and safety in the harvesting sector. Any such system should seek to retain parity between the harvesting and processing sectors, including healthy, stable and competitive markets.

The purpose of the proposed action is to provide a management program that improves resource conservation and management; decreases bycatch and deadloss; decapitalizes the fisheries; provides economic stability for harvesters, processors, and communities; and improves safety at sea. Given that the problems in the
BSAI crab fisheries are due to overcapacity and the race for fish, the Council has determined that the institution of some form of rationalization program is warranted. The allocation of harvesting and possibly processing privileges would allow harvesters and processors to manage their operations in a more economically efficient manner since they no longer must compete with other users for a portion of the available resource. Rationalization of the harvesting sector eliminates the derby-style race for fish by providing economic incentives to consolidate, thus reducing capacity by decreasing the number of vessels participating in the fishery. The extent of this consolidation depends on efficiency differences across the fleet, how the rationalization program is set up and what restrictions are placed on amassing shares. Shares are expected to be consolidated on the most efficient vessels, thus removing excess capital from the fishery and allowing remaining vessels to fish for a longer amount of time. With a guaranteed share of the catch, fishermen can choose when to fish depending on weather conditions, market considerations, and other factors. Eliminating the race for fish is also thought to decrease the potential for harvest limit overruns that can result from the difficulty of monitoring catches during short fishing seasons with many vessels participating.

Scope of the EIS

We are asking the Council to review and provide input on the proposed scope of the EIS.

NEPA Guidance: A programmatic EIS is prepared for a broad federal action, such as the adoption of a regulation, policy, plan or program. A programmatic EIS is required only when there is a proposed formal agency program. The preparation of a programmatic EIS facilitates and expedites the preparation of subsequent project-specific NEPA documents through the use of a process called "tiering." Tiering refers to the coverage of general matters in broader EISs with subsequent narrower EISs or EAs incorporating by reference the general discussions [from the programmatic EIS] and concentrate solely on the issues specific to the [subsequent projects-specific action]. Although NEPA's legal requirements are the same for both the programmatic EIS and the project-specific EIS, lead agencies generally focus on different factors when preparing each of them. (Bass et al. 2001)

The purpose of the EIS is to provide decisionmakers and the public with an evaluation of the environmental and economic effects of the proposed action and alternatives to the proposed action. The EIS will examine the direct, indirect, and cumulative effects of the alternatives, including the proposed action and status quo, on the physical, biological, and human environment. The EIS will be programmatic in scope because the proposed action is a program. According to the CFPQ regulations, a programmatic EIS is prepared for a broad federal action, such as the adoption of a plan, program or policy. The EIS will also include an environmental assessment of the FMP overall and the effects of the fisheries prosecuted under the FMP.

The scope of this EIS will include decisions before the Council and also before the State of Alaska, which shares the responsibility for the management of BSAI crab. The Council will decide on whether to continue management under the existing crab FMP or to manage crab under a rationalization program. An underlying principle of this EIS is that a rationalization program will affect most aspects of BSAI crab fishery management by making some existing management measures unnecessary and requiring modification of other management measures. If the Council recommends a rationalization program, the State will make changes to State regulations governing the BSAI crab fisheries so that fisheries management responds to the unique demands of the rationalization program. To the extent possible, the EIS will identify alternative
rationalization programs, alternative modifications to the existing management measures in the FMP, and ranges of potential changes to State management measures. Once these have been identified, the EIS will then analyze the effects on the human environment of the status quo and each alternative, and discuss ways to avoid or mitigate any adverse effects. Alternatives considered but rejected will also be briefly addressed in this EIS.

In order to analyze the proposed action, the EIS needs to provide the decisionmakers and the public with a basic understanding of the fishery, including a description of the historic and existing fishery, against which they can judge the alternatives. This EIS will analyze the environmental effects of all activities authorized under the FMP, the current suite of FMP management measures, as amended over the years, and the State and Federal regulations developed to implement those measures. As such, the scope of this analysis is not limited to alternative rationalization programs. By thoroughly analyzing the status quo, subsequent amendments to the FMP can tier off this EIS, thus focusing that NEPA analysis on the issues specific to the future proposed action. The EIS will not present alternatives to specific elements in the FMP that are not impacted by the proposed action because these are outside of the purpose and need for the action and were not brought up during scoping. FMPs are adaptive and alternatives to specific FMP measures can be adopted by the Council in the future, even if they are not foreseeable now and not specifically laid out in this EIS. A programmatic look at the existing FMP will also provide valuable information to the State in managing these fisheries and in making future management decisions beyond those required to manage under a rationalization program.

Summary of Public Scoping

Scoping for the EIS began with the publication of a Notice of Intent in the Federal Register on September 20, 2001 (66 FR 48410). Public comments were initially due to NMFS by November 16, 2001; however, NMFS extended the scoping period until December 10, 2001 to provide the public with more time to develop comments (66 FR 59771). The CEQ has issued informal guidance for the scoping process, which we have followed. The Draft EIS will be based on and prepared from the issues identified in the scoping process. NMFS presented the Council with a report on the results of public scoping in February 2002.

Scoping is an early and open process for determining the scope of issues to be addressed and for identifying the significant issues related to the proposed action. A principal objective of the scoping and public involvement process is to identify a reasonable range of management alternatives that, with adequate analysis, will delineate critical issues and provide a clear basis for distinguishing between those alternatives and selecting a preferred alternative.

NMFS held three public scoping meetings. At the scoping meetings, NMFS requested written comments from the public on the range of alternatives to be analyzed and on the environmental, social, and economic issues to be considered in the analysis. Each scoping meeting was held in conjunction with another formal public meeting on BSAI crab fishery management to make it convenient for interested public to attend. In addition to the Notice of Intent, the scoping meeting was on the agenda for each of these meetings. The scoping meetings were attended by fishermen; vessel owners; fishing and processing industry representatives; representatives from environmental organizations; ADF&G, Council, NMFS, and NOAA-GC staff; community representatives; and the general public. Attendance lists for each meeting are filed in the administrative record and available on request.
Three public scoping meetings were held as follows:

Anchorage, Alaska: Thursday, September 20, 2001, from 2-4 p.m., at the Hilton Hotel, 500 West 3rd Street. This meeting was held in conjunction with the Council’s Crab Plan Team meeting and approximately 15 people attended, including Plan Team members.

Seattle, Washington: One on Monday, October 1, 2001, from 2:30-4:30 p.m., at the Leif Erikson Hall, 2245 N.W. 57th Street. This meeting was in conjunction with the Annual Bering Sea/ Aleutian Islands Crab Industry Meeting and approximately 86 people attended. The second meeting was on Thursday, October 4, 2001, from 7-9 p.m., at the airport Doubletree Hotel, 18740 International Blvd., in conjunction with the October Council meeting. Approximately 23 people attended this meeting.

Summary of Comments and Issues Addressed in Written Comments Received During Scoping

NMFS receive three written comments during the scoping period. Copies of the three comments were provided to the Council at the February Council meeting and are available in the administrative record. The comments are summarized below.

Comment 1: Consider Alaskan Communities.

This comment requested consideration of the impacts of proposed rationalization programs on Alaskan coastal communities, and the City of Unalaska specifically. The comment explained the importance of crab harvesters and processors to the economic viability of the city and the need for the development of an alternative management system that will lead to industry consolidation. The comment focused on four main areas of concern:

• Vessel safety
• Resource management
• Economic stability
• Excess harvesting capacity

The comment also recommended NMFS comply with NEPA and the Magnuson-Stevens Act national standards as it develops the EIS.

Comment 2: Analyze a harvester-only IFQ alternative.

This comment recommended moving forward with a harvester-only individual fishing quota (IFQ) program before analysis of a processor quota (PQ) program. The comment discussed issues in support of an harvester-only IFQ program over a two-pie IFQ program, and asserted that:

• Considering processor quota along with IFQ will delay implementation of an IFQ program because of the complexities of a PQ program,
• IFQs are an accepted and reasonable management tool for rationalization of the BSAI crab fleet, and will address significant resource conservation and management objectives, as well as specific economic and social objectives,
• PQs are not authorized by Congress and there is no precedent PQ program,
• PQ has anti-trust implications,
• PQuS equate to a distribution of ownership rights of a natural resource to a small class of large businesses, many of which are vertically integrated and multinational.

Comment 3: Make conservation and sustainability of biological resources the highest priority for a rationalization program.

This comment recommended that the EIS evaluate rationalization alternatives against the following conservation and community objectives:
• Reward clean fishing (promote low bycatch and minimize impact on ocean floor).
• Create opportunity for future generations of independent fishermen.
• Prevent excessive consolidation and vertical integration of the seafood industry.
• Preserve healthy competition among seafood processors and prohibit processor monopolies.
• Promote healthy community fishing economics and maintain diverse independent fishing fleets.
• Recognize historic regional fishing and processing patterns.
• Require good stewardship of the public's marine resources as a condition for continuing participation in IFQ fisheries.

This comment also recommends that the EIS evaluate the success of the crab pot escape rings and mesh size required by State of Alaska regulations in reducing crab bycatch in the crab fisheries. In addition, the comment recommends that the EIS detail with GIS mapping the spatial extent of the crab fisheries, degree of fishing effort, and spatial extent of the crab stocks.

This comment also raises a number of issues outside the scope of this EIS. The comment recommends changes to the groundfish fisheries which are not under the management jurisdiction of the BSAI crab FMP and therefore will not be directly considered in the EIS for the BSAI crab FMP.

Additional Comments

In addition, one verbal public comment suggested an alternative structured around exclusive Federal management of the BSAI crab fisheries.

Other Scoping Efforts

Significant issues were also raised during a trip Mark Fina (Council staff) and Gretchen Harrington (NMFS staff) took to Dutch Harbor/Unalaska and Akutan in October 2001. The purpose of the trip was to meet with members of industry, harvesters (vessel owners, skippers, and crew) and processors (shore-based and catcher/processors), and ADF&G staff to listen to their position on various issues surrounding crab rationalization. In addition, staff observed the landing and processing of red king crab from Bristol Bay.

In developing alternative rationalization programs, a number of meetings to discuss rationalization have occurred in the Council arena. Beginning in late 1999, interested parties met on an informal basis in a series of meetings to discuss rationalization. In December 2000, this ad hoc industry committee was formalized into the Council's the BSAI Crab Rationalization Committee. The Council appointed members to the BSAI Crab Rationalization Committee, which included representatives for harvesters, processors, skippers and crewmen, communities and environmental organizations. The Committee was tasked with developing elements and options for analysis and reporting to the Council at the April 2001 meeting. The Committee
met once in February and once in March, 2001. In summary, the BSAI Crab Rationalization Committee made significant progress during its meetings in developing a set of elements and options for Council consideration and analysis of a crab rationalization program. Also, the Council, the Advisory Panel and Scientific and Statistical Committee have discussed rationalization at a number of meetings since October 1999, focusing on the alternatives, elements, and options under consideration during the June, October, and December 2001 meetings. The public comments received and the issues discussed during these meetings are part of the scope of the EIS and are included under relevant issues below. They are also discussed in detail in the Initial Council Review Draft of BSAI Crab Rationalization Alternatives, which is available on the web at http://www.fakr.noaa.gov/npfrc/default.htm.

Relevant Issues

We request that the Council review and comment on the proposed list of relevant issues for the proposed action.

NEPA Guidance: CEQ regulations indicate that agencies are responsible for a clear and efficient definition of issues. An issue is an effect (or a perceived effect, risk, or hazard) on a physical, biological, social, or economic resource. An issue is not an activity; instead, the predicted effects of the activity create the issue. Your goal is to educate readers as to why a particular issue is truly relevant (and thus important to the decision at hand). (The Shipley Group 1998).

This section defines and summarizes the relevant issues raised during scoping and the Council process. The issues are organized by the five problem areas identified by the Council. These issues will analyzed in depth in the EIS, as required by the CEQ regulations (1502.7(2)).

The stakeholders impacted by the crab FMP and proposed rationalization programs include crab vessel owners, skippers who do not own vessels, crew, owner/operators, crab processors, communities, crab consumers, participants in other State and Federal managed fisheries, and the general public.

1. Resource conservation, utilization and management problems

Crab mortality - legal male crabs

Harvest limits are set to account for all sources of fishery induced mortality on legal male crabs so that total mortality in the fishery does not exceed a threshold. Thresholds are set to ensure sustainable harvests. When the fisheries cause mortality that is not accounted for in the harvest strategy, stock abundance may be negatively impacted. Two sources of unaccounted for mortality of legal male crabs of the target species are harvests above the guideline harvest level and highgrading. Harvests that exceed the harvest level are difficult to prevent in the derby-style fisheries. Highgrading is sorting through the legal crab for the largest, cleanest crab, and discarding the remaining legal crab to ensure that only the highest-priced portion of the catch is landed and counted against the quota. This leads to additional fishing mortality in excess of the quota. Highgrading is an environmental concern because it may alter the composition of the stock by removing only the largest, cleanest crab. Highgrading may be a problem in the rationalized fisheries.

Fishery Impacts on ESA species

Crab EIS preliminary materials

April 2002
NMFS has determined that the crab fisheries, as prosecuted under the FMP, do not adversely affect any listed species or their critical habitat in the action area. A rationalization program will need to be evaluated to determine if it changes the prosecution of the fisheries in such a way that adversely affects listed species or critical habitat in the action area.

Manageability of fisheries

Derby-style fisheries are difficult to manage because of the many participants, especially when the harvest amounts are small. Since the goal of most management measures is conservation, the increased ability of managers to ensure compliance with harvest limits and other regulations has conservation benefits. Seasons are short and it’s difficult to prevent the fleet from exceeding the harvest level. Monitoring provides information to managers on the amount of catch and bycatch, and the location of harvest. This information is vital for setting the harvest levels, measuring the effectiveness of bycatch reduction measures, and determining when each vessel has reached its quota. Many inefficient management measures are put in place to limit effort that may no longer be necessary under a rationalization program.

Data collection

Data collection is important for establishing the scientific foundation on which the fishery is managed. Rationalization programs require extensive data collection to ensure compliance. A rationalization program will increase the need for sophisticated monitoring, catch accounting, recordkeeping, reporting, and enforcement procedures.

Habitat Impacts

The extent to which pot gear impacts the benthic habitat is unknown. Any new management program should not increase damage to habitat from pot gear, either single pots or longlined pots. Increased damage may come from greater numbers of pots deployed or changes in location of the fishery.

Spillover effects on other fisheries - harvester side

If fishermen are allocated a portion of the crab harvest, this may free-up vessels to target other fisheries, such as Pacific cod or crab in state waters. Spillover effects can be mitigated by sideboard measures.

Stewardship

The NRC report discusses stewardship in terms of a fisherman’s increased incentives for conservation motivated by the belief that a healthy resource will increase the value of each fisherman’s individual quota. Public comment recommends that the Council require that good stewardship of the public’s marine resources be a condition for continuing participation in the IFQ fisheries.

Abundance of stocks
Crab stock abundance fluctuates with changes in environmental conditions. Crab stocks experience cyclical abundance. Currently, many stocks are in periods of low abundance and NMFS has declared three stocks overfished. When stocks are low, the problems of overcapacity are exasperated because each harvester can only harvest a small percentage of a small harvest limit. Thus, many fishermen cannot harvest enough crab in a season to cover the costs of fishing. Also, when stocks are low, management difficulties increase and actual harvest often exceeds the pre-season harvest limit. Due to these management problems, a minimum harvest level is established under which the fishery is closed. Bycatch and handling mortality can negatively impact stock abundance when the stock is at low abundance levels, delaying stock rebuilding.

**Seasons**

The State of Alaska specifies seasons according to FMP criteria. Seasons last until the guideline harvest level has been reached. With small harvest levels and the race for fish, crab fishing seasons are very short. Rationalization may result in longer seasons, which slow down the pace of the fisheries and allow the fishermen to improve fishing methods, such as gear operation and sorting on deck. With more time, fishermen would be able to soak pots on the bottom longer to allow the escape mechanisms to work, which would reduce bycatch. Also, with more time, fishermen would be able to improve handling methods and reduce the mortality of all crabs brought on deck. Changes to the length of fishing seasons would still be within the biological constraints of the FMP.

**Pot limits**

Pot limits restrict the number of pots deployed by a vessel to limit harvest capacity. Pot limits also help ensure that vessels do not exceed their ability to manage the pots they set. Increased season lengths and soak times may reduce the need for pot limits designed to limit effort on the grounds and reduce wasteful fishing practices resulting from deploying more pots than could be retrieved during a short fishing season. Relaxing pot limits may improve efficiencies for the fishing fleet. It may also cause environmental consequences that will need to be evaluated.

2. Bycatch and its associated mortalities, and potential landing deadloss

**Deadloss**

Deadloss is the amount of dead crab landed at the dock. It is a direct result of the extended amount of time a crab spends in the boat. Deadloss can be increased by having diseased or dead crab in the tank with live crab. Currently deadloss is about 1 percent of all crab landed. Because rationalization could change fishing practices, it is possible that the amount of deadloss increase or decrease as well.

**Bycatch**

Bycatch in the crab fisheries is predominantly female crab, small crab, and other species of crab not targeted by the fishery. Crab bycatch can be up to two thirds of the total catch and all bycatch is discarded. Its is estimated that 25% of discarded crab die from handling. This negatively effects stock abundance.
3. Excess harvesting and processing capacity, as well as low economic returns

Excess capacity in the crab harvesting sector.

Excess capacity in the harvest sector occurs if the harvest capacity of vessels participating in the crab fisheries exceeds the amount of crab available to harvest. Crab abundance is cyclical and fishing effort in the crab fisheries has increased during times of high abundance. This level of fishing capacity is retained during periods of low abundance. Derby-style fisheries also encourages excess harvest capacity as fishermen increase vessel capacity to catch more than the other fishermen. With the current level of capacity and stock abundance, each vessel is harvesting a share of the resource that is too small to be economically efficient. Vessels that might have left the fishery for economic reasons still participate because of the future prospects of a rationalization program and the associated benefits of receiving quota.

Excess capacity in the processing sector.

Excess capacity in the processing sector occurs if processing capacity dedicated to crab exceeds the amount of crab available to process. The current crab processing capacity is designed to process crab quickly at the end of seasons when the entire fleet offloads its catch. A program that rationalizes the harvesting sector would spread deliveries to processors over a longer time period. Processors could then have excess processing capacity. The rationalization of the fishery could result in a reduction of processing capital utilized in the crab fisheries.

Derby fishery

Fishermen are compelled to race to catch as much crab as possible before the season closes, resulting in very short seasons when harvest levels are low. Racing to catch crab often leads to fishing in rough weather and make other choices based on time efficiency, such as pulling pots as quickly as possible limiting the ability of fishers to move to avoid congregations of female and small male crabs. In response to the derby fishery, managers have implemented measures, such as pot limits and fair-start measures, to control effort in the fisheries. These effort limits create inefficiencies in how the crab are harvested.

Availability and quality of crab to consumers

Currently, crab is processed primarily at the end of the each season. The majority of the product is processed into frozen crab legs. Lengthening the seasons would provide processors with more time to process crab and potentially the ability to develop other products and provide live crab to the market over a longer period.

Fair and equitable allocation of interests in the fisheries

Fairness and equity in eligibility to participate and allocation of interests in a fishery are important to the management of public resources. Several factors could affect the fairness of a quota distribution including breadth of the distribution and historical reliance. A broad distribution of quota may better reflect reliance on the fishery. The Magnuson-Stevens Act states that any new IFQ
program shall provide for a fair and equitable initial allocation of individual fishing quotas (§ 303(d)(5)(C)).

4. Lack of economic stability for harvesters, processors and coastal communities

Entry Opportunities

Entry into the harvesting and processing sectors can be affected by fishery management. The current management program limits entry to those who meet certain participation criteria. Programs that allocate shares in a fishery can either create entry opportunities or limit opportunities based on several factors.

Excessive shares

Excessive share concerns in a fishery arise when interests are consolidated to the extent that persons can influence the market for outputs, influence labor markets, influence opportunities for entry, or capture a disproportionate share of the benefits of a fishery. Management structures can influence excessive shares by limiting entry or permitting the consolidation of interests by a relatively few number of participants. Excessive share provisions typically are intended to prevent excessive consolidation and vertical integration of seafood industry. The Magnuson-Stevens Act states that any new IFQ program shall prevent any person from acquiring an excessive share of the quotas issued (§ 303(d)(5)(C)).

Competition

Competition can be used to facilitate efficiency and ensure a reasonable return on investment to skippers and crews and the harvesting and processing sectors. Competition is important for fair price negotiations between harvesters and processors. Competition can also affect the distribution of activity and the benefits of the fisheries among communities. Management can influence the market power of these different interests to ensure a fair distribution of the resource rents. Vessel owners are concerned that the Council may recommend a rationalization program that eliminates competition and thus disadvantages harvesters in negotiating price with processors.

Skipper/crew concerns

Changes in management can affect the interests of skippers and crew in a fishery. Skipper and crew shares, which are the percentage of the vessel earnings paid to skippers and crew, can be affected by management. A quota system that allocates quota to vessel owners only, without any provisions to allocate or provide assistance for the purchase of quota share would create a barrier to entry by skippers and crew. Also, as the number of vessels participating in the fisheries decreases, skippers and crew will lose their jobs.

Community stability

Many communities are home to crab processors and harvesting vessels. With a change in management (and consequent consolidation) may come decreases in the numbers of vessels and
processing facilities in the crab fisheries. Communities are concerned that, under rationalization, processors may leave the local area. In addition, communities could be affected by changes in the regional distribution of harvest vessels. On the other hand, a rationalization program could provide economic stability to communities that are home to the remaining vessels and processors. Public comment recommends that a rationalization program promote healthy community fishing economies, maintain diverse independent fishing fleets, and recognize historic regional fishing and processing patterns.

**Spillover effects on other fisheries - processor side**

Changes in the processing sector under crab rationalization could have influences on other fisheries. Processors that are successful in a rationalized crab fishery could use resources developed in the crab fisheries to expand activities in other fisheries. In addition, consolidation of crab processing could lead to the exit of processors from other fisheries, as well as the crab fisheries. If processors that process crab as well as other species close facilities, fishermen that target other species, such as Pacific halibut and Pacific cod, may be left with fewer processors to which to deliver their harvests. Any decline in competition among processors could affect the ex-vessel price realized for harvests and could increase delivery costs for harvesters.

**Efficiency in the fishery**

Management of a fishery can affect the efficiency of the harvest and processing sectors. If the incentive structure of the fishery promotes cost minimizing production, benefits can be realized by both participants and consumers. The change to a rationalized fishery could improve efficiency in the fishery.

5. **High levels of occupational loss of life and injury**

**Safety**

Safety is an important concern for the crab fisheries because of when the fisheries occur, primarily in the winter, and the fact that crab vessels haul and transport pot gear. Between 1990 and 2001, 61 fatalities occurred and 25 vessels were lost in the BSAI crab fisheries. Current management creates incentives for fishermen to risk vessels and lives to fish when the season is open because harvests are maximized by maximizing time spent fishing. In cases of very short seasons, harvest opportunity is forgone completely if a vessel does not fish when the season opens. Changes in management in a rationalized fishery could reduce incentives to fish in dangerous weather.

**Alternatives**

**NEPA Guidance:** The content and scope of the discussion of alternatives should depend on the nature of the proposed action. The evaluation of alternatives is governed by the rule of reason that requires a Draft EIS to consider a range of alternatives that could accomplish the proposed action's purpose and need. The court has stated that the content and scope of the discussion of alternatives should depend upon the nature of the proposed action (NRDC v. Callaway). In general, if the statement of purpose and need has been clear and concise and all of the alternatives satisfy the purpose and
need, then the courts will uphold the alternatives discussion in the EIS. The number of alternatives within the reasonable range is directly related to the statement of purpose and need. (Bass et al. 2001, The Shipley Group 1998)

The proposed action is a rationalization program. The Council has developed alternative rationalization programs, with numerous elements and option, during an extensive public process over the course of eight Council meetings, six ad-hoc industry meetings, and four Council Crab Rationalization Committee meetings. The alternative rationalization programs are fully described in the Council’s Initial Review Draft for the Bering Sea Crab Rationalization Program Alternatives. This report will be a appendix to the EIS. The Council has also received a report on the results of scoping for this EIS, which provided public comments on FMP alternatives. The Council plans on choosing its preferred rationalization program alternative in June 2002.

The decision before the Council now is how to construct alternatives for the EIS. Decisions on the exact content of alternatives may be made in June, when the Council chooses its preferred alternative. The CEQ regulations explain that the discussion of alternatives should present the environmental impacts of the proposed action and the alternatives to the proposed action in comparative form, thus sharply defining the issues and providing a clear basis for choice among options by the decision maker and the public (40 CFR 1502.14). The CEQ regulation require an EIS to consider three types of alternatives, a no action alternative, alternatives describing other reasonable courses of action, and an alternative that advances mitigation efforts to the proposed action (40 CFR 1508.25(b)).

The no action alternative is status quo FMP. The preferred alternative in the EIS will be the rationalization program the Council identifies as its preferred alternative. The Council will select a preferred alternative from the range of alternatives, elements, and options presented in the Council’s analysis for alternative rationalization programs. When the Council chooses its preferred alternative, it may want to put forward other alternatives.

At this stage the range of alternatives for Council consideration is as follows:
Alternative 1 - Status Quo FMP
Alternative 2 - Rationalization FMP
Alternative 3 - no fishing FMP

One outstanding issue is whether or not a specific ‘mitigation measures’ alternative is necessary. NOAA-GC has interpreted the CEQ regulations as requiring a separate mitigation alternative (Letter from Craig O’Connor, December 11, 2001, page 7). The letter states that without a discussion of a mitigation measures alternative, neither the agency nor other interested groups and individuals can properly evaluate the severity of the adverse effects. Another point of view is that all management alternatives mitigate unregulated fishing. So the proposed action would be a mitigation measures alternative to status quo and unregulated fishing.

If the decision is made that a mitigation measures alternative is good idea, we proposes a ‘no fishing’ alternative as the mitigation alternative, because the environmental effects, most likely, will be from the prosecution of fisheries. A ‘no fishing’ alternative will allow the EIS to properly evaluate the magnitude of the effects on the human environment caused by the proposed action and no action alternatives. The Council may also choose another mitigation alternative that would mitigate the effects of the crab fisheries,
such as a rationalization program with additional environmental mitigation components, such as 100% observer coverage.

One unusual aspect of this EIS is that Congress may define the rationalization program, and that program may not mirror the any of alternatives recommended by the Council. At this stage, we think that once Congress takes action, NMFS, the Council, and ADF&G will need to assess the situation and determine the best way to proceed.

Cooperating Agencies and Tribal Governments

ADF&G and the U.S. Coast Guard have agreed to participate in the preparation of the EIS as cooperating agencies. ADF&G is also preparing sections of the EIS, as discussed below. On November 1, 2001, NMFS mailed a letter to 113 Alaska tribal governments, providing information about the EIS and soliciting input from interested parties. As of the date of this report, no meetings have been scheduled and no correspondence has been received from any of the tribal governments.

Preparation of the EIS

A steering committee was created for the EIS. The steering committee consists of Jim Balsiger, NMFS; Chris Oliver, Council staff; Kevin Duffy, ADF&G; Robert Otto, NMFS-Alaska Fisheries Science Center (AFCS); Tom Meyer, NOAA-GC; Ramona Schreiber, NOAA; and Tamra Faris, NMFS. The Steering Committee’s charge is to ensure the scope of analysis adequately spans the action being taken and to coordinate staff tasking among the various government agencies and departments.

We have determined that the best way to organize the preparation of this analysis is to convene an analytical team comprised of NMFS staff, Council staff, and ADF&G staff, supplemented by contracts for the environmental justice and cumulative impact analyses. We have established staff assignments for the preparation of this analysis and confirmed the staff assignments with ADF&G, the Council, and the AFSC. The analytical team consists of Gretchen Harrington, NMFS; Robert Otto, Brad Stevens, AFSC Kodiak Lab; Herman Savikko, Wayne Donaldson, Forrest Bowers, ADF&G; Mark Fina, Council; and Jessica Gharrett, NMFS-RAM. We have contracted with URS Corporation for the cumulative impacts analysis; URS will revise these sections in response to public comments between draft and final EIS, and edit the entire document for internal consistency. We have also established deadlines for completing each section to ensure timely completion of the EIS.

The first analytical team meeting was in November 2001. At this meeting, the team developed an analytical framework for identifying the affected environment and reviewed the FMP issues that arise from rationalization. Potential modifications to the FMP and to State regulations were also identified. These issues are reflected in the draft outline. The next analytical team meeting will be April 15 to review the Council’s range of alternatives and determine significance criteria for the direct, indirect, and cumulative effects assessments.

Organizational Structure of the EIS

The CEQ regulations that implement NEPA recommend a format for organizing an EIS (40 CFR 1502.10). Federal agencies are given the flexibility to modify the standard format to encourage good analysis and
provide for a clear presentation of the alternatives including the proposed action. A draft outline has been prepared for this EIS that encompasses all of the required elements for an EIS, but organizes the presentation of information, alternatives, and issues in a way that best meets the needs of this project. The draft outline is a work in progress and many sections and subsections are likely to change, be moved, or be added as the analysts prepare the draft EIS.

The draft outline also includes deadlines for completing sections. Some sections will be completed before others so that the document will be coherent. Also, some sections are not possible to complete until after the Council has chosen a preferred alternative. The proposed deadlines assume that the Council will choose a preferred alternative in June. With this schedule, a draft of the first three chapters must be finished by June, so that a draft of chapter 4 can be completed by August. The Council would then initially review the draft, perhaps in October, and decided to send the draft out for public review. Also, if Congress has not provided statutory authority before October, NMFS will consult with the Council on whether to release the draft for public review or wait for Congressional action before releasing the draft to the public. NMFS would then file the draft EIS with EPA and distribute it for public review. Public comment received by NMFS on the draft EIS would be summarized and responded to, to the extent possible, prior to the February 2003 Council meeting. This way, the Council would have the draft EIS and public comments when it takes final action to recommend a rationalization program. Any delays in Council or Congressional action will lengthen the time for preparation of the draft EIS. Alternatively, Congress may decide to enact the rationalization program as a statute, similar to their action for the AFA or the crab vessel buyback program. In this case, an EIS would still be required.

### Draft Outline and Deadlines

Notes: 1) Due dates assume the Council will recommend a preferred alternative in June 2002 and that Congress will make the required statutory changes necessary for the Council to take final action on a rationalization program in February 2003. Following this schedule, a draft EIS will be ready for initial Council review in October 2002. 2) This outline may change as the EIS is written and in response to Council input and public comments.

<table>
<thead>
<tr>
<th>Section</th>
<th>Due Date</th>
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<tr>
<td>Chapter 1 Purpose and Need for Action</td>
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<tr>
<td>1.1 Introduction</td>
<td>June 2002</td>
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<td>1.2 Action Area</td>
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<td>1.3 Purpose and Need for Action</td>
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<td>1.4 Public participation</td>
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<td>1.4.1 Notice of Intent and Scoping</td>
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<td>1.4.2 Public participation in development of rationalization</td>
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<td>1.5 Coordination with other agencies</td>
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<td>1.6 Issues to be addressed in the EIS</td>
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<td>1.7 Related NEPA Documents</td>
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<td>1.8 Relationship of this action to other federal laws and action</td>
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<td>Chapter 2 Alternatives</td>
<td>June 2002</td>
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<tr>
<td>2.1 Development of the Alternatives</td>
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<td>2.1.1 How the alternatives are constructed</td>
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| Crab EIS preliminary materials               | April 2002     |
2.2.2 Key policy issues and decision points in the development of the alternatives
2.2.3 NMFS and Council development of Alternatives

2.2 Alternative 1: Status Quo - FMP  
2.2.1 Category 1 - Federal management measures fixed by the FMP
2.2.2 Category 2 - framework management measures (What is in the FMP, what is in the State regs, and why)
2.2.3 Category 3 - management measures deferred to State

2.3 Alternative 2: ???????????\(^1\)
2.3.1 Description of alternative
2.3.2 Description of potential changes to FMP measures resulting from IFQ (These are changes to FMP text required to implement the rationalization program)

2.4 Alternative 3: ???????????\(^2\)
2.4.1 Description of alternative
2.4.2 Description of potential changes to FMP measures resulting from IFQ (These are changes to FMP text required to implement the rationalization program)

2.4 Alternative 3: No Fishing\(^2\)

2.5 Comparison of the alternatives

2.6 Alternatives considered and rejected\(^3\)
2.6.1 ?????????
2.6.2 ?????????
2.6.3 ?????
2.6.4 ?????
2.6.5 ?????

2.7 Impact Assessment Methodology

Chapter 3 Affected Environment
3.1 BSAI Ecosystem
3.2 Crab Life History Approach (physical and biological environment)
3.2.1 Larval stage
3.2.2 Settlement stage
3.2.3 Juvenile stage
3.2.4 Adult stage
3.2.5 Spawning stage

3.3 Other Biological Resources
3.3.1 Benthic species caught as bycatch in the crab fishery
3.3.2 Benthic species impacted by pot gear
3.3.3 Marine mammals
3.3.4 Seabird
3.3.5 ESA listed species present in action area

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\(^1\) Details of this alternative recommended by the Council.

\(^2\) This is the default alternative for purposes of constructing the outline. The alternatives will be determined through public participation in the scoping process and input from the Council.

\(^3\) These are also for discussion purposes and may change in response to public and Council input.
3.3.6 Environment in vicinity of crab processors

3.4 Features of the human environment
3.4.1 History of the BSAI crab fishery (This section can be summarized from the ADF&G AMR)
3.4.2 History of BSAI crab management
3.4.3 Profile/Description of the BSAI crab industry
3.4.4 Affected communities
3.4.5 CDQ groups
3.4.6 Other Fisheries in the BSAI
3.4.7 Other human activity

Chapter 4 Environmental and Economic Consequences of the Alternatives

4.1 Anticipated changes to BSAI crab fishing patterns resulting from the alternatives
(This section can be largely summarized from the Council’s economic analysis) July 2002
4.1.1 Scenario 1: Status quo fishery (Alternative 1–No action)
4.1.2 Scenario 2: ?????????
4.1.3 Scenario 3: ?????????
4.1.4 Projected changes to fleet composition (vessels, skippers, crew)
4.1.5 Projected changes to processing practices (shore-based, floaters, CPs)
4.1.6 Projected changes to State management of BSAI crab fisheries
4.1.6.1 Fishing Seasons
4.1.6.2 Pot limits
4.1.6.3 Guideline Harvest Levels
4.1.6.4 In-season adjustments
4.1.6.5 Closed Waters
4.1.6.6 Reporting Requirements
4.1.6.7 Bycatch Limits
4.1.6.8 Other Measures
4.1.7 Projected change to Federal management of BSAI crab fisheries
4.1.8 Projected changes to other State and Federal fisheries *
4.1.9 Summary of expected changes in BSAI crab fishery

4.2 Predicted effects of the alternatives on the life history stages of crab
4.2.1 Effects of the alternatives on larval life stage
4.2.2 Effects of the alternatives on settlement stage
4.2.3 Effects of the alternatives on juvenile stage
4.2.4 Effects of the alternatives on adult stage
4.2.5 Effects of the alternatives on spawning stage
4.2.6 Cumulative Effects on crab life history

4.3 Predicted effects of the alternatives on other biological resources
4.3.1 Effects of the alternatives on benthic species caught as bycatch in the crab fisheries
4.3.2 Effects of the alternatives on benthic species impacted by pot gear
4.3.3 Effects of the alternatives on marine mammals (non-ESA)
4.3.4 Effects of the alternatives on seabirds (non-ESA)

*Federal groundfish fisheries, jointly managed scallop fishery, and State managed snail, GOA crab. Pacific cod, and hair crab fisheries.

Crab EIS preliminary materials April 2002
4.3.5 Effects of the alternatives on ESA listed species present in action area
4.3.6 Effects of crab processing on water quality and substrate
4.3.7 Other environmental consequences
4.3.8 Commutative effects on other biological resources

4.4 Essential Fish Habitat assessment
4.5 Predicted effects of the alternatives on the BSAI Ecosystem
4.6 Economic and socioeconomic effects of the alternatives (This section can be largely summarized from the Council's economic analysis)
4.6.1 Crab allocations and eligible participants
4.6.2 Economic structure under FMP - status quo
4.6.3 Economic structure under ??????
4.6.4 Economic structure under ??????
4.6.5 Effects of the alternatives on management and enforcement
4.6.6 Effects of the alternatives on communities
4.6.7 Effects of alternatives on other State and Federal Fisheries
4.6.8 Effects of alternatives on CDQ groups
4.6.8 Commutative economic effects

4.7 Regulatory Impact Review (RIR)
4.7.1 Introduction
4.7.2 Benefit-Cost Analysis
4.7.3 Distributional impacts
4.7.4 Evaluation of significance

4.8 Initial Regulatory Flexibility Analysis (IRFA)
4.8.1 Statement of Problem
4.8.2 Objective Statement of Proposed Action and its Legal Basis
4.8.3 Description of each Action
4.8.4 Reasoning for, and focus of, an IRFA
4.8.5 Requirement to prepare an IRFA
4.8.6 What is a Small Entity?
4.8.7 Description of Fleet, Fishery, & Industry Directly and Reasonably Indirectly Impacted by Proposed Action
4.8.8 Discussion of the potential negative effects of alternatives on small entities
4.8.9 Mitigation of negative impacts
4.8.10 Recordkeeping and reporting requirements
4.8.11 Summary and conclusions

4.9 Environmental Justice Considerations
4.10 Energy Requirements and Conservation Potential of Alternatives
4.11 Cumulative Effects Assessment
4.12 Summary and Conclusions

Chapter 5: List of Preparers
5.1 EIS Steering Committee

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5 Includes full discussion of recordkeeping, reporting, and catch accounting requirements of proposed programs.

Crb EIS preliminary materials

April 2002
5.2 Project leaders
5.3 Contributors
5.4 Consultant contributors
Chapter 6: List of Agencies, organizations, and persons to whom copies of the statement are sent
Chapter 7: Literature cited

Appendix 1: Council Analysis of BSAI Crab Rationalization Program Alternatives - Report to Congress
Appendix 2: Scoping process documentation (NOI, meeting records, summary of comments, issues identified for analysis)
Appendix 3: History of FMP (previous FMPs, approval dates, NEPA analysis, list of FMP amendments, list of regulatory actions)
Appendix 4: State crab regulations

Related NEPA Documents

This EIS is a standalone NEPA document that does not tier of any previous EISs because this is the first EIS prepared for the BSAI crab FMP. An environmental assessment/regulatory impact review (EA/RIR) was prepared for the current FMP in 1988. Environmental Assessments have been prepared for each of the subsequent 15 amendments to the FMP, including revising the FMP in 1998. These EAs will be incorporated into the EIS to fully explain status quo and the analyze the cumulative effects of status quo on the human environment.

This EIS will incorporate by reference information from other EISs produced by the NMFS Alaska Region, were applicable. For example, the Draft Programmatic Supplemental EIS for the groundfish FMPs provides a detailed discussion of the Bering Sea and Aleutian Islands physical environment and ecosystem; life history, habitat, and stock status of groundfish species; seabird life history, population biology, and foraging ecology; and marine mammal life history, population biology, and foraging ecology (NMFS 2001). Most likely, these sections will be summarized and incorporated by reference into the Chapter 3, Affected Environment.
# Public Testimony Sign-Up Sheet for Agenda Item

Please sign on the next blank line. Lines left blank will be deleted.

<table>
<thead>
<tr>
<th>Name</th>
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<tbody>
<tr>
<td>Dr. Robert Halvorsen</td>
<td>CRAB Group</td>
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<tr>
<td>David Hillstrand</td>
<td>Owner/Operator F/V Timebandit</td>
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<tr>
<td>Jake Jackson</td>
<td>Alaska Marketing Assn. Pavlof - owner/ Operator</td>
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<tr>
<td>Coleman Anderson</td>
<td>Kozak &amp; Associates</td>
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<tr>
<td>Linda Kozak</td>
<td>Aleutians East Borough</td>
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<tr>
<td>Beth Steuer</td>
<td>Munsell &amp; Mallon</td>
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<tr>
<td>Joe Sullivan</td>
<td>F/V North Pacific Crab Co.</td>
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<tr>
<td>Russ Moore</td>
<td>SEA</td>
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<tr>
<td>Barney Olsen</td>
<td>F/V owner Sitka Crab Fish</td>
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<tr>
<td>Chris Heuker</td>
<td>North Pacific Crab Assn. Blue North Fisheries</td>
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<tr>
<td>John Jones</td>
<td>Westward Seafoods</td>
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<td>James Mize</td>
<td>Icicle Seafoods</td>
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<td>Greg Baker</td>
<td>F/V Trailblazer</td>
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<td>Terry Leitgall</td>
<td>AF2G</td>
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<td>Gary Painter</td>
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<td>P.M. Cole</td>
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<td>George Blue</td>
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<td>Larry Cutter</td>
<td>APICDA</td>
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<tr>
<td>Max Malavansky</td>
<td>City of St. George</td>
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<tr>
<td>Brent Colburn</td>
<td>St. George Tanag Corp.</td>
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<tr>
<td>Paula Bregdon</td>
<td>Fisherman's Lab (F04)</td>
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<td>Tom Swaney</td>
<td>SEAJAMA</td>
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<td>Dorothy Childress</td>
<td>Amcc</td>
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<td>Arni Thomson</td>
<td>ACC</td>
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<td>Larry Leman</td>
<td>Royal Aleutian Seafoods</td>
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<tr>
<td>NAME</td>
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<td>Walt Christiansen</td>
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<td>Margaret Hellek</td>
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<td>Tim Kennedy</td>
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<td>Maek Mason</td>
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<td>Bob Stone</td>
<td>Unalaska Native Fisherman's Assoc.</td>
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<td>Leonard Herzog</td>
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<td>Steve Minaw</td>
<td>Saint Paul</td>
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<td>Pat Carlson</td>
<td>Kodiak Island Borough</td>
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<td>Frank Kelly</td>
<td>City of Unalaska</td>
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| David Leth 

| Gary Johnson          | Peter Pan Seafoods                 |
| John Rutte            |                                     |
| James Mize            |                                     |
| Todd Hinchl           |                                     |
| Rick Sheltford        |                                     |
| Jeff Stephon          |                                     |
| Dan Benson            |                                     |
| Kevin Susan           |                                     |
| Dave Peterson         |                                     |
| Bill Proud            |                                     |
| Jewl Rongen           |                                     |
### Public Testimony Sign-Up Sheet for Agenda Item C-5

**Please sign on the next blank line. Lines left blank will be deleted.**

<table>
<thead>
<tr>
<th>NAME</th>
<th>AFFILIATION</th>
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<tbody>
<tr>
<td>Buck Laukitis</td>
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<tr>
<td>Charles King</td>
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DATE: March 18, 2002

TO: Ed Dershaw, Chairman
   Alaska Board of Fisheries

FROM: Arni Thommen, Executive Director

RE: COMMENT ON COMMITTEE A, PROPOSAL 425
   CLARIFICATION ON ACC PUBLIC COMMENTS, RC 16,
   INCLUDING RAY HILBORN'S COMMENTS ON OPILIO HARVEST
   STRATEGY, APRIL 2, 2000

Following the Board of Fisheries approval of the Opilio Harvest Strategy in March of 2000, the ACC contracted Dr. Ray Hilborn to conduct a hasty review of the Magnuson-Stevens overfishing definition and the opilio harvest strategy and to make a presentation to the NPFMC Scientific and Statistical Committee for the April 10, 2000 NPFMC meeting.

MAGNUSON-STEvens ACT OVERFISHING DEFINITION:

Mr. Hilborn's comments were attached to ACC's original comments on proposals, primarily to illustrate that most of the complexities and controversy surrounding the opilio harvest strategy are derived from the Magnuson-Stevens Act overfishing definition and the mandates and guidelines that agencies must adhere to in order to rebuild fisheries. The overfishing formula was developed primarily for finfish, and it is ill-suited as a guideline for management of king and tanner crabs. Mr. Hilborn notes some key differences between finfish harvest strategies and shellfish harvest strategies. Finfish fisheries are generally not sex selective, whereas king, tanner and dungeness crab fisheries are selective to males only. He notes in the opilio crab fishery, that it is specific to large male crabs and it has no effective fishing mortality on females. Following Mr. Hilborn's presentation, the NPFMC Scientific and Statistical Committee concurred with Mr. Hilborn on the associated problems with the overfishing definition and its lack of relevance to the opilio fishery and other fisheries. They also expressed concern that "the perception will be created that NPFMC and Board of Fisheries management practices led to the decline of certain NPFMC populations because NMFS determined they were "overfished", even though fishing had no demonstrable effect,..." (PNCIAC Minutes October 1, 2000, Advisory Committee #1).
Although Mr. Hilborn’s comments about the overfishing definition were accurate, he made a number of factual errors in his specific comments about the 2000, opilio harvest strategy. Doug Pengilly, ADF&G, Kodiak filed comments with the NPFMC on Mr. Hilborn’s comments, dated April 8, 2000 that are attached to this memorandum, that rebutted Mr. Hilborne.

REVISED HARVEST STRATEGY CHANGES:
ADF&G’s revised 2002 opilio harvest strategy, which is a framework harvest strategy, now allows for adjusting thresholds and exploitation rates. The exploitation rate for new shell >4 inch males has been increased to 58%, and the 25% cap on the exploitation rate for old shell crabs has been removed. The new strategy has allowance for a variable harvest rate that can be adjusted as the fishery selectivity changes and it will enable a larger harvest of old shell crabs. In addition, ADF&G has now proposed to reduce the minimum threshold for a fishery opening from 25 million pounds, to 15 million pounds, provided the pot limits are reduced. Exploitation rate adjustments can be accomplished without further regulatory approval of the Board of Fisheries and the NPFMC. These are significant improvements over the 2000 harvest strategy.

PACIFIC NORTHWEST CRAB INDUSTRY ADVISORY COMMITTEE (PNCIAC):
Industry concerns and recommendations regarding the problems associated with the NMFS overfishing definition as it mandated a conservative harvest strategy have been a primary focus of the PNCIAC, under the chairmanship of Garry Loncon, since March 1, 2000. These concerns, including a recommendation to revise the old shell harvest rate, are summarized and restated in the PNCIAC minutes of October 1, 2000, (Advisory Committee Comments #1 for this meeting).

RECOMMENDATIONS:

- ADF&G has informed the ACC that the Crab Plan Team will soon be initiating a review of the current FMP “overfishing” and “overfished” threshold definitions for the BS/AI King and Tanner crab stocks. The ACC recommends the CPT initiate this review in the spring and summer of 2002.

- The NMFS at some point when the controversy over the overfishing definition became widespread in 2000, agreed to convene regional workshops to solicit further public input on possible modifications to the Magnuson-Stevens overfishing definition. That series of workshops never took place, however, the ACC strongly encourages the NMFS to initiate a series of workshops to coincide with the MSFCMA congressional amendment process to review the overfishing definition.

cc: James Balsiger, Regional Director, NMFS, AK Region
    Chris Oliver, Executive Director, NPFMC
Comments on: “Comments on ... ‘A rebuilding plan for the Bering Sea C. opilio stock’, Dr. R. Hilborn, 2 April 2000”

Prepared by:
Douglas Pengilly
ADF&G, Kodiak
8 April 2000

Dr. Hilborn argues that fishery management guidelines established for finfish fisheries may not be optimum in application to crab fisheries. That argument may have merit because, unlike finfish fisheries, females are not typically harvested in crab fisheries and minimum size limits are established for male crabs that are typically greater than their size-at-maturity. In particular, Tanner crabs are also distinguished from finfish by such characteristics as skip sperm storage by females and (or possibly terminal) molting.

On the other hand, Dr. Hilborn’s comments and conclusions on the eastern Bering Sea opilio fishery and the current status of the opilio stock are based either on errors or without any substantiating information at all. Additionally, Dr. Hilborn misrepresents the “word and intent” of the Magnuson-Stevens Fishery Conservation and Management Act (MSA) relative to preventing overfishing and achieving optimum yield.

I’ve divided my comments on Dr. Hilborn’s comments into “Errors” and “Unsubstantiated Comments”, below.

Errors:

Sex-ratio graph (page 2)
- Graph on sex ratio is based on misreading of NMFS AFSC Processed Report 2000-01 Table 5 ("large" and "very large" males are mistakenly added together), so the ratios are wrong.
- Interpretation problems remain even if Table 5 had been read correctly:
  - Effects of survey catchability by size and geographic distribution?
  - Look at ratio based on maturity status rather than size? Gives a different picture than ratios based on size.
  - Should shell age be factored in? What would be the most meaningful ratio?
"Any overfishing definition based on sex ratio would assure that the long term ability of the stock to produce MSY would not be hindered" (page 4)

- Stock size should always remain at least part of the consideration of a crab stock's status relative to the risks of fishing (even if the hypothesized minimum sex ratio can be established).

"The word of the law (i.e., the MSA) and the intent is to manage fisheries to produce MSY" (page 5)

- Statement is absolutely and unambiguously false.
  - The "word of the law" (National Standard 1 of the MSA, Section 301) is: "Conservation and management measures shall prevent overfishing while achieving, on a continuing basis, the optimum yield from each fishery for the United States fishing Industry" (bold italics mine).
  - "optimum yield" is defined in the MSA to be less than MSY "The term 'optimum,' with respect to the yield from a fishery, means the amount of fish which... is prescribed as such on the basis of maximum sustainable yield from the fishery, as reduced by any relevant economic, social, or ecological factors." (Section 104-297 28; bold italics mine)

- This misunderstanding carries into statements on page 2 (second paragraph) and page 3 (ast paragraph in section headed "Analysis"), which erroneously assume that the goals of a harvest strategy under the MSA is to maximize yield.

**Unsubstantiated statements:**

"...fertilization has not been affected by directed fishing on males..(page 2)"

- This is a conjecture, based on no data, and is presented as fact.
  - Conjecture is hypothesized from misreading of sex-ratio information (above)

"...quite simply there is no impact from the fishery on the long term yield of opilio" (page 2; bold are Hilborn's).

- Statement is based upon nothing more than the above unsubstantiated statement.

"To maximize the biological yield from this stock, you would simply maximize the yield-per-recruit of males, which is done by the size limit combined with a 58% exploitation rate" (Page 2)

- Is this statement based on a review of the work and assumptions leading to the 58% exploitation rate and the 4-inch industry minimum size?
"Nothing in the current status of this fishery suggests that the fishery has affected the capacity of the fishery to produce MSY" (page 3).

- Statement is apparently based on no information other than the (earlier noted) misreading of a table in a stock status report. Dr. Hilborn has not demonstrated that he possesses the familiarity with this stock to justify making such a statement.

"The yield in this fishery is being driven by environmental factors affecting recruitment" (Page 3).

- Which factors and how?

"Clearly...the fishery has not "jeopardized the capacity of a fishery to produce maximum sustainable yield on a continuing basis" (Page 4)

- If the data to back up this statement was available it should have been provided (and the arm-waving use of "clearly" would not be necessary here).
Dear Chairman Benton:

My name is Maria Painter. I live in Kodiak Alaska. I am 50% owner in a Bering Sea crab boat. Alaska fisheries are my families' single source of income. I am writing you this letter because I need your help.

Foreign owned canneries will soon own most of the Alaska fisheries in federal waters; and the small entities (our crab boat operations), are rapidly become a thing of the past.

The foreign owned canneries have accumulated their own fleet of fishing vessels. They can catch the crab quotas on their own. They have no need to be competitive with price, if the small entities decline a price; the canneries fish it themselves. It leaves the crab boat owners with no negotiating power and little hope for the future.

The American Fisheries Act is another thorn. Because of the AFA most of the Bering sea canneries have caps on the amount of crab they can buy per season; but there are a few canneries that have unlimited purchasing rights. With this arrangement, the canneries with unlimited purchase power set the price how they see fit.

Is this an Anti-Trust issue?
Is this a form of price fixing?
What can we do?

Unless these problems are addressed, the small entities that are dependent on the crab fisheries will be destroyed.

The solution: No cannery owned fishing vessels
      No caps on canneries

Please help us!

Your response would be greatly appreciated.

Respectfully,

Maria Painter
P.O. Box 3137
Kodiak, AK 99615
907-486-2639
F/V BIG BLUE, INC.
Rick Turvey, Owner/Skipper
P.O. Box 161
Kodiak, Alaska 99615

March 21, 2002

Senator Ted Stevens
Washington, D.C.

Dear Senator Stevens,

The purpose of this letter is to express concern regarding the crab rationalization proposal at the North Pacific Fishery Management Council and in Washington, D.C., to issue processor shares that would guarantee processors a delivery; processor shares that would require a match with most or all of a fisherman's IFQ.

Processor shares do not make sense if the goal is to provide a competitive market for the independent harvesters, the commercial fishermen. If processors are given a delivery guarantee, without competition, it will be like going back before statehood, when the processors from Seattle controlled the seafood industry and Alaskan residents couldn't find jobs in the fishing industry. Senator, this is our livelihood we are talking about, our ability to support our families and our communities. Processor shares will rob us of this ability. The ex-vessel price for fish will go down, as the processors will have NO incentive to be competitive if they are guaranteed product. Without a competitive price to fishermen, crewmembers and communities will suffer.

Senator, please consider that most crab processors who want guaranteed deliveries are part of the American Fisheries Act (AFA) program and highly diversified, with little or no dependence on crab, while most crabbers have no other real source of fisheries income. In addition, most crabbers are losing money fishing, but the processors are still making their margin. The benefits from the crab fishery are now being retained by the processors. This is not equitable and if the goal of this proposal is to try to maintain the status quo in pricing, the result will be that the independent vessel owners go under.

I would like to close with one final point: I don't believe this will be limited to the crab fishery. If the processors have delivery guarantees in one fishery, they will want them in everything, including salmon. That will be the end of Alaska's independent fishermen. Thank you for your time and consideration.

Sincerely,

Rick Turvey

Cc: Senator Frank Murkowski
Senate Commerce Fisheries Subcommittee
House Fisheries Subcommittee
Dave Benton, Chair NPFMC
Dear NPFMC Board members,

I am writing to you to express my opinions on the CRP Crab. I’m 44 years old and have been fishing out of Sand Point since I was 10 years old. My father was born and raised just outside of Sand Point in Unga. I live in Sand Point now but do not spend much time there. Fishing is all I’ve done. In 1977 I graduated from high school and went right to the Bering Sea crab fishing. I did crab with my father before that between Salmon and school. For the last 14 years I’ve operated two boats, the F/V Bering Star from 1988-1994 and from 1994 until now the F/V Ocean Fury. Although I’m in good standings with the owners of the Ocean Fury it does not guarantee my future with them. If (CRP) goes the way the AFA boats went, then a lot of us skippers including myself will be looking for other professions. We need to be protected. I am a member of the S.E.A. and would like to see their proposals enacted to insure my longevity in the fishing industry. I’ve talked to a lot of people who are following this pretty close, and many things do not sound good. Quotas being piled up on top of each other. The corporations with the most money will win big time. I have hope the processors will not succeed they will get the crab either way. They just want to insure a very high profit range for themselves with little negotiating power from the fleet. I hope you can sort it out. Most things do not come out fair for the little guys. I guess we can always hope though. There are a lot of long time skippers (prior deck hands) in my position right now. I have a great safety record, probably because I came from the deck. I care about the people that work for me. I spent enough years on deck myself. A lot of the people I worked for did not care, I’ve seen the results. Some of the injuries can’t be helped no matter what you do. Shit happens. Most injuries can be prevented. It comes from experience and when to say we are going to jog boys. I have a certain values in this fishery now, my ability to catch crab and keep my crew safe. That will be all out the window for the most part if my fellow skippers and me are left out. I’ve spent a lot of time in the Bering Sea to get where I am at, and there have been sacrifices. Mainly being away from family and little life outside of fishing. I have no regrets. I’m asking you to not drop us from the equation. Let us have a piece of the pie. I would testify in person but finances prohibit me. I’ll let S.E.A. speak for me.

Sincerely,

Alan A. Lauritzen
March 27, 2002

Mr. David Benton
North Pacific Fishery Management Council
605 West 4th Avenue, Ste. 306
Anchorage, Ak. 99501-2252

Dear Mr. Benton

This letter is pertaining to the options for distributing Bairdi quota shares to catcher boats in the BSAI crab rationalization plan. I have been involved in the BSAI crab fisheries since 1977. I personally worked on crab decks for 11 years prior to operating the Denali in 1988. In 1991 I joined a partnership in the boat. We targeted Bairdi while most of the fleet went after Opilio. We have already given up a lot of our Opilio catch history by targeting Bairdi during those qualifying years, and now there is a chance we will be sharing our Bairdi catch histories with the rest of the fleet. Where is the fairness in this option?

As I understand this rationalization, catch histories are what determines who goes where, so lets stick with the issues at hand here and allocate quota shares to boats who created those catch histories, only.

In the preliminary rationalization draft, in NPFMC own words ; It is a time to stem the flow of additional unneeded vessels into the fisheries, to address existing and emerging problems resulting from an overcapitalized fishery.

I am all for rationalizing this fishery, I've wrote to you on previous occasion stating the fact. I am also all for the quota share program and the fact that catch histories are the avenue of choice, so let the catch histories speak for themselves and qualify those who belong.

Sec.1.4.2.3 Bairdi (EBS tanner crab ),
Option 3; Based on a 50/50 combination of Bristol Bay red king crab and opilio harvests.

.........Doesn't take into consideration the catch histories that were made during the qualifying year options.
.........Gives Bairdi allocations to vessels without much if any Bairdi catch history.
.........Bases allocations on a much broader base than needed.

Thank you for taking time to read and consider this letter.

Sincerely

Robert Trumble

Robert Trumble
David Hillstrand  
Box 1500  
Homer, AK 99603

North Pacific Fisheries Management Council.  
Item: C-5

Of all the issues concerning rationalization of the Crab fisheries, the Qualifying period is our highest concern; the second would be job losses from transferability.

The NPFMC has been progressing along with a process, this process is to create a stable fisheries.
   a. The first was the Moratorium on vessels entering the fishery. 1988-1992
   b. The second was the LLP endorsements from 1992-1995
   c. The third was the recency requirement on one landing from 1995-1997

We encourage the Council to use the most current years. With all years considered protecting those dependent upon the fishery.

Opilio
Option 4. 1996 – 2000 (5 seasons)  
   (a) Best 4 seasons

Bristol Bay Red King crab
Option 3. 1996 – 2000 (5 seasons)  
   (a) Best of 4 seasons

Baridi
Option 1. 1992-1996 (5 seasons)  
   (a) Best 4 seasons

We would consider the option of ones percentage of Opilio, and Bristol Bay Red King crab to determine ones Baridi catch.

St. Matthews

Option 2. 1994-1998  
   (a) Drop one season

Pribilofs Red & Blue

Option 2. 1994-1998  
   (a) Drop one season
We encourage the biological split in the Quota between the Red and Blue crab.

a. We recommend that the Red and Blue catch be determined off of ones overall catch of the quota. Than that percentage applied to the population estimate of each species.
b. Historically the catch was mostly blue crab; between 2-6 million pounds. With 11 million being the highest.
c. Current catches which will determine a catch history are mostly split between the species, with some years being better for reds and others blue.
d. If ones catch history for the last six years of the fishery; 1993-1998 was mostly Red king crab, their catch of the overall harvest when the fisheries changes back to a Blue king crab harvest would be nonexistent. The same could be true if the red king crab biomass continues to grow as well.
e. By allowing ones overall catch to determine their history the ADFG can determine the percentage of the population estimate of each species each year and apply the percentage for each species. This will reduce bycatch as well.
f. This will not cause hardship or a loss to a fishery that one has participated in each year.

We would also like to request the State of Alaska to include the Korean Hair crab fisheries with the NPFMC rationalization of the crab fisheries.

We highly recommend that the NPFMC apply a consistent time period with a high participation requirement for all fisheries! These options do. We recommend all others be dropped.

Transfer/Leasing
We highly recommend that the NPFMC limit transfers, sales and leasing to preserve jobs.
1. Allow sale of catch history.
   a. No owner can purchase or lease another vessel if they own interest in more than one vessel.
   b. Owners that own only one vessel can purchase or lease another vessel or its shares if it does not exceed the cap set by the NPFMC.
2. Are largest concern is to not to allow too much consolidation.
   a. Owners that have 2 or more vessels should not be allowed to lease additional shares.
   b. We recommend only 2 vessels for consolidation for leasing. From a fleet of 250 to 125 vessels is a dramatic reduction in crew and jobs.

Excessive Share Caps
1. 1% For King crab red, blue and Baridi.
2. 3% to 5% for Brown king crab.
3. 1% for Opilio.
4. Grandfather provisions if one exceeds the excessive share cap in the original endorsement.

5. This will determine if an owner can purchase more shares; remember caps apply for a single vessel owner or an owner with more than one vessel to see if they are allowed to consolidate two vessels. Again please watch for owners accruing a large monopoly.

1. We also would like for the NPFMC to consider IFQ for vessels that are owner operated without any ties to processors or communities. We will gladly supply ownership data for the NPFMC if they include this option.

2. We would like the NPFMC to consider AFA sideboards for Pacific Cod for all pot vessels that qualify for crab shares. This will cap their catch at current levels.

   A. Alaska Groundfish Data Bank has come up with what we consider a fair option; using the same qualifying period and years applied to determine ones catch.

3. We would also like the NPFMC to add another recency requirement of one landing of crab in 2001.

   
   
   David Hillstrand
February 28, 2002

To: North Pacific Fishery Management Council

605 West 4th Avenue, Suite 306
Anchorage, AK 99501-2252

Re: C-6 Crab Rationalization, Options for Skippers and Crew

Dear Council Members,

One of the elements and options of Crab Rationalization is the treatment of skippers and crew under a new program. I believe there is general consensus in the crab industry that there should be consideration of skippers and crew in the new quota-based system. The Council must decide which method would best achieve this goal.

Under an Olympic style fishery, skippers and crew are valued for their ability to catch crab efficiently, effectively and safely. In a quota based fishery, the same qualities will be sought in skippers and crew by vessel owners for their operation. There is a concern among some that skippers and crew will underbid each other in the competition for jobs. It is assumed that today the crab fleet is overcapitalized, that there are too many vessels in the crab fishery and consolidation is needed. One of the early steps being considered is a fleet sponsored buyback. After consolidation under a buyback and rationalization, there will, by necessity, be fewer jobs in the crab fishery assuming each vessel had a distinct crew. However, the remaining jobs will be more stable financially and may in fact be filled by more than one person in a crab season, assuming crab stocks can rebound. As in any fishery, the best skippers and crew will be sought by vessel owners for these jobs and will be compensated as such.

The best and fairest way to include skippers and crew, and to allow an avenue for new entrants in a rationalization program, is to set up a first Right of Refusal Program based on quota sales, funded by a Low Interest Loan Program and a pre-tax savings account which can be used for quota purchases (similar to CCF program used to purchase vessels). These would provide the opportunity to purchase quota and the ability to access capital for purchases. This approach, I believe, would have wide support from vessel owners.

Another option is for skippers and crew is for them to receive initial allocation of quota share. This option is unfair to vessel owners who have taken the financial and emotional risk associated with ownership of a vessel. The quota associated with a vessel under a new quota program is a transfer of value from that vessel to the quota. This has been shown in the halibut and sablefish program where vessels are worth a fraction of what they were under Olympic fisheries. The quota will be the cream of that value. The vessel owner will
be left with all the negative things associated with vessel including operational costs, legal requirements, crew injuries, etc. while non-owner recipients would receive a portion of the most valuable portion of the overall operation, the quota. Vessel owners who have made the financial and emotional investments in vessels should be the recipients of quota, not skippers and crew who have not. Crewmembers have benefited financially from the owners investment in the fishery (skippers as much as 3 times as crew) and some have chosen to participate as owners while other have chosen not to invest in the crab fishery with their earnings. Some have invested in other fisheries such as salmon and halibut. The ones who have become investors will be awarded quota as a result of their investment.

I would urge the Council to move forward with First Right of Refusal and Low Interest Loans as the preferred option for skippers and crewmembers.

Sincerely,

Kevin L. Kaldestad
March 28, 2002

Mr. Chris Collier, chairman
North Pacific Management Council
605 West Fourth Avenue, Suite 306
Anchorage, AK 99501-2252

Gentlemen,

I am writing to you in regard to option 3 pertaining to the Bardi fishery as stated on page 157 of the BSAT Crab Rationalization Program Alternatives 1.2.3. dated January 22, 2002. I think it should be disqualified for the following reasons:

1. Targeted Bardi Tanner crab for most of the qualifying years. I have no catch history for most of the Opilio Tanners. This is a severe penalty.

2. For this legislation to be rational you must qualify. For the fishery to start with, I don’t see how you can get quite shares to a boat that doesn’t have catch history in the fishery.
3. If you use Option 3, use a baird opilio seasonal quota ratio to make it fair for the baird fishermen.

Gentlemen please allow all boats participating in future crab fisheries in the state of Alaska, enter there on their past catch histories.

Thanks for your time.

Captain Leslie G. Delong
P.O. Box 162
King Cove AK 99612

Leslie Delong
P.O. Box 162
King Cove AK 99612
The C. bairdii Fishery.

The Council motion includes the following qualifying year options for the distribution of QS in the Bering Sea C. bairdii fishery:

1.4.2.3 Bairdii (EBS Tanner crab)

Option 1. 1992 - 1996 (5 seasons)
(a) All seasons
(b) Best 4 seasons
Option 2. 91/92* - 1996 (6 seasons)
(a) Best 5 seasons
Option 3. Based on a 50/50 combination of Bristol Bay red king crab and opilio harvests

*The biological season extended over a calendar year

Option 3 would base the allocation on the allocations in the Bristol Bay red king crab and the C. opilio fisheries, weighting each of those allocations equally for purposes of determining the allocation in the C. bairdii fishery.

Table 3.3-7 shows the mean, median, and average of the four largest allocations under the different qualifying year options in the Bering Sea C. bairdii fishery. Figure 3.3-4 is a graph of the distribution in the fishery under the different options. As in the C. opilio and the Bristol Bay red king crab fisheries, the allocations are quite similar. Although the graph appears flatter than the graphs from the other fisheries, that is largely an artifact of the scale of the graph. The shape of the curve and the average of the four largest allocations is approximately the same as in the other fisheries. The average allocation to the four vessels receiving the largest allocations under all of the options is slightly more than one percent of the total allocation in the fishery, while the median (midpoint) and mean (average) allocations are slightly less than one-half of one percent. Under that Option 2A, one more vessel (269 vessels) is included in the initial allocation than under the other two options. All reported descriptive statistics are approximately the same under the options.

Table 3.3-7 Mean, median, and average of the four largest allocations under the different qualifying year options in the Bering Sea C. bairdii fishery

<table>
<thead>
<tr>
<th>Fishery</th>
<th>Mean</th>
<th>Median</th>
<th>Average of four largest allocations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bering Sea Bairdii (EBS Tanner Crab)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Option 1A, 1992 - 1996 (All seasons)</td>
<td>0.004</td>
<td>0.004</td>
<td>0.011</td>
</tr>
<tr>
<td>Option 1B, 1992 - 1996 (Best of 4 seasons)</td>
<td>0.004</td>
<td>0.004</td>
<td>0.011</td>
</tr>
<tr>
<td>Option 2A, 1991-1992, 1996 (Best of 5 seasons)</td>
<td>0.004</td>
<td>0.004</td>
<td>0.011</td>
</tr>
</tbody>
</table>
March 29, 2002

Mr. David Benton, Chairman
North Pacific Fishery Management Council
605 West 4th Avenue
Anchorage, Alaska  99501-2252

Re: Crab Rationalization

Dear Chairman Benton:

There is no question that the crab industry is in desperate need of some form of rationalization. Any crab processing company, crab harvesting vessel, or community dependent upon crab is acutely aware of the problems facing the industry. Although there are a myriad of proposals to address rationalization, of particular concern to APICDA and our member communities are those proposals that could eliminate our present and/or future participation in the crab industry.

Three of APICDA's member communities either participate in the crab processing industry or are preparing to participate in the crab processing industry: St. George, False Pass, and Atka.

For a number of years, St. George has been the home for one or two floating crab processors. This has provided sorely needed tax revenue and employment opportunities for the island. This year, no processors operated in St. George due to the low GHL. The financial impact upon the community has been devastating. The community is scared to death that under one or more of the rationalization alternatives being considered by the Council, there may never be crab processing in St. George again.

Neither False Pass nor Atka have ever processed crab, although both plan to in the relatively near future. In both communities, APICDA has made significant investments in shoreside processing operations (Bering Pacific Seafoods in False Pass and Atka Pride Seafoods in Atka). Construction of a boat harbor in False Pass is expected to begin in 2003. We have also initiated the process for construction of a boat harbor in Atka.

St. George, False Pass and Atka are viable crab processing communities. APICDA's plans, commensurate with the desires of the three communities, is to construct a shoreside processing facility in St. George (capable of processing crab, cod, halibut and...
other species) and expand the processing capabilities of both the False Pass and Atka plants to crab. This would strengthen the economies of all three communities and help provide a viable future for their residents. That is the purpose of the CDQ program.

As mentioned above, we are concerned that some of the rationalization proposals before the Council could eliminate our community's present and/or future participation in the crab industry. Any of the proposed rationalization requirements that identify or limit in any way future participation in the crab industry to current participants serves to eliminate the development of shoreside crab processing operations in these communities. For example, adoption of processor quota shares would make it virtually impossible for us to participate in the industry, since we will not be able to afford to purchase any quota shares that go on the market. The proposed open access set asides will not alleviate this situation since we will not be able to compete for product against companies that are guaranteed product.

One might argue that CDQ crab should be allocated to address these needs. The fact is that there is not enough CDQ crab in total to meet the needs of a shoreside processing facility, much less if the CDQ quota is divided among the six CDQ groups.

It is extraordinary difficult for the residents of these communities to understand why their community cannot directly participate in the crab processing sector when they have finally reached — or will soon reach — the capability to construct the shoreside facilities to participate. In False Pass, for example, dozens of crab vessels transit False Pass to and from the Bering Sea to participate in the fishery. Under some of the rationalization proposals, they will be allowed to sell crab in various Gulf of Alaska ports, such as King Cove, Sand Point, and Kodiak, but only after sailing past False Pass which will finally have a boat harbor and processing facility capable of handling crab.

We are very sensitive to the debate over processor quota shares, regionalization, co-ops, ITQs, etc., and the needs of the industry. We are also supportive of rationalization because it is necessary. Therefore, we propose and request the Council include a provision in the rationalization package that provides some measure of protection to CDQ communities that currently do not have a shoreside crab processing facility. Our proposal reads:

Any limitation of future crab processing entities, whether as a result of crab processor quota shares, the formation of cooperatives, or some other limitation, shall not apply to a CDQ community that does not have a shoreside crab processing facility, providing the crab processing facility constructed is owned at least fifty percent by the CDQ group representing that community.
We believe this is a fair and reasonable proposal. Realistically, we expect this to apply only to three communities (St. George, False Pass and Atka) since weather, geography and other considerations (including current operating shoreside crab processing facilities) effectively preclude their participation in this proposal. The proposal would also alleviate any conflict between the purpose of the CDQ program and crab rationalization. In APICDA's case, we have already invested millions of dollars in infrastructure and facilities in each of these communities. From the beginning, our intent has included crab production as a necessary means to utilize the resources available to the community, diversify our operations, and develop stable local economies.

Thank you for your consideration.

Sincerely,

Gilda Shellikoff, Chair
APICDA Board of Directors

cc: APICDA Board of Directors
City of St. George
City of False Pass
City of Atka
Council Members
March 26, 2001

Mr. David Benton, Chairman
Mr. Chris Oliver, Executive Director
North Pacific Fishery Management Council
605 West Fourth Avenue, Suite 306
Anchorage, AK 99501-2252

Gentlemen,

I am writing with regard to Option 3 pertaining to the Bairdi fishery as stated on page 157 of the BSAI Crab Rationalization Program Alternatives, 1.4.2.3, dated January 22, 2002. Option 3 should be deleted for the following reasons:

1. Boats that specifically targeted Bairdi consequently acquired very little Opilio history and the boats that targeted Opilio acquired very little Bairdi history. Everyone targeted their favored fishery by choice. This option allows the Bairdi fishermen to be put out of business because their fishery would be misappropriated to boats that never fished it.

2. This option to allocate Bairdi to boats that fished Opilio makes no more sense than an option to allocate Opilio to boats that fished Bairdi, which is NOT an option. Bairdi fishermen would certainly like to be awarded Opilio by their Bairdi history, but that is not fair.

3. This option could allow the concept of allocating brown crab to some other group that never fished it nor depended on it. Should this happen? NO. Should this happen to Bairdi? NO. Should this happen to Opilio? NO.

Let the fisheries’ history dictate who receives what quota based on who fished that quota and has subsequently depended on it. Please do not allow the Bairdi fishermen to be put out of business. Delete Option 3.

Sincerely,

FANNING FISHERIES, INC.

Kris L. Fanning, President
To: North Pacific Fisheries Management Council

From: Randy Walton  F/V Snug Harbor

Reference To: Including Skippers in any BSAI Crab I.F.Q. Program

In the past I have expressed my concerns to the council about why the skippers need to be included in any B.S.A.I. crab I.F.Q. system that is to put into place and would like to express them again.

The skipper is the one person that keeps these vessels going, he hires new crew members and see to the training of them (which is getting to be more and more frequent) due to small quotes and small prices for product. He see to the safety equipment and makes sure it's up to Coast Guard specks and trains the crew on how to use it. He makes sure these vessel are maintained and in working order so they do not have brake downs in the middle of these short seasons.

The skippers job is 24 hours a day, 7 days a week once he steps foot onboard through to the end of a season or until the vessel is back in port. As a skipper I purchase all the Item Use Permit Cards that are required before the vessel can participate in any given crab fishery, these cards then produce the catch history (fish tickets) that is going to be used in determining any I.F.Q.s to be issued.

The skipper is the one that is liable for any fines, tickets, or any fee's to be paid to the State of Alaska for any small crab that might be delivered, any pots that might be rigged wrong, any pots that do not have the right pot tag or any tag on them at all.

A skippers job is more than just driving the bus from point A to point B. It is his knowledge and skill that produces a catch history, and keeps the crew safe in bad weather during these fisheries.

The most important fact for skippers to be included is to keep a NEXT GENERATION in the fisheries itself. If we are not included, are chances will be severely jeopardized.

Sincerely,

Randy Walton
F/V Snug Harbor
Alaska Marketing Association

To: Mr. Mark Fina
North Pacific Fishery Management Council

1 April 2002

Mark,

Please include the enclosed options regarding the funding of binding arbitration in the items to be considered by the AP and the Council.

Thanks,
Jake Jacobsen, Manager, Alaska Marketing Association

RECEIVED
APR - 2 2002
N.P.F.M.C
Options for Funding Binding Arbitration
Per Initial Council Review Draft, Section 3.7 Binding Arbitration

Original Language:

4. Each party shall be responsible for its own costs incurred in connection with the arbitration, and the parties agree to pay the arbitrator’s fee in equal shares. Notwithstanding the foregoing, should any party fail to participate in arbitration in good faith or fail to perform in accordance with the arbitral award, then the other party shall be entitled to an award of costs, arbitration fees and attorneys fees incurred as a result of the first party’s failure to participate or to perform, including any such costs and fees incurred in enforcing the arbitral award.

New Options:

1. Retain original draft language as noted above.

2. Retain original draft language as noted above with the inclusion of the italicized language: Each party shall be responsible for its own costs incurred in connection with the arbitration, and the parties agree to pay the arbitrator’s fee in equal shares. *Each party shall pay the arbitrator’s fee in advance; failure to pay the fee shall result in the party that failed to pay losing the arbitration.* Notwithstanding the foregoing, *and in addition to it,* should any party fail to participate in arbitration in good faith or fail to perform in accordance with the arbitral award, then the other party shall be entitled to an award of costs, arbitration fees and attorneys fees incurred as a result of the first party’s failure to participate or to perform, including any such costs and fees incurred in enforcing the arbitral award.

3. Costs of arbitration and market research is to be funded by one-quarter of one percent of the raw fish tax collected from fisheries subject to the rationalization plan distributed equally to an arbitration fund and to the harvesters legally constituted collective bargaining association. The arbitration trust fund will only be used to pay the arbitrator’s fee. Processors and the collective bargaining association will hold the fund jointly, and removal of funds must be authorized by signatories of each party. Should any party fail to participate in arbitration in good faith or fail to perform in accordance with the arbitral award, then the other party shall be entitled to an award of costs and attorneys fees incurred as a result of the other party’s failure to participate or to perform, including any such costs and fees incurred in enforcing the arbitral award.

   Option 3A: The raw fish tax remains the same. One quarter of one percent is allocated from the existing tax.
   Option 3B: Increase raw fish tax one quarter of one percent.
   Option 3C: The arbitration trust fund may be funded to a maximum of $400,000.00 or ( ). Any monies collected in excess of
that amount will be distributed to a separate trust for families of fishermen lost at sea administered by the Alaska Marketing Association.

4. Additional language in options 1 or 2 defining “party” as a processor (or group of processors) or a legally constituted collective bargaining association. Membership in a legally constituted collective bargaining association is mandatory for harvesters to participate in the fishery.

Comments:
A “best offer” binding arbitration process in the event of failed price negotiation is a necessary part of crab fishery rationalization. It will establish a mechanism to ensure a timely start of fishing, equitable price levels for processors and fishermen and bring much needed stability to the fishery and marketplace. Funding of market research by harvesters and the arbitration process is an essential part of rationalization.

The Alaska Marketing Association was established in 1981 as the collective bargaining association for the Bering Sea/Aleutian Island crab fleet. The association has been effective, particularly since 1994, in bringing millions of extra dollars into the fishing fleet and into the State of Alaska. For example, Prior to the last opilio season, we received a serious “best and final” initial offer from a processor of $1.00/lb. Through negotiation, we eventually were paid $1.40/lb., increasing the value of the catch by .40 and thereby increasing the tax collected by the state by approximately $360,000.00. In some years with larger opilio quotas, we have increased the value of the catch by as much as 50 million dollars, increasing the revenues to the state by over $1,500,000.00.

The State of Alaska has a vested interest in insuring a fair and equitable price for fishermen. It can well afford the tiny investment of one-quarter of one percent of the raw fish tax collected from rationalized crab fisheries to fund collective bargaining and binding arbitration. Depriving fishermen of recourse to arbitration in the event of failed negotiation would result in substantial losses to the state.

Throughout the history of the Alaska Marketing Association, there have been harvesters who have neglected their responsibility to the association and have been content to ride the coattails of the majority of the fleet. Several vessels have even fished while the rest of the fleet remained in port until a price was settled. Option 3 will most effectively distribute the cost of collective bargaining and arbitration between all participants and beneficiaries.
April 1, 2002

Mr. David Benton
Chairman
North Pacific Fishery Management Council
Suite 306, 605 West Fourth Avenue
Anchorage, Alaska 99501-2252

Re: Crab Rationalization

Dear Chairman Benton:

This letter is in regard to rationalization in the Brown Crab fishery.

As you may remember, I represent Kevin Suydam, an Alaskan fisherman in the Brown Crab fishery. I will not recount the circumstances of his particular situation, as I have done so in a previous letter to you. However, I do want to highlight again for you our particular concerns.

First and foremost, it is important for the Council to understand the uniqueness of the Brown Crab fishery. It is unlike the other fisheries, in that there are a limited number of participants, and until the year 2000 the Brown Crab fishery had not been fully harvested. In fact, it is telling that in the Initial Review Draft, dated in March 2002, the answer to the three questions posed in considering rationalization of a fishery are a resounding "no" for the Brown Crab fishery. See Initial Review Draft, March 2002, pg. 137. The questions are as follows:

1) Is there documented overcapitalization in the harvesting and/or processing sector as a result of this fishery? 2) Is the participation level high enough to generate a race for fish under shorter and shorter seasons? 3) Are there outstanding biological or management concerns such as overfishing, bycatch, etc.?

This is a fishery in which rationalization is not merited. However, if the Council chooses to go forward and rationalize this fishery, it is imperative that consideration be given to all participants in the fishery, so that there is a fair and equitable outcome in this unique fishery. Below are some concerns we feel must be addressed by this Council in order to ensure a fair outcome.
Specifically, Mr. Suydam is concerned that the catch history (1996-2000) currently being considered is in violation of National Standard 1 and 4 of the Magnuson-Stevens Act. 16 USC § 1851(a)(1) and (4). Recent testimony by William Hogarth, the Assistant Administrator for Fisheries in the NOAA, before the House Subcommittee on Fisheries Conservation, Wildlife and Oceans, re-enforces the importance of following National Standards 1 and 4. We were pleased to see that although Mr. Suydam's specific situation was not resolved during the Council meeting in February, the Council did address our concerns about excessive shares in adding a suboption to 1.6.3(d). However, after looking at staff comments and research on this particular suboption, I think it is safe to say that with all the confidentiality requirements in the fishery, the suboption was unable to accurately address the issue of excessive shares. Therefore, our concerns regarding that issue still stand.

Furthermore, our concerns that the current options being considered almost inevitably exclude those who entered the fishery before full-utilization remain. This concern relates directly to National Standard 1, which states that "[c]onservation and management measures shall prevent overfishing while achieving, on a continuing basis, the optimum yield from each fishery for the United States fishing industry." 16 USC § 1851(a)(1).

Finally, as brought up in Mr. Suydam's testimony at the last meeting, we continue to press the Council to consider recency in determining appropriate options. In the Initial Council Review Draft dated January 2002, the staff included the following comments on the use of recent catch history in determining quota share allocations:

In defining qualification criteria for allocating quota shares, consideration should be given to present participants up through the date of the Council's final action. NOAA GC notes that the potential for an IFQ program to grant quota shares to persons no longer participating in the fisheries was a pivotal issue in the lawsuit concerning the halibut and sablefish IFQ program. The use of "steal" qualification criteria has the potential to award QS to persons no longer in the fishery and fails to consider the present participation of relatively new entrants; the court in the IFQ litigation was very critical of the halibut and sablefish IFQ program on both counts.

Initial Council Review Draft, January 2002, page 33 (emphasis added). The current options proposed in the Brown Crab fishery ignore NOAA General Counsel's words of warning. We understand the Council's concerns that there would be a rush in the fishery if one of the options included final action. However, as I am sure you know, the Brown Crab season is over, and therefore any concerns of there being a rush by including catch...
Mr. David Benton  
April 1, 2002  
Page 3 

History up until the 2001-2002 season are without merit. In addition, it is unclear at this point whether final action will, in fact, occur in 2002.

While we understand that this is a very difficult process with many interests to be represented, we ask again that the Council focus on our particular situation, as it truly highlights the uniqueness of the Brown Crab fishery.

Sincerely,

RICHMOND & QUINN

Kristen K. Richmond

KKR/ckd
Gordon Blue  
P.O. Box 1064  
Sitka, Alaska 99835  

April 3, 2002  

David Benton, Chairman  
North Pacific Fishery Management Council  
605 West 4th Avenue, Suite 306  
Anchorage, Alaska 99501-2252  

Transmitted by facsimile to: (907) 271-2817  

RE: Agenda Item C-5(a), Crab Rationalization

Dear Chairman Benton:

Following is material pertinent to the Crab Rationalization Analysis discussion. This material has been excerpted from a larger article, which is in draft. The sections omitted are of an expository nature, and designed to bring a more general audience to an appreciation of the complexities of this rather arcane subject. These are of course, unnecessary in the present company.

Sincerely,

Gordon Blue
Processors are from Mars, Harvesters from Venus

Is Change coming to Council Family Values?

1. Summary and conclusion. Up front, for the seriously time-impaired.

Processors feel the ITQ in halibut/sablefish gave an unfair advantage to harvesters. Icicle Seafood's Ralph Hoard testified to the U.S. House Resources subcommittee on Oceans and Fisheries, on February 13, 2002, that Icicle was able to maintain a 50% market share of the halibut fishery by capitalizing equipment that accelerated the harvester's "race for fish." He stated that the result of ITQs in halibut was a loss of market share for Icicle, and a consequent loss of fishing receipts. "Capital stuffing" by a processor no longer guaranteed dominance of the market.

'Two pie' is a bargaining game structure designed to address such processor complaints. It goes too far. Its theoretic basis includes justifies processor collusion to set price and divide markets. Such collusion is illicit. Nevertheless, the 'two pie' theory argues that a processor cartel is necessary in a rationalized fishery, to balance the potential for a harvester monopoly. There is not now a harvester monopoly in crab harvesters are losing money, on average. No monopoly has resulted from the halibut ITQ. It is unlikely that a monopoly could result in ITQ crab fisheries, either. A limited ability to 'organize' the crab fleet has resulted directly from the 'race for fish'. Under existing rules, harvesters must assemble in a few specified ports, to provide for pre-season tank inspections. After rationalization, harvesters will choose their own starting dates, and the ability to 'organize' the fleet will dissipate. There is neither necessity, nor reason, to legalize a processor cartel. Processors are advantaged by 'the race for fish'. Processors will also be advantaged in a crab ITQ program, as major stakeholders. Processors will have a dominant role in the ownership of crab harvesting shares, from the first day they are issued.

The reason tic-tac-toe is not a serious game, is that the first player will always win if he doesn't make a mistake. Harvesters understood that the initial 'two pie' proposal provided the "first-move" advantage of tic-tac-toe to processors. Proponents of the system brought additional rules into play, to answer this charge of imbalance. The initial "two pie" dialogue shifted, then, to a discussion of what rule changes would bring about a conversion of "two pie marriage" to a more balanced and complex game that would allow more equity between harvesters and processors. This led to the proposals for "20/20", "90/10" and "binding arbitration."

There has been no progress in negotiation in nearly two years, since. The analysis that follows illustrates that the introduction of the proposed new rules has produced more complication and confusion, but no more equity. There is a great deal of similarity between the rules of the games "tic-tac-toe" and "go," yet the possibilities for different outcomes depending on strategic play, are vastly different. 'Two pie' remains a species of 'tic-tac-toe.' It is theoretically possible that some as yet unimaginable rule change could salvage the 'two pie' plan, and bring about fairness. No such proposals have been made. The 'two pie' and 'voluntary coop' alternatives should be dropped. An ITQ program that takes into its structure the community and regional protections which have been brought to the analysis, provides for an adequate and workable program, without needless complexity. Processors will be among the largest stakeholders when ITQ shares are issued. Processors do not require the special provision of a right to form a processor cartel.

2. Introduction. Game theory discussion can be more entertaining than other modeling.

The analysis is a game-theoretic examination of the strategic behaviors which are likely to result from each of the several options now in consideration for rationalization of the Bering Sea and Aleutian Island [BSAI] crab fisheries by the North Pacific Fishery Management Council [NPFMC]. Game-theoretic consideration is of value in economic analysis when there are likely to be strategic elements in the decision
making of the participants in an economic process. The utility of this technique has led to greater acceptance among economists for analysis of this type of decision behavior, than purely theoretic modeling techniques. The technique is also accompanied by an ability to convey relatively abstruse considerations in familiar and concrete terms which are readily accessible to the layman.

The model chosen for this exercise is an examination of the operation of Processor - Harvester bargaining using terminology familiar to every American adult. This model is expressed in terms of a "family law" dynamic, based upon the rules of each of the proposals in analysis. The introduction of gender into the discussion is purely felicitous. Processors are from Mars, harvesters from Venus.

6. Three systems of 'Family Law'

A. The ITQ.

In status quo, three types of relationships between processors and harvesters can be found.

'Marriage.' The Analysis shows that about one-quarter of the ITQs being initially allocated, will be allocated to harvesters owned or controlled by the same processors who also advocate for processing quota shares. An estimated additional 10% to 20% of initial ITQ will be issued to harvesters owned or controlled by processors who do NOT advocate for processing quota shares. The estimate is supported by the statement of processing quota advocate John Garner to the NPFMC. "We represent processors of about 80% of the crab harvest," he said. "Our members have reported our vessel ownership to the NPFMC." Most of the non-advocating processors have adopted a "wait and see" approach, although a few have begun to oppose processing quota shares, as particular program elements are appreciated to impinge upon them.

'Committed/Cohabiting.' Many of the remaining harvesters, though independently owned, have very long and stable delivery relationships with processors. The number of these is known to processors in each company's instance, and there has been no attempt to quantify them for analysis. The relationships are unlikely to alter significantly under an ITQ fishery management structure, and will most likely continue to be stable. Seven years of this could be said to constitute a common-law marriage.

'Just dating.' The remainder of the harvester fleet is independently owned, and has changed markets one or more times within the past three years. In some cases, this occurs when the vessel changes fishing activities, in other cases it has been made necessary when processors left specific areas or markets, and in still others, the change occurs as a part of the business plan of the harvester, perhaps as price-seeking behavior. These relationships are also likely to continue in the same, uncommitted fashion, after an ITQ program is implemented.

The number of independent harvesters that remain after fleet consolidation due to rationalization is likely to be reduced, because of advantages available to vertically integrated operations, such as access to greater reserves of capital and information. Consolidation of capacity and reallocation of ITQs is likely to occur most rapidly among the 'married' and 'committed/cohabiting' members of the fleet, and these players will in turn compete with independent harvesters for the remaining pool of consolidating quota. This defines one of the greatest tasks facing the NPFMC - creating effective "caps" for preventing too much consolidation of control over the resource. 'Too much consolidation' results in an inability of managers to effectively manage the resource.

'Cohabiting' harvesters will provide a degree of vertical integration greater than that anticipated by the use and ownership caps that are anticipated in the analysis. This results because these relationships behave as 'married' but are not 'owned or controlled' and therefore not enumerated or otherwise identified for
These 'informal marriages' will provide additional platforms for control of ITQ that will not be counted against the caps of the processing company. This creates a new 'efficiency' which will be a counter regulating artifact of the regulatory system designed to limit consolidation of interest.

It is difficult to be convinced, given a thorough understanding of the relationships which exist in the status quo, that ending the compulsion to 'race for fish' will create major shifts in market share for processors, in and of itself. As Fethoven has indicated, the extent to which technical harvesting efficiency may increase after rationalization is likely to be impacted by the processing strategies of inshore processors. This implies that processor competition for market share after an ITQ in the crab fisheries may take the form of shifts in processing strategies that will allow harvester efficiency gains to be maximized. Thus, the 'dating' relationship of harvester and processor is likely to continue under an ITQ, and the recognition of this is more likely to produce successful relationships, than inflexibility.

It is possible that the downward shift in market share experienced by Icicle during the advent of the halibut/sablefish ITQ, as noted by Hoard, was at least partly the result of an inability or unwillingness to allow for this shift in dynamic by changing processing strategy. To the extent that regulations abet such inflexibility, harvester efficiency gains are reduced, and neither the harvester nor the processor benefits. For example, consider the impact of a regulation which compressed the extended opilio 'biological season' of four or more months, to four weeks, in order to allow processors to shift their focus to some different activity. Then harvesters would not be able to experience the efficiency gains possible, and neither would processors. The absence of such compulsion cannot be automatically taken to be detrimental to processors, however, as again indicated by Fethoven. Processor efficiency gains are also possible, under an ITQ system, with a slower paced crab fishery.

B. The 'Two Pie' marriage.

The defining characteristic of the 'two pie marriage' is that it is universal. This compulsion to create a 'one size fits all' box, and confine all the players in it, has made the 'dating' crowd understandably nervous. This has also caused a great deal of angst for many of the 'committed/cohabiting' group, and a general chill has entered the relations of many formerly happy members of this set. On the side of the processors, this chill has increased the fear that the 'committed' relationship is not enough, and the 'two pie marriage' advocates conclude that it is even more important to establish this protection. This has led to a greater hearing down, and a more vigorous campaign to establish the 'two pie' institution, and a greater fear on the harvester side that the potential for abuse in a 'two pie marriage' is real, and to be feared. Thus, at this point, the efforts of the 'two pie advocacy' are creating greater distance, rather than closure, with the 'committed' and 'dating' fleet.

These efforts, however, are presently focused primarily on delivering the vote of the NPFMC. If this were accomplished, then the 'two pie marriage' would have cleared a major hurdle, and its advocates could shift to a different tactic with harvesters. This circumstance could be expected to signal increased courting behavior between processors and harvesters, which could accelerate and produce desperation among harvester 'old maids', as the processor's quota requirements are filled. However, a great deal of dissatisfaction by harvesters with the NPFMC decision could also lead to legislative deadlock, and a failure of the 'two pie marriage' to become authorized.

A second set of behaviors would govern the conduct of harvesters once the marriage(s) were consummated. What if a processor determines that he is unsatisfied with the market share that his processing quota allows? In the ITQ system, or in the present 'race for fish', this processor might simply bid for the product, by paying harvesters more to bring product to him. Until now, the more usual processor strategy to increase crab market share has been simply to encourage a new vessel to enter the fishery, by providing market opportunity, financial assistance to accomplish conversion or acquire gear or
licences, or providing tendering contracts or other employment. This has resulted in very little bidding for product through price, and few price wars on even a minor scale. In the ITQ fisheries, this tactic has a surrogate, which is assistance in financing quota purchase. This bidding occurs at relatively lower risk than ‘open access’ and capital cost is on the same financial order of magnitude as the ‘open access’ tactic.

The ‘two pie marriage’ doesn’t prohibit a processor from getting more quota on the side. However, since the institution of marriage is mandatory for each harvester ‘A’ share, there is no ready pool of quota to draw upon, except for ‘B’ shares. Although price bidding may result, the transaction costs to acquire ‘B’ shares are likely to become prohibitive because of restrictive practices of processors. Just for one instance, ‘tying agreements’ could become adopted, which would require harvesters to deliver their ‘B’ shares to an ‘A’ share market, on a first option or other basis. More sophisticated wooing behavior would structure these agreements so that the ‘B’ share sale compelled an acceptance of the ‘A’ share quota by the processor.

In either event the result is the same, that processors will be required to pay one another, to increase their market share. This encourages a degree of processor collusion that is presently prohibited and discourages competition between processors. At the same time, this encourages processors to focus additional rent seeking as extractions from harvesters. Once an agreement between processors has been reached, to transfer processing quota by lease or sale, the agreement of the harvester to the transaction is moot. There will simply be no more place under the roof for her, and only one place to move.

Now, assume that there is a disagreement between a harvester and a processor who have been matched up for some interval, and they no longer wish to do business. Let this disagreement be for any reason, so that there is no stigma attached to either side - a no fault divorce, if you will. Under the two-pie system, the harvester would have to find a place to move to. The 2-pie system requires a processor quota share increment to match a harvester quota share increment. This means that there are four options available to the ‘divorcing’ harvester.

- Stop fishing - “homeless and out on the street” - maybe the harvester can sell out her shares and recover something - if there is anything to fish. The quota portfolio, at present, includes many stocks which are depressed. One of the most glaring limitations on ITQs as a buyback mechanism, is that the fishing quota share is strictly vended according to the present fishery. What if the fishery is closed, or at very low level?

- Trade down - swap ‘A’ shares for ‘B’ shares, and leave. Since she will be competing with the processor for these shares, she must prepare to take a major hit on price. She will also have to pay multiple transaction costs, since she will have to ‘sweep up’ shares from a number of other players. ‘B’ quota, after all, will be issued in relatively small amounts.

- Swap husbands - she could find a harvester that is wanting to leave another processor, has a similar amount of quota share, and is willing to try out her husband - if the husband [processor] has any say [and they will], this could get messy

- Bust up someone else’s marriage, and move in - she could seduce a new processor and get them to throw the [other] wife out. This option, of course, exhibits a distinct downward pressure on ex-vessel price. Let’s just assume the seducer has some bauble that turns the first processor’s head - say, a block of halibut ITQ she is willing to commit. Surely the dumped wife will have no such asset. Then, what else is likely to get a ‘spurned husband’ to accept a ‘rejected wife’ than a considerable discount in ex-vessel price?

These are not considered socially desired behaviors in our civic lives, and we are unlikely to consciously devise a system that actively encourages them. I can not see why they are any more desirable
in our business lives. In fact, if we design a system like this, we can expect to have severe actual impacts on the health of communities.

C. The "voluntary coop" model marriage.

In the voluntary coop, there is a choice available to the harvester, to enter the 'two pie marriage' or remain 'daring' under 'open access.' Also, in the coop model, the husband swapping of "straight 2-pie" is discouraged. In order to move to a new processor, there must be a payment made to the old processor [pay to seduce].

This ends the no-fault divorce, and decides in the favor of the husband, in every case. Sometimes, a husband might actually be at fault. For example, let's say he still puts out the same price as everyone else, but the quality becomes a big factor - assume that suddenly, quality grading becomes punitive, and what was acceptable product delivered by the vessel, is no longer. In the short term, there is a conservation implication - high grading by the vessel increases, with an increase in handling mortality. In the long term, the conservation impacts either continue, or, if the punishment is great enough, the severance payment is made, a different processor is seduced, and some other wife gets thrown out.

In this civic marriage analogy, such a payment might almost make sense, accepting of course that the husband is always right. After all, the other wife would move in with the old husband after the swap, and share in the communal benefits of the severance payment. We are not talking about U.S. marriage practices here, however - we are talking about a society that is strictly, and intensely, polygynous.

In the Analysis, 75% of all opilio quota share would be allocated initially to the 8 top processors, and the 150 to 160 top harvesters. Roughly, a harem of 20 wives for each husband, at the 75% participation level. In this system, there is no community property, so the 'high grading' husband gets the blood money AND gets to collect a more valuable dowery (ie, pay a lower ex-vessel price for the same amount of quota share) to accept the 'damaged goods' - the wife displaced by the flight of the abused former spouse.

The model coop provides that vessels don't have to join (be married). It is not at all clear that it allows vessels to return to open access, having once joined. If not, then the coop model provides an even more odious pecking order than the 2-pie model, because of the "pay to seduce" provision.

Although it is not at all clear in the draft program stage, assume that unhappy wives can always go back on the open access street, and compete to support themselves. Then, an independent may scratch up a living, if she can provide high-enough quality goods at a low-enough price. Of course, this incentive is directly in conflict with the goals of the program in the first place - to get those harvesters off the street and create incentives for safety, conservation and stability [ie. sustainability]. There is a major flaw, here - all the complication has not resulted in a better system.

Let me illustrate this with one more marriage analogy, to show the extent to which this system shelters abusers - and provides counter-incentives to solve the problems exhibited in the problem statement. Assume a small fishery - say, a Pribilof Is. red king crab fishery - was able to reopen. This isn't a necessary condition, it just simplifies the illustration. The top four processors have 2/3 of the initial allocation and the top 100 boats have about the same amount - these depending upon the option chosen from the analysis. So, an average harem of about 25 wives per husband. Now let's say that husband (A) is one of the four dominant males, and he has a special relationship with four of his wives. In this analogy, I can think of no other term - these wives are slaves. (A) owns them. There is no way they are ever going to move to another husband, unless (A) simply decides to whore them out, for greater personal return.

Let us assume that these wives are allowed to bargain price as part of the group. What will the long-term implications of this be? Such wives are allowed to bargain price in the pollock coop, however, the
pollock coops are not directly analogous. In pollock, the only history is that of the vessel, and the fleet is almost entirely integrated into the ownership of the plants. This makes conditions somewhat different, and we can't simply assume that the experience of pollock will translate directly. In pollock coops, ex-vessel price as reported on fish tickets has fallen. This costs the State of Alaska money, on a per pound basis, though the increase in quota subject to tax, probably more than offsets the overall loss. Pollock vessels, however, are enthusiastically reported as experiencing increased income, due to 'off the ticket' bonuses. It is an unreported fact that crews are not sharing in these increases, in the vertically integrated fleet, because their pay has been restructured. In many cases, vessels are leasing quota to one-another and then charging that lease off against the gross stock - resulting in lower shares to crews, and higher returns to owners. Since some of these vessels have been acquired by processors more recently than their processing plants, this is most likely an internal reallocation of income to the area with the greatest tax-shelter, and not an actual sharing of benefits to harvesters.

That said, assume that slave wives are simply price takers in negotiation. This is probably a defensible argument, is it not? In the long term, strategies such as that reported for the pollock fleet will evolve, to the extent that the open access fishery is eliminated. In the short term, independent vessels will become converted at lowest possible cost to processor control. A specific strategy that would work to this effect, is if processor (A) reaches agreement with his four wives to take a price that results in an operating loss for those harvesters. Since (A) will support and sustain these wives (though not necessarily in the peak of safe condition) then it is simply a way for (A) to get best value - he works them and provides just enough allowance to keep them going.

Now, in the chosen fishery, four harvesters could take 100% of any likely quota, for the foreseeable future, so these wives could certainly take all of the QS needed to use the processing quota allocation belonging to (A). (A) would reasonably expect to offer the other 21 wives of his harem a payment - a royalty - to simply remain idle. Initially, compared to the mean streets of open access, harem life may seem like an ideal - she gets to collect a shiny-looking royalty. Since the price will ultimately be set by agreement with the slave wives, the royalty could be brought in at a high percentage for sake of appearances. Recruit wives think: "Sit back, never have to put out, and be happy. Let the slaves do all the work." This will create the closure necessary to draw them into the fold.

Soon, the income from the combined royalty and low (slave wage!) price will be too low to survive, even in the harem. What is the likelihood that these wives will be able to generate a separation payment? They will either be forced into the open access fishery (if the rules allow this) or be bled by royalty payments that won't sustain their overhead.

This is an ideal incentive for processor abuse. The price in the fishery is set by processor-owned vessels. These vessels are able to attain whatever efficiency benefit there is, in the quota share system. Some independent vessels may opt to continue in the open access fishery. As at present, these vessels will fish at a loss, on average. After a very short time, they will have been so weakened, they will revert to coop control, and the owners will make any arrangement possible to get out - even if they have to remain titular owners of the vessels, and be brought to collude to avoid the constraints of caps on processor ownership.

If the coop 2-pie system is implemented, processors will gain additional leverage over harvesters. Harvesters that attempt to exercise independence will find themselves in an even more intense race for fish. Conservation will be worsened in this race, which will leave the ADF&G in an unsavory role. The department, in its necessary role as conservation watchdog, will be forced to intervene with new proposed regulations, which in turn can only make the open access fishery even more difficult.

The role of the ADF&G, then, will become 'enforcer' for the coops, which will be vertically integrated
creatures of the processors, and will enjoy all the benefits of the new system. In the mid term, the coops will get all the good press, while a new system is created that destroys all independent operators, captures all the benefits to the coops, and leads to the long-term decline of the communities that now receive the benefits of the harvest, directly and indirectly. The long-term implications of the coop 2-pie system includes that the ADF&G will have become so co-opted by its role as enforcer and cheerleader for the coops, it will be incapable of the kind of monitoring and enforcement that will be required to actually do its job for conservation.

Why would we choose to go down such a path?
April 3, 2002

David Benton, Chairman
North Pacific Fishery Management Council
605 West 4th Ave, Ste 306
Anchorage, AK 99501-2252

SUBJECT: Crab Rationalization
Replacement Vessel/Catch History
F/V Sandra Five

We are the owners of the F/V Sandra Five (ADF&G #70770), a replacement vessel for the F/V Chevak, which sank in February 1994. Before being lost, the Chevak was a crab catcher vessel with catch history dating back to the 1980s.

At the February council meeting, two concerns were expressed about my replacement vessel catch history. The first concern was a valid License Limitation Program (LLP) permit. At that time, we did not have a permanent LLP, but since the meeting, we have received a permanent, transferrable LLP permit for the F/V Sandra Five (see attached Permit No. LLC3590).

The second concern was a comment made that it appeared we have just recently brought this matter to your attention, i.e., it looks like we just recently bought the sunken vessel catch history. In fact, I have sent four previous letters trying to address this issue (see attached copies, dated 01/31/01, 03/30/01, 04/27/01 and 01/06/02) and as outlined below, have worked diligently to follow the regulations in effect.

We started looking at replacing the F/V Chevak as early as 1994. Serious negotiations began in late 1996 with final contracts acquired in October 1997. Construction on the F/V Sandra Five began in November 1997 with completion on June 20, 1998. At the time of the final contract in October 1997, we had worked with the Council and NMFS RAM Division to review the purchase contract to comply with the regulations in effect at the time. Also at that time, there was no mention of looking at any catch history beyond 1995.

We've followed all the rules at the time of purchase of the fishing rights and catch history. We also qualified under the recent participation requirements (RRP). By changing the rules in the middle of the game, you will make it impossible for me to have enough catch history to run a profitable operation. This is not a hardship case. This is a unique situation caused by a governmental process that will have taken over ten years to complete. This situation can be avoided by my proposed amendment (see attached copy).
Please consider this information and my amendment at your April Council Meeting. I would be happy to testify at the April meeting. Please contact me at (541) 374-8255 (office), (503) 789-7888 (cell) or email heukerbros@gorge.net

Sincerely,

HEUKER BROS., INC.

Chris Heuker, President

CH:dwh
Attachments
April 3, 2002

David Benton, Chairman
and NPFMC Council Members
604 West 4th Ave, Ste 306
Anchorage, AK 99502-2252

SUBJECT: Proposal for Replacement Vessel/Catch History

Please consider the following:

Proposal: For initial allocation of quota share for Amendment 10-approved replacement vessels (for sunken vessels only).

1.4 Initial Allocation of Quota Shares (QS):

1.4.1 Suboption (a) Calculation of QS distribution:

Develop a new suboption for Amendment 10 replacement vessels, that replaced sunken vessels:

For each of the fisheries for which such a vessel holds valid endorsement for any years between the sinking of the vessel and the entry of the replacement vessel to the fishery, allocate QS according to 100% of the vessel’s average history for the qualifying years unaffected by the sinking.

Sincerely,

Chris Heuker
LICENSE LIMITATION PROGRAM

Crab License Number: LLC3590

LICENSE HOLDER

HEUKER BROS., INC.
62975 NE TUMALT ROAD
CASCADE LOCKS, OR 97014

ENDORSEMENT

Name: SANDRA FIVE

Vessel: SANDRA FIVE

Operation Type: Catcher Vessel

MLOA (Feet): 126

Species/Area: Bristol Bay Red King Crab
BSAI C.Opilio and C.Bairdi Crab
St. Mathews Blue King Crab

SPECIAL TERMS & CONDITIONS

Issue Date: February 28, 2002

Transferable? Yes

Note: A variety of state and federal regulations govern commercial fishing and processing privileges. It is the responsibility of any person conducting fishing activities under the authority of this permit to understand and comply with those requirements.
January 31, 2001

David Benton, Chairman
NPFCM Council Members
605 West 4th Ave, Ste 306
Anchorage, AK 99501-2252

SUBJECT: LLP Program and the Capacity Reduction Program
F/V Sandra Five ADFG #70770

We would like to address the issue of the Capacity Reduction Program recently approved by Congress. This legislation applies retroactively (i.e., a current replacement vessel is now ineligible) and prospectively (i.e., any vessel lost in the future cannot be replaced). It was our understanding that anyone with a valid LLP permit would be issued a Certificate of Vessel Eligibility based on the approved legislation.

Based on the previous regulations (and direction) of the NMFS Restricted Access Management division, we purchased fishing rights from a sunken vessel and proceeded to construct the F/V Sandra Five. Halfway through construction, we were informed that we weren't eligible because of a change in the recency requirements. We subsequently proceeded to work with the Council to adopt and implement Amendment 10 and the four exemptions contained therein. After an extensive investment of time and money (nearly $2 million), we were under the assumption that after we received the LLP, we would then be permanently eligible for the crab fishery with our vessel.

It appears that NMFS Restricted Access Management (RAM) division's interpretation of the new congressional buyback language is more restrictive than the Council's original intent. Our vessel qualified under the Council's intent by recognizing combined history and replacement provisions provided for by the Council (under Amendment 10), in contrast to the RAM division's interpretation which fails to include the combined history exception for crab vessels and a replacement provision for vessels that are lost. By a literal interpretation of the new Congressional buyback language, RAM is not following the same logic and intent as the Council, thus not issuing permanent licenses to vessels relying on combined histories.

We do not believe it was Congress' intent to ignore the Council's previously-approved actions. We request the Council contact the appropriate government offices and agencies to correct this misinterpretation and restore the vessel's eligibility.

Sincerely,

HEUKER BROS., INC.

Chris Heuker, President
March 30, 2001

David Benton, Chairman
and NFFMC Council Members
605 West 4th Ave, Ste 306
Anchorage, AK 99501-2252

SUBJECT: Crab Rationalization - Replacement Vessel/Catch History

We are the owner of the F/V Sandra Five, ADF & G #70770, a replacement vessel for the F/V Chevak, which sank in February 1994. Before being lost, the Chevak was a crab catcher vessel with catch history dating back to the 1980s. The Chevak was strictly a pot fishing catcher vessel, and if not lost, it would still be active in the pot fisheries.

Plans for replacement of the Chevak and purchase of the fishing rights and catch history began in 1996. Final contracts were acquired in October 1997, and construction of F/V Sandra Five began November 4, 1997 with completion on June 20, 1998. The Chevak had catch history from 1990-1994 and F/V Sandra Five has catch history from 1998 (blue and red king crab) and 1999 (opilio, blue and red king crab).

I understand the committee is considering catch history from 1990-1999, 1992-1999 or 1995-1999. Due to the time and financial commitment required, replacement vessels cannot be completed in between seasons. Therefore, under the first option (1990-1999), we would lose 40% of our catch history. For the years 1992-1999, we would lose 60% of our catch history, and for the years 1995-1999, we would lose 80% of our catch history. This is based on the opilio fishery only. A reduction of this magnitude would put undue hardship on our participation in the future crab fisheries, and ultimately affect the financial stability of the families relying on the income from this vessel.

To my understanding, there are 10-12 vessels in the same situation. The vessels could average their catch history over the years they participated and apply the result to the years they lost during replacement of the vessel. It would be unreasonable to apply zero catch histories in coming up with an average for the vessel as the vessel has proven history when the vessel was participating. This would not apply to vessels that left to participate in another fishery, rather only those vessels that did not participate in any fishery at all.

With this said, it would be our recommendation that the Crab Rationalization Committee address the issue of replacement vessels and find ways to resolve it in the planning stages rather than later where there is potential for delaying adoption of the program.

Sincerely,

Chris Heuker
April 27, 2001

Dave Hanson, Chairman
Crab Rationalization Committee
North Pacific Fishery Management Council
605 West 4th Ave, Ste 306
Anchorage, AK 99501-2252

SUBJECT: Crab Rationalization - Replacement Vessel/Catch History

Dear Mr. Hanson:

On March 30, 2001, I filed a letter with the council regarding catch history of replacement vessels (copy attached). Please consider this my request to circulate this letter to the Crab Rationalization Committee members for their consideration.

We feel the Crab Rationalization Committee should address the issue of replacement vessels and find ways to resolve it in the planning stages rather than later where there is potential for delaying adoption of the program.

I would appreciate hearing from you on whether my request can be granted. You may contact me at the phone number provided above or at heukerbros@gorge.net.

Sincerely,

Chris Heuker
January 6, 2002

David Benton, Chairman
North Pacific Fishery Management Council
605 West 4th Ave, Ste 306
Anchorage, AK 99501-2252

SUBJECT:  Crab Rationalization
Replacement Vessel/Catch History

Upon reviewing the crab rationalization reports, I have not seen any mention of how replacement vessels are dealt with, which will have a limited crab history.  As stated in my previous letters (see attached March 30, 2001 and April 27, 2001 letters), losses of this magnitude would put an extreme hardship on our participation in future crab fisheries.  It is my understanding that less than six vessels would be in these same circumstances.  Constructing a replacement vessel is more than a one-year project.

Please consider this information at the next Crab Rationalization Committee meeting.  I would be happy to testify at the February meeting.  Please contact me at (541) 374-8255 (office) or (503) 789-7888 (cell) or email heukerbros@gorge.net.

Sincerely,

HEUKER BROS., INC.

Chris Heuker, President

CH:dw
Attachments
cc:  Crab Rationalization Committee
April 3, 2002

Mr. David Benton
Chairman
North Pacific Fishery Management Council
605 West 4th Avenue, Suite 306
Anchorage, Alaska 99501-2252

Dear Mr. Chairman and Members of the Council:

The C.R.A.B. Group would like to bring to your attention testimony which Dr. Robert Halvorsen of the University of Washington presented to the Fisheries Subcommittee of the Committee on Resources of the United States House of Representatives on February 13, 2002. In his testimony Dr. Halvorsen specifically reviewed the economic analysis Dr. Matulich has advanced in support of the “two-pie” approach for allocating quotas to fishermen and processors.

After reviewing Dr. Matulich’s papers on the subject and the papers cited by Dr. Matulich in support of his theory, Dr. Halvorsen found that Dr. Matulich’s claimed “proof” that a two-pie allocation would be “Pareto-safe” in a bilateral monopoly is invalid. Dr. Halvorsen also concluded that “no credence should be given to [Dr. Matulich’s] claims that a “two-pie” system is a ‘policy superior initial allocation of rights.’” (See attached Testimony of Dr. Robert Halvorsen, pages 2 and 11-12).

Dr. Halvorsen’s testimony also provides some academic insight into the “Pareto-safe” concept that is at the heart of Dr. Matulich’s rationale for why processor quota shares are necessary to ensure that an Individual Fishing Quota (IFQ) allocation program does not harm processors. Council members may be interested to learn that the term “Pareto-safe” appears to have been originated by Dr. Matulich, and that the “Pareto criterion” on which the concept is based has been long held to be “of little practical use.” The reason the “Pareto-safe” concept is of little practical use is, as Dr. Halvorsen explains, because “virtually all feasible public policies result in at least one individual being worse off” and therefore would fail to meet the “Pareto criterion.” (Halvorsen Testimony at pages 9-10).

The C.R.A.B. Group urges the Council to review the attached testimony. It clearly demonstrates the complete lack of academic support for the two-pie allocation model championed by Dr. Matulich. It is time the Council devoted greater time and attention to the far larger body of academic research, staff analysis, and legal jurisprudence that all conclude that allocating specific shares of a market to individual processors is anti-competitive and harmful to fishermen and consumers. Dr. Halvorsen will be attending this meeting, and we hope you will each take the time to discuss the serious deficiencies of the “two-pie” model further with him.

Cordially,

Earl Comstock
Counsel to the C.R.A.B. Group
Statement of Proposed Testimony to the
Subcommittee on Fisheries Conservation, Wildlife and Oceans of the
Committee on Resources
U.S. House of Representatives

Robert Halvorsen
Professor of Economics
Department of Economics
University of Washington

On behalf of the
Crab Rationalization and Buyback Group
Executive Summary

My testimony addresses the issue of whether the guidelines for Individual Fishing Quota (IFQ) programs should require explicit mechanisms to ensure that processors are compensated for losses they might incur as a consequence of the introduction of IFQs. I begin by discussing the importance of market structure in determining the effects on processors and harvesters of rationalizing a fishery, with the primary emphasis placed on the effects of an IFQ program in which quota shares are allocated only to harvesters.

To illustrate the importance of market structure and the balance of bargaining power on the outcomes of a rationalization program, I review a recent analysis of the BSAI inshore pollock fishery that was prepared for the North Pacific Fishery Management Council (Haverson, Khalil, and Lawarée 2000). The analysis demonstrates that market structure is critical in determining the distributive outcomes of IFQ programs. Because the characteristics of market structure differ greatly across fisheries, the distributive effects of rationalization policies require fishery specific analysis. It is concluded therefore that decisions concerning the desirability of mechanisms to compensate processors for potential losses, and the type of mechanism that is most appropriate, should also be fishery specific, rather than attempting a “one-size-fits-all” approach.

Next I discuss the rationales that have been advanced for compensating processors for any losses that they may incur as the result of a rationalization program. My primary emphasis is on the argument that if processors are not compensated they may block the implementation of a rationalization program, with the result that the potential efficiency gains from the program cannot be realized. I note that there are several problems with this argument. First, attempts to block a program unless distributive outcomes are altered may simply reflect an attempt to increase the size of already positive net benefits, rather than to avoid losses. Second, if harvesters become concerned that the attempt to keep processors safe from harm will result in losses for harvesters, they may also try to block implementation. Lastly, when efforts to hinder implementation are rewarded, an incentive is created for increased obstructive behavior in the future.

Following this general discussion, I consider two recently proposed concepts that have received a considerable amount of discussion in the context of rationalization programs in North Pacific fisheries. One is that rationalization programs should satisfy the criterion of being “Pareto safe,” which requires that no fishery entities be made worse as a result of rationalization. The other is that an IFQ program should also involve the allocation of Individual Processor Quotas (IPQs) in what has come to be known as the “two-pie” approach.

The two concepts are linked in that the two-pie system has been advocated by Matulich and Sever (1999) as a feasible way of achieving Pareto-safe rationalization in at least some policy-relevant situations. In particular, Matulich and Sever claimed to have proven that a two-pie allocation would be Pareto safe in a bilateral monopoly, that is, a
fishery with only one harvester and one processor, and asserted that their analysis of this case would be applicable to the BSAI inshore pollock fishery because it "emulated" a bilateral monopoly. However, neither of these claims is correct. First, as discussed in Halvorsen, Khalil, and LaRue (2000), the characterization of the BSAI inshore fishery as a bilateral monopoly was highly misleading because it ignored critical elements of the inshore fishery's market structure. Second, and more importantly, my testimony shows that the claimed proof that a two-piece allocation would be Pareto safe in a bilateral monopoly is invalid. Therefore, even if a real-world fishery could be found that was a bilateral monopoly, there is no reason to believe that a two-piece allocation would be Pareto safe.

Since there are no other market structures for which the Pareto safety of a policy feasible two-piece system has even been asserted, no credence should be given to claims that a two-piece system is a "policy-superior initial allocation of rights" (Matulich, Mittelhammer, and Rebera 1996, page 112). Instead, the inclusion of IPQs in a fishery rationalization program should be viewed as simply one possible mechanism for enhancing outcomes for processors, bearing in mind that the possible outcomes under IPQs have received very little credible economic analysis and are untested by experience in any real-world fishery.

Evaluations of the appropriateness of allocating IPQs as part of a specific rationalization program should include (i) an assessment of whether compensation for processors is desirable, given the characteristics of the specific fishery, in particular the balance of bargaining power, and (ii) the relative merits of IPQs versus other possible compensation programs, given the characteristics of the specific fishery.

Accordingly, it is desirable that regional councils have flexibility in deciding whether, and how, processors should be compensated for possible losses arising from a fishery rationalization program. Therefore, I recommend that the national standards for fishery conservation and management not require that IPQs or other specific compensation mechanisms be included in future fishery management plans and regulations.
1. Introduction

My testimony addresses the issue of whether the guidelines for Individual Fishing Quota (IFQ) programs should require explicit mechanisms to ensure that processors are compensated for losses they might incur as a consequence of the introduction of IFQs. I will discuss in turn the conditions determining the probability, extent, and incidence of such losses, and the efficiency and equity rationales that have been advanced in favor of compensation.

I will pay particular attention to two recently developed concepts that have received a considerable amount of discussion in the context of rationalization programs in North Pacific fisheries. One is that rationalization programs should satisfy the criterion of being "Pareto safe," which requires that no fishery entities be made worse as a result of rationalization. The other is that an IFQ program should also involve the allocation of Individual Processor Quotas (IPQs) in what has come to be known as the "two-pie" approach. The two concepts are linked in that the two-pie system has been put forward as a feasible way of achieving Pareto-safe rationalization in at least some policy-relevant situations by Professor Scott Matulich and his co-authors (Matulich, Mittelhammer, and Reberte 1996, Matulich and Sever 1999).

2. The Effects of IFQ Programs on Processors

Unless specified otherwise, the phrase "IFQ program" will refer to a program in which IFQs are allocated only to harvesters. In analyzing and predicting the effects of such an IFQ program on the well-being of processors, it is critical to take into account the specific conditions of the fishery being considered.

One important set of conditions concerns the market structure of the fishery. The first analyses to emphasize the possibility of processors incurring losses as a result of the introduction of an IFQ program (Plesha and Riley 1992, Matulich, Mittelhammer and Reberte 1996) assumed that the fishery was perfectly competitive, the end of the race for fish created excess processing capacity with no alternative uses, and the firms in the industry were not vertically integrated (that is, processors did not own harvesters or vice versa). Given these assumptions, they conclude that processors would be made worse off by an IFQ program because they would fail to obtain any of the rents from fish and would also lose part of the value of their capital.

However, if all other circumstances were the same, but processors and harvesters were vertically integrated (as for example in a fishery comprising only factory trawlers), then processors could not be made worse off because they would receive the full benefits of the rationalization program (Matulich and Sever 1999). In a mixed case, with some processors vertically integrated and others not, the incidence of gains and losses might differ by type of entity, with non-integrated processors being more susceptible to suffering losses than integrated (Halvorsen, Khalil, and Lawarée 2000).
Perfect competition is one of the standard models used in economic analyses, in part because of its analytical simplicity. Examples of other standard models familiar from economic theory include monopoly (a single harvester facing perfectly competitive processors), a monopsony (a single processor facing perfectly competitive harvesters), and a bilateral monopoly (a single harvester facing a single processor). In the first case, the monopolist would obtain all the net benefits of the fishery, in the second case the monopsonist would, and in the third case the division of net benefits would depend, among other things, on the alternative opportunities available to the participants.

These three standard models also have the advantage of analytical simplicity, but are not in general directly applicable to the analysis of the effects of IFQ programs for two reasons. First, the characteristics of the market structures of real-world fisheries are more complex than such simple theoretical models imply. And second, if a fishery did conform to one of these model specifications, then it would be expected to be capable of maximizing aggregate net benefits on its own, which would preclude the development of a race for fish. For instance, a monopolist harvester would optimally allocate its fleet over time rather than engaging in a race to fish between its own vessels. Accordingly, rationalization programs such as an IFQ program would be redundant.

However, consideration of these standard models does illustrate the wide range of results possible with respect to the division of the net benefits of a fishery, and therefore the need to take market structure into account when assessing the effects of an IFQ program on the participants in the fishery. Also, to the extent that a fishery being considered for an IFQ program has characteristics similar to a standard model, some inferences may be drawn about the probability that processors could be adversely affected by the implementation of the program. For example, other things equal, implementing an IFQ program in a fishery with very few processors and many harvesters is less likely to result in processor losses than in a fishery with many processors and harvesters.

More generally, these examples suggest the importance of bargaining power in determining the distributive effects of an IFQ program, and therefore the need to use the tools of game theory to assess the possible outcomes of a particular IFQ program. These tools include cooperative bargaining theory (e.g., Nash 1953) and non-cooperative bargaining theory (e.g., Osborne and Rubinstein 1990). A recent example of an analysis of a fishery using cooperative and non-cooperative bargaining theory is Halvorsen, Khalil, and Lawrée (2000). This analysis, which was prepared on behalf of the North Pacific Fishery Management Council, considered the prospective distribution of net benefits from rationalization of the inshore sector of the Bering Sea/Aleutian Islands (BSAI) fishery under the American Fisheries Act (AFA).

Although most of the specific results of the analysis are directly applicable only to that particular fishery, a brief review of the main elements of the analysis is useful to illustrate the issues involved. The review also will be useful as background for the evaluation of the two-piece allocation, which was initially discussed in the context of the inshore pollock fishery.
Halvorsen, Khalil, and Lawrèce evaluated, and rejected, the suitability of several standard economic models that had been proposed for application in the inshore pollock fishery. For example, Wilen (1998) had argued that the inshore fishery was best characterized as a single monopsony, in part because of the dominant position of two firms in the main market for surimi products. Halvorsen, Khalil, and Lawrèce concluded that Wilen’s analysis substantiated the hypothesis that processors had significant market power, but that the fishery was not a monopsony.

One reason given for rejecting the conclusion of monopsony was that for the processors to behave as a monopsony they would have to overcome serious economic and legal difficulties associated with being a successful cartel. Also, there was evidence that the processors had not always acted in a united way, as they would have if they were a monopsony. For example, when the Bering Sea Marketing Association (BSMA) went on strike against several processors in 1999, the largest processor in the fishery, which was not a party to the negotiations, had its fleet continue to fish, making prolongation of the strike too costly to both the members of the BSMA and their processors. The existence of the BSMA also argued against the conclusion that the inshore sector was a monopsony, because its collective bargaining is not consistent with harvesters acting as passive price takers. Lastly, as noted above, an effective monopsony would have been capable of substantially rationalizing the fishery without the intervention of the AFA.

The existence of the BSMA was considered especially important by Matulich and Sever (1999), who argued that it implied that the inshore sector was a single bilateral monopoly. They claimed that the dissemination of price information to each processor by the marketing association during the course of negotiations allowed the processors to unite even though they were not sharing information among themselves. In other words, Matulich and Sever were claiming that the BSMA, acting as the representative of independent catcher vessels, unwittingly made it possible for the processors to unite against its own clients.

One serious factual problem with Matulich and Sever’s analysis is that the BSMA did not represent all of the independent catcher vessels, and the largest processor was not a party to the negotiations. Also, the theoretical analysis left two critical questions unanswered. First, why would the marketing association not take advantage of the processors’ lack of communication and play one against the other by misrepresenting received price offers? Second, even if it did not do so, why would information on prices be sufficient to allow the processors to overcome the other economic and legal difficulties hindering their behavior as a single agent?

Another critical factual problem with Matulich and Sever’s analysis is that it ignored the existence of substantial vertical integration in the fishery. Based on National Marine Fishery Service data, processor controlled vessels harvested approximately half the total allocation of catch to the inshore sector. This makes the existence of a united harvesting sector implausible, because processor controlled vessels would be subject to
conflict of interest issues and could not be expected to consider only the effects on harvesters of the results of negotiations with processors.

Furthermore, the degree of vertical integration was not uniform across processors. For example, two of the largest processors, which together accounted for about two-fifths of the total inshore catch, were estimated to obtain more than eighty percent of their fish from their own processor-controlled vessels, whereas another large processor, with about one-fourth of the total inshore allocation, obtained virtually all of its fish from independent catcher vessels. The differences in the degree of vertical integration implied differences in the effects of a given negotiated outcome, complicating any effort of the processors or harvesters to act in unison.

Based on their assumption that the inshore sector was a bilateral monopoly, Matulich and Sever (1999) recommended that a two-pie rationalization approach be implemented, and claimed that it would result in a Pareto-safe distribution of net benefits. However, as discussed in section 5 below, Matulich and Sever’s theoretical analysis of the two-pie system under bilateral monopoly is fundamentally flawed, and their conclusion that it would guarantee a Pareto-safe outcome is simply incorrect. Furthermore, even if their analysis of a two-pie program under bilateral monopoly had been correct in theory, advocacy of this particular policy approach for this specific fishery was based on a highly misleading characterization of the fishery’s market structure.

Halvorsen, Khail, and Lawarrée (2000) used concepts from game theory to evaluate the nature of competition in the industry, and the resulting balance of bargaining power. They concluded that the processors had a number of important bargaining advantages. The large portion of the harvest caught by processor controlled vessels reduced the reliance of the vertically integrated processors on supply from independent catcher vessels, while also providing processors an informational advantage because the independent catcher vessels they bargained with did not own inshore processing plants. Also, because the processing sector was highly concentrated and new entry was prohibited under the AFA, processors would be expected to realize that aggressive tactics yielding short-term gains were unlikely to be profitable in the long-run. Independent catcher vessels did have one bargaining advantage in that they were able to legally bargain as a group. However, it was concluded that on balance the processors had substantially more bargaining power than independent catcher vessels.

The Halvorsen, Khail, and Lawarrée analysis noted that rationalization of the inshore pollock fishery was expected to result in a large increase in the effective amount of processing capacity, which would provide more opportunities for processors to engage in aggressive competition, but the long-term incentives for refraining from doing so would remain. Therefore they concluded that the rationalized fishery would be characterized by “moderate but not cutthroat competition” among processors.

These conclusions concerning bargaining power were then applied to analyze two alternative rationalization programs being considered by the Council: processor-specific
cooperatives (an implicit processor compensation mechanism) and the Dooley-Hall proposal for non-processor-specific cooperatives (an approximation to IFQs). Halvorsen, Khalil, and Lawarée concluded that there was a significant probability that some independent catcher vessels would be adversely affected by the requirement of processor-specific cooperatives. They also concluded that the Dooley-Hall proposal would be more favorable to independent catcher vessels, and less favorable to processors, than the processor-specific cooperatives.

Their conclusions concerning the relative bargaining power of harvesters and processors in the inshore BSAI pollock fishery would also have been relevant to the analysis of the effects on processors of alternative rationalization programs including IFQs. However, it is important to note that the conclusions were based on the conditions in this specific fishery. Because market structure is critical in determining the distributive outcomes of IFQ programs, and the characteristics of market structure differ greatly across fisheries, the distributive effects of rationalization policies require fishery specific analysis. Accordingly, decisions concerning the desirability of mechanisms to compensate processors for potential losses, and the type of mechanism that is most appropriate, should also be fishery specific, rather than attempting a "one-size-fits-all" approach.

On the other hand, the basic principles underlying the recommendation that processors should be compensated for losses arising from fishery rationalization programs can be addressed at a general level. The following section discusses the principal arguments that have been made in support of compensation based on considerations of efficiency and equity.

3 Rationales for Compensation

One rationale advanced for compensating processors for possible losses is that not doing so could have adverse consequences for economic efficiency by creating impediments to the implementation of efficiency-enhancing rationalization programs. This possible source of inefficiency is emphasized by Matulich, Mittelhammer, and Reberte (1996). Having concluded that processors could suffer losses as the result of the introduction of IFQs in a perfectly competitive fishery, they note (page 112), "These losses could promote political gridlock and jeopardize adoption of an ITQ policy unless they are fully compensated or redistribution is avoided by a policy-superior initial allocation of rights to both harvesters and processors."

This argument assumes that processors do not have enough economic bargaining power in rationalized fisheries to avoid losses, but do have enough political bargaining power to block efficiency-enhancing rationalization programs. However, as the Halvorsen, Khalil, and Lawarée analysis of the BSAI pollock fishery indicated, processors may in fact have more bargaining power than harvesters in some real-world fisheries.
Therefore, a situation in which processors seek rent-enhancing mechanisms as the price of agreeing to rationalization programs may simply reflect the desire of processors to obtain a larger share of the net benefits the program would create, rather than that they are seeking to protect themselves from suffering losses. Under these circumstances, utilizing mechanisms to enhance the processors' share of the net benefits could actually create new impediments to the implementation of rationalization programs by causing harvesters to fear that they would lose out from the implementation of the program.

The history of the American Fisheries Act is instructive in this regard. Rationalization of the BSAI pollock fishery was based on the creation of harvesting cooperatives. Processors in the inshore sector expressed concern that cooperatives might put them at a bargaining disadvantage. In response, the AFA rules for cooperatives required that they be processor-specific, and that membership in the cooperative for each processor was limited to vessels that were qualified for that processor, as determined by where a catcher vessel had previously delivered the largest share of its total catch.

In response, an association of independent catcher vessel owners expressed concern that the AFA rules for inshore cooperatives would harm them because of the restrictions placed on where they could market their fish, and proposed an alternative set of rules known as the Doolery-Hall proposal. Resolution of this conflict required extensive hearings before the North Pacific Fisheries Management Council. In addition, concerns were raised about the effects of processor-specific cooperatives on small entities as defined in the Regulatory Flexibility Act.

Another possible disadvantage of responding to processors’ resistance to the adoption of a rationalization program by incorporating mechanisms to enhance their position is that doing so might have adverse efficiency consequences in the longer run. If it appears that policy makers are willing to appease opponents of rationalization by enhancing their rewards, this will provide incentives for increased obstructive behavior in the future, and thereby impede the implementation of rationalization programs in other fisheries.

The other principle rationale for compensating processors against possible losses is that it would be inequitable not to do so. For example, Plesha and Riley (1992) and Mautz, Mitcho, and Rebert (1996) argue that there is a Fifth Amendment “taking” issue if the rationalization of a fishery results in losses for processors.

Without attempting to address the implied legal issues, some observations can be made on whether investment losses from rationalization are inequitable from an economic point of view. It seems unlikely that the investments assumed to be at risk from rationalization were made with the anticipation that the race for fish was certain to be the long-run equilibrium outcome for the fishery in question. Faced with an uncertain future, processors’ investment decisions can be assumed to have taken into account the possibility of various alternative scenarios, including regulatory policies to end the race for fish. Accordingly, investment decisions would be optimized to reflect trade-offs between the various possible future outcomes. For example, there might be a trade-off
between further increasing investment in capacity in order to secure competitive advantages by, for example, deterring the entry of new processing firms into the fishery, versus the advantage of having the smaller amount of capacity that would be optimal if the race for fish were ended. It is not clear why losses that had been anticipated to occur under a particular scenario should instead be compensated on equity grounds when that scenario turns out to be the actual outcome.

Another equity issue concerns the distribution of net benefits within the processing sector. For example, as noted above, in a processing sector comprising some firms that are vertically-integrated and some that are not, the non-integrated processors would be more susceptible to suffering losses from rationalization than would the integrated processors. But the choice to not be vertically-integrated presumably reflects a judgement by these firms that they obtained enough economic advantages by refraining from acquiring harvesting capacity to compensate for the increased risk of losses if the fishery were rationalized. Adopting a policy to compensate all processing firms for possible losses would change the anticipated benefits and costs of these business decisions after the fact and thereby effectively discriminate in favor of the non-integrated firms, partly at the cost of harvesters.

Matulich and Sever (1999) use the term “Pareto safe” to refer to the concept of a rationalization program that is “equitable in the sense of not redistributing status quo ante wealth of historical participants” (page 204). They then argue that if a rationalization program is not Pareto safe, “politically powerful interest groups may form to block a switch to ITQ management, jeopardizing the efficiency benefits of rights-based fishing (page 215). The desirability, and feasibility, of relying on the concept of Pareto safety in designing and evaluating fishery rationalization polices is discussed in the following section.

4. Pareto Safe Rationalization

Although the term “Pareto safe” appears to have originated in the writings of Matulich and his co-authors, essentially the same concept has been long known in the economic policy analysis literature as the Pareto criterion. “The logical criterion for proving that a policy change, or any other change, is beneficial was first stated by a nineteenth century Italian social scientist, Vilfredo Pareto. Pareto’s rule is very simple: Program X improves the welfare of the society if it makes at least one person better off and no one worse off.” (Graham 1990).

The recommendation by Matulich and his co-authors that fishery rationalization policies should be required to be Pareto safe is equivalent to saying that they should satisfy the Pareto criterion. However, the Pareto criterion only provides information on a policy’s effect on economic welfare when the policy would result in no individual being made worse off. A policy that involved small losses to one individual, and large gains to many others, would fail the Pareto criterion, even though it might have a large positive effect on economic welfare. And virtually all feasible public policies result in at least one individual being made worse off.
This has led to the general rejection of the Pareto criterion as a practical basis for evaluating public policies. As Ng (1984, page 1033) summarizes, "The Pareto criterion is widely accepted as a sufficient condition for an improvement in social welfare. ... However, most, if not all, changes in the real world involve making some better off and some (no matter how small the number) worse off. Thus the Pareto criterion in itself is of little practical use."

The practical difficulties of trying to implement Pareto safe fishery rationalization policies can be illustrated by considering the effects on individual harvesters of implementing an IFQ program. Matulich, Mittelhammer and Reberte (1996, page 112) indicate that an IFQ policy would be Pareto safe within the harvesting sector, because "endowing individual harvesters with fully transferable, permanent, and exclusive fishing rights is tantamount to assigning property rights over the fish stock...[an important benefit]...arises out of gains from free trade in which more efficient users of the resource are able to purchase rights from less efficient users. Such trade fully compensates the sellers." While this is a reasonable summary of the efficiency arguments in favor of IFQs, it does not provide a basis for concluding that no individual harvesters are made worse off.

There are at least two ways in which individual harvesters can be made worse off under an IFQ program. First, it is not feasible to ensure that the original distribution of quota among harvesters matches their actual participation in the fishery. For example, a standard procedure is to base quota share allocations on catch history over some historic period. If a participant's harvest was unusually low during all or part of that period he may not receive sufficient quota to leave him as well off as before. Similarly, if the catch history period is not fairly recent, a large proportion of the quota shares may go to individuals no longer active in the fishery rather than to those currently active (see, for example, North Pacific Fishery Management Council 2002, Appendix 2-7, page 8). Second, the assumption that the price of quota will fully compensate the sellers depends on the implicit assumption that the market for quotas is perfectly competitive, which need not be the case (Anderson 1991).

It should be noted that similar issues could arise in a program involving the allocation of individual processor quotas. The allocation of the quotas might not reflect an individual processor's actual participation in the fishery, for example if a facility was incapacitated during part of the historic period used to determine shares. And fisheries with a small number of processing firms, or a few large and many small firms, are particularly susceptible to market imperfections that might prevent the price of a quota from fully compensating the seller.

Thus the Pareto safe concept is not of much practical help in evaluating the effects of fishery rationalization programs at the individual participant level. Matulich and his co-authors in fact rarely refer to applying the Pareto safe concept at this level, but instead focus on Pareto safety at the level of the aggregate harvesting and processing sectors. In
particular, as noted above in section 3, they suggest that a rationalization policy is unlikely to be adopted if it would create uncompensated losses for the processing sector.

Matalich, Mittelhammer and Roberts (1996, page 126) speculate that a Pareto safe allocation might be obtained under a "symmetrical rights distribution" and suggest, "Candidates worthy of consideration include (i) a split of harvest quota shares between fishers and processors; (ii) a "two-pie" allocation, in which catching rights are awarded to fishers and processing rights are awarded to processors; and (iii) full-utilization quota shares.""

Matalich and Sever (1999) investigate the properties of the first two of these proposals, referring to the first one as a "one-pie split allocation." They first consider the application of the one- and two-pie allocations to a fishery that is perfectly competitive and conclude that neither type of allocation is capable of providing policy feasible Pareto safe outcomes. They then consider the application of these allocations to a bilateral monopoly, after asserting that the BSAI inshore pollock fishery "appears to emulate bilateral monopoly" (page 212). The one-pie allocation is again concluded to not be capable of providing policy feasible Pareto safe outcomes. However, they claim to prove that the two-pie system would be Pareto safe not only at the aggregate level but also at the level of individual participants. The validity of this remarkable claim is discussed in the following section.

5. Two-Pie Allocations and Pareto Safety

Matalich and Sever's alleged proof that a two-pie allocation would be Pareto safe in a bilateral monopoly is based on a series of dubious assumptions. The first is their assumption that the bilateral monopoly would be able to negotiate an ex vessel price that maximized joint profits under conditions of a race for fish, but would be unable to negotiate rationalization measures that would end the race for fish and thereby increase the potential joint profits. No explanation is given for this assumed constraint on the bilateral monopoly's ability to maximize joint profits. Instead it is simply implicitly assumed that the race for fish can be ended only by an externally imposed rationalization program.

In their analysis of the two-pie allocation, efficiency is assumed to be attained through quota trading, and to be independent of the bargained ex vessel price. In particular, they note that the ex vessel price might be outside of the Pareto safe range. However, they argue that the actual price will fall within the Pareto safe range because (page 214):

"While the efficient price does not guarantee Pareto safety, intrinsic bargaining behavior should, provided the bargaining association is responsive to the well being of its entire membership. Bargaining agents have internal incentives to negotiate a price that not only maximizes joint profits (efficiency) but also leaves no member worse off. ...at least one Pareto-safe price exists - the open access exvessel price, P^d...As long as"
the parties desire to reach a Pareto-safe agreement, they can do so by settling on a rent share that implies \( P^* \) as the ex vessel price. Thus, there are no functional impediments to achieving an efficient price that is also Pareto safe.

Mutilich and Sever then use the Nash (1953) bargaining solution concept to indicate how the rent shares might be determined, given that “the bargaining agents are assumed to act so as to leave no member worse off under ITQs relative to open access” (page 214). Thus solution of the Nash model does not form part of the proof, but instead is performed under the assumption that the price must fall with the Pareto safe range.

In short, their “proof” really just consists of the assumption that bargaining agents will want and be able to set prices that are Pareto safe for all their members. This assumption is merely asserted, rather than derived from economic theory, and is unlikely to be satisfied in a real-world fishery, in which each side would contain possibly large numbers of heterogeneous participants. It is not obvious, and Mutilich and Sever do not suggest, how such a difficult principal-agent problem in each sector could be structured so that the agent is constrained to leave no member worse off.

Even if it is assumed for the sake of argument that both sides of the bilateral monopoly desire agreements that are Pareto safe as among their own members, a Pareto safe price need not be the outcome of the bilateral monopoly negotiation. This can be demonstrated using a Nash bargaining model with the outside options for both sides correctly specified.

To determine the outside option for the harvester sector of the bilateral monopoly, consider what its alternative would be if it did not reach an agreement with the processor sector. Because it would have ITQs it could harvest the fish, but the processor sector could simply refuse to process the harvest. Therefore the outside option for the harvester sector is zero rent. Similarly, the harvester sector could threaten to not fish, so that the outside option for the processor sector is also zero rent, assuming that it has no processor controlled vessels. With these outside options, there is no reason to assume that the bargaining outcome would be Pareto safe. And if the processor sector does have processor controlled vessels, the outcome could be very unfavorable for harvesters, as shown in Halsvorsen, Khairi, and Lawarrée (2000).

To summarize, Mutilich and Sever’s claim that they have provided a proof that a two-piece allocation would be Pareto safe under bilateral monopoly is invalid, and there is no other market structure for which this claim has even been made. Therefore, no credence should be given to claims that a two-piece system is a “policy-superior initial allocation of rights” (Mutilich, Mittelhammer and Reberts 1996, page 112). Instead, the inclusion of ITQs in a fishery rationalization program should be viewed as simply one possible mechanism for enhancing outcomes for processors, bearing in mind that the possible outcomes under ITQs have received very little credible economic analysis and are untested by experience in any real-world fishery.
Evaluations of the appropriateness of allocating IPQs as part of a specific rationalization program should include (i) an assessment of whether compensation for processors is desirable, given the characteristics of the specific fishery, in particular the balance of bargaining power, and (ii) the relative merits of IPQs versus other possible compensation programs, given the characteristics of the specific fishery.

Accordingly, it is desirable that regional councils have flexibility in deciding whether, and how, processors should be compensated for possible losses arising from a fishery rationalization program. Therefore, I recommend that the national standards for fishery conservation and management not require that IPQs or other specific compensation mechanisms be included in future fishery management plans and regulations.
References


ERRATA to Bering Sea Crab Rationalization Program Alternatives - Initial Review

Allocations of Shares to Catcher/Processors

Two tables contain errors concerning the number of catcher/processors that would receive allocations under the different allocation options. The following table replaces Table3.4-2 in the analysis. The original table undercounted the number of catcher/processors that would receive processing shares, instead showing the number of companies owning catcher processors that would receive shares.

<table>
<thead>
<tr>
<th>Fishing/Option</th>
<th>Total allocation of processing shares to catcher/processors</th>
<th>Number of catcher/processors receiving processing shares</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bering Sea Opilio</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Option 1 - 1997 - 1999 (Three year average)</td>
<td>0.068</td>
<td>12</td>
</tr>
<tr>
<td>Option 2 - 1996 - 2000 (Best of 4 seasons)</td>
<td>0.070</td>
<td>14</td>
</tr>
<tr>
<td>Bristol Bay Red King Crab</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Option 1 - 1997 - 1999 (Three year average)</td>
<td>0.081</td>
<td>11</td>
</tr>
<tr>
<td>Option 2 - 1996 - 2000 (Best of 4 seasons)</td>
<td>0.079</td>
<td>11</td>
</tr>
<tr>
<td>Bering Sea Bairdi (EBS Tanner Crab)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Option 1 - 1997 - 1999 (50/50 combination of BSRKC and opilio)</td>
<td>0.075</td>
<td>12</td>
</tr>
<tr>
<td>Pribilof Red King Crab</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Option 1 - 1996 - 1998 (Three year average)</td>
<td>0.000</td>
<td>0</td>
</tr>
<tr>
<td>Pribilof Blue King Crab</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Option 1 - 1996 - 1998 (Three year average)</td>
<td>0.000</td>
<td>0</td>
</tr>
<tr>
<td>St. Matthew Blue King Crab</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Option 1 - 1996 - 1998 (Three year average)</td>
<td>*</td>
<td>3</td>
</tr>
<tr>
<td>Eastern Aleutian Islands (Dutch Harbor) Golden King Crab</td>
<td>*</td>
<td>2</td>
</tr>
<tr>
<td>Option 2 - 1996 - 1998 (Best of 4 season)</td>
<td>*</td>
<td>3</td>
</tr>
<tr>
<td>Western Aleutian Islands (Adak) Golden King Crab</td>
<td>*</td>
<td>3</td>
</tr>
<tr>
<td>Option 2 - 1996 - 1998 (Best of 4 season)</td>
<td>*</td>
<td>3</td>
</tr>
</tbody>
</table>

* Withheld due to confidentiality requirements.
Source: NPFMC Crab Database 2001 - Version 1
Table 3.4-2. Allocation of processing shares to catcher/processors.

The following table replaces Table 3.4-14 in the analysis. The original table undercounted the number of catcher/processors that would receive catcher/processor shares.

<table>
<thead>
<tr>
<th>Number of Vessels Qualified for Catcher/Processor Shares</th>
<th>Fishery/Option</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bering Sea Opilio</strong></td>
<td></td>
</tr>
<tr>
<td>Option 1A - 1994 - 1999 (Best 5 seasons)</td>
<td>13</td>
</tr>
<tr>
<td>Option 2A - 1992 - 1999 (Best 7 seasons)</td>
<td>13</td>
</tr>
<tr>
<td>Option 3A - 1995 - 1999 (All seasons)</td>
<td>12</td>
</tr>
<tr>
<td>Option 3B - 1995 - 1999 (Best 4 seasons)</td>
<td>12</td>
</tr>
<tr>
<td>Option 4A - 1996 - 2000 (Best 4 seasons)</td>
<td>12</td>
</tr>
<tr>
<td><strong>Bristol Bay Red King Crab</strong></td>
<td></td>
</tr>
<tr>
<td>Option 1A - 1993 - 1999 (All seasons)</td>
<td>12</td>
</tr>
<tr>
<td>Option 1B - 1992 - 1999 (Best 4 seasons)</td>
<td>12</td>
</tr>
<tr>
<td>Option 2A - 1993 - 1999 (All seasons)</td>
<td>12</td>
</tr>
<tr>
<td>Option 2B - 1992 - 1999 (Best 5 seasons)</td>
<td>12</td>
</tr>
<tr>
<td>Option 3A - 1996 - 2000 (Best 4 seasons)</td>
<td>12</td>
</tr>
<tr>
<td><strong>Bering Sea Bairdi (EEC Tanner Crab)</strong></td>
<td></td>
</tr>
<tr>
<td>Option 1A - 1992 - 1996 (All seasons)</td>
<td>12</td>
</tr>
<tr>
<td>Option 1B - 1992 - 1996 (Best 4 seasons)</td>
<td>12</td>
</tr>
<tr>
<td><strong>Pribilof Red King Crab</strong></td>
<td></td>
</tr>
<tr>
<td>Option 1A - 1993 - 1998 (Best 4 seasons)</td>
<td>2</td>
</tr>
<tr>
<td>Option 2A - 1994 - 1998 (All seasons)</td>
<td>0</td>
</tr>
<tr>
<td>Option 2B - 1994 - 1998 (Drop one season)</td>
<td>0</td>
</tr>
<tr>
<td><strong>Pribilof Blue King Crab</strong></td>
<td></td>
</tr>
<tr>
<td>Option 1A - 1993 - 1998 (Best 4 seasons)</td>
<td>1</td>
</tr>
<tr>
<td><strong>St. Matthew Blue King Crab</strong></td>
<td></td>
</tr>
<tr>
<td>Option 1A - 1993 - 1996 (Best 4 seasons)</td>
<td>5</td>
</tr>
<tr>
<td>Option 2A - 1994 - 1998 (All seasons)</td>
<td>5</td>
</tr>
<tr>
<td>Option 2B - 1994 - 1998 (Drop one season)</td>
<td>5</td>
</tr>
<tr>
<td><strong>Eastern Aleutian Islands (Dutch Harbor) Golden King Crab</strong></td>
<td></td>
</tr>
<tr>
<td>Option 1A - 1992-1993 to 1995-1999 (All seasons)</td>
<td>1</td>
</tr>
<tr>
<td>Option 1B - 1992-1993 to 1998-1999 (Drop one season)</td>
<td>1</td>
</tr>
<tr>
<td>Option 2A - 1995-1996 to 1998-1999 (All seasons)</td>
<td>0</td>
</tr>
<tr>
<td>Option 2B - 1995-1996 to 1998-1999 (Drop one season)</td>
<td>0</td>
</tr>
<tr>
<td>Option 3A - 1995-1997 to 1998-1999 (All seasons)</td>
<td>0</td>
</tr>
<tr>
<td>Option 3B - 1995-1997 to 1998-1999 (Drop one season)</td>
<td>0</td>
</tr>
<tr>
<td>Option 4A - 1996-1997 to 2000-2001 (Best 4 seasons)</td>
<td>1</td>
</tr>
<tr>
<td><strong>Western Aleutian Islands (Adak) Golden King Crab</strong></td>
<td></td>
</tr>
<tr>
<td>Option 1A - 1992-1993 to 1995-1999 (All seasons)</td>
<td>3</td>
</tr>
<tr>
<td>Option 1B - 1992-1993 to 1998-1999 (Drop one season)</td>
<td>3</td>
</tr>
<tr>
<td>Option 2A - 1995-1996 to 1998-1999 (All seasons)</td>
<td>1</td>
</tr>
<tr>
<td>Option 2B - 1995-1996 to 1998-1999 (Drop one season)</td>
<td>1</td>
</tr>
<tr>
<td>Option 3A - 1995-1997 to 1998-1999 (All seasons)</td>
<td>1</td>
</tr>
<tr>
<td>Option 3B - 1995-1997 to 1998-1999 (Drop one season)</td>
<td>1</td>
</tr>
<tr>
<td>Option 4A - 1996-1997 to 2000-2001 (Best 4 seasons)</td>
<td>1</td>
</tr>
<tr>
<td><strong>GHL Split EAI (Dutch Harbor)/WAI (Adak) Golden King Crab</strong></td>
<td></td>
</tr>
<tr>
<td>Option 1A - 1992-1993 to 1998-1999 (All seasons)</td>
<td>3</td>
</tr>
<tr>
<td>Option 1B - 1992-1993 to 1998-1999 (Drop one season)</td>
<td>3</td>
</tr>
<tr>
<td>Option 2A - 1995-1996 to 1998-1999 (All seasons)</td>
<td>1</td>
</tr>
<tr>
<td>Option 2B - 1995-1996 to 1998-1999 (Drop one season)</td>
<td>1</td>
</tr>
<tr>
<td>Option 3A - 1995-1997 to 1998-1999 (All seasons)</td>
<td>1</td>
</tr>
<tr>
<td>Option 3B - 1995-1997 to 1998-1999 (Drop one season)</td>
<td>1</td>
</tr>
<tr>
<td>Option 4A - 1996-1997 to 2000-2001 (Best 4 seasons)</td>
<td>1</td>
</tr>
<tr>
<td><strong>Western Aleutian Islands (Adak) Red King Crab</strong></td>
<td></td>
</tr>
<tr>
<td>Option 1A - 1992 - 1996 (All seasons)</td>
<td>2</td>
</tr>
<tr>
<td>Option 1B - 1992 - 1996 (Best 2 seasons)</td>
<td>2</td>
</tr>
</tbody>
</table>
Analysis of AFA Processor Sideboards

The following table should be substituted for Table 3.10-9. This table is updated for a calculation error for Option 2 qualifying years and also includes the allocations of processing shares to AFA processors under the option with catcher/processors receive “catcher/processor shares” instead of processing shares.

Since most catcher/processors are not affiliated with AFA members, under the option in which catcher/processors receive “catcher/processor shares”, allocations to AFA processors are higher. In the Bering Sea C. opilio fishery AFA processors would receive slightly smaller allocations under Option 2 than under Option 1. Under both options their total allocations slightly exceed the total of the AFA sideboard caps. In the Bristol Bay red king crab fishery, the allocations to AFA processors under Option 2 are also slightly less than the allocations under Option 1.

Only under the allocation option with catcher/processor shares would the allocation to AFA processors exceed the AFA sideboard cap. In the Bering Sea C. bairdi and the Pribilof blue king crab fishery, the allocations to AFA processors would exceed the sideboard cap under both the option with catcher/processor shares and the option without catcher processer shares. On the other hand, the allocation to AFA processors in the Pribilof red king crab fishery is less under than the sideboard caps under both the option with catcher/processor shares and the option without catcher/processor shares.

In the St. Matthew blue king crab fishery and both of the Aleutian Islands golden king crab fisheries, only the allocations with catcher/processors receiving processing shares can be shown (to protect the confidentiality of the few catcher/processors participating these fisheries). In the Western Aleutian Islands golden king crab fishery, the allocation to AFA processors is approximately 20 percent less than the AFA sideboard cap. This is likely a result of substantial catcher/processor activity in this fishery. In the Eastern Aleutian Islands golden king crab fishery, the allocation to AFA processors is less than 2 percent more than the cap under either of the qualifying year options, while in the St. Matthew blue king crab fishery the allocation to AFA processors is approximately 3 percent less than the AFA sideboard cap.
Table 3.10-9. AFA and non-AFA split of processing allocations by fishery

<table>
<thead>
<tr>
<th>Fishery/Option</th>
<th>Allocation with catcher/processors receiving AFA processors</th>
<th>Allocation with catcher/processors receiving non-AFA processors</th>
<th>AFA Sideboards</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bering Sea Opilio</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Option 1 - 1997 - 1999 (Three year average)</td>
<td>0.248</td>
<td>0.752</td>
<td>0.280</td>
</tr>
<tr>
<td>Option 2 - 1996 - 2000 (Best 4 seasons)</td>
<td>0.217</td>
<td>0.783</td>
<td>0.280</td>
</tr>
<tr>
<td><strong>Bristol Bay Red King Crab</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Option 1 - 1997 - 1999 (Three year average)</td>
<td>0.248</td>
<td>0.752</td>
<td>0.280</td>
</tr>
<tr>
<td>Option 2 - 1996 - 2000 (Best 4 seasons)</td>
<td>0.217</td>
<td>0.783</td>
<td>0.280</td>
</tr>
<tr>
<td><strong>Bering Sea Bairdi (Sable Tunny Crab)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Option 1 - 1997 - 1999 (50/50 combination of SBRKC and opilio)</td>
<td>0.248</td>
<td>0.752</td>
<td>0.280</td>
</tr>
<tr>
<td><strong>Pribilof Red King Crab</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Option 1 - 1996 - 1998 (Three year average)</td>
<td>0.317</td>
<td>0.683</td>
<td>0.317</td>
</tr>
<tr>
<td><strong>Pribilof Blue King Crab</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Option 1 - 1996 - 1998 (Three year average)</td>
<td>0.253</td>
<td>0.747</td>
<td>0.285</td>
</tr>
<tr>
<td><strong>St. Matthew Blue King Crab</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Option 1 - 1996 - 1998 (Three year average)</td>
<td>*</td>
<td>*</td>
<td>0.202</td>
</tr>
<tr>
<td><strong>Eastern Aleutian Islands (Dutch Harbor) Golden King Crab</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Option 1 - 1996/1997, 1997/1998 (&amp; 1998/1999 (Three year average)</td>
<td>*</td>
<td>*</td>
<td>0.466</td>
</tr>
<tr>
<td>Option 2 - 1996 - 2000 (Best 4 seasons)</td>
<td>*</td>
<td>*</td>
<td>0.464</td>
</tr>
<tr>
<td><strong>Western Aleutian Islands (Adak) Golden King Crab</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Option 2 - 1996 - 2000 (Best 4 seasons)</td>
<td>*</td>
<td>*</td>
<td>0.570</td>
</tr>
</tbody>
</table>

* Withheld due to confidentiality requirements.

Source: NPFMC Crab Database 2001 - Version 1
Figure 2. Changes in Industry-Wide Total Revenue Before and After Alaska Halibut and Sablefish IFQs: Impacts on Processors' Gross Operating Margins.
82% of Processors Lost Retained Revenues

97% of Processors Lost Retained Revenues

Figure 2. Changes in Industry-Wide Total Revenue Before and After Alaska Halibut and Sablefish IFQs: Impacts on Processors' Gross Operating Margins.
Figure 1. Potential Efficiency and Distributional Impacts of Rationalization Policy Design
1992-1993 Halibut Processing Firms

Figure 3. 1992-1993 Market Share of Halibut Processing Firms
1992-1993 Halibut Processing Firms

Figure 4. 1992-1993 Market Share of Surviving and Exiting Halibut Processing Firms
Figure 5. Market Share Changes for Surviving Halibut Processing Firms
Figure 6. Composite Market Share Changes in the Halibut Processing Sector by 1999-2000
1992-1993
Wholesale Price = $1.82/lb

Variable Fish Cost (Exvessel Price) 61.4%
Variable Processing Cost 19.0%
Unit Quasi Rent 19.6%

1999-2000
Wholesale Price = $3.01/lb

Variable Fish Cost (Exvessel Price) 75.5%
Variable Processing Cost 17.8%
Unit Quasi Rent 6.7%

Figure 7. Unit Quasi Rents, Variable Processing Cost and Fish Cost as Share of Halibut Wholesale Price
HIV more the doubled = 2.89

\[ \frac{1}{2} \times 2.89 = 1.4446 - 46.5^6 \]

\[ \text{Quart} = 2.89 \]

1, 1, 2, 2, 2, 2, 2

\[ 1.1.7/1b - 4 \]

Proc. IQ, 2.36/1# = 2.6/# - 4 \frac{1}{13}

All but
Figure 8. 1992-1993 Market Share of Sablefish Processing Firms
1992-1993 Sablefish Processing Firms

Figure 9. 1992-1993 Market Share of Surviving and Exiting Sablefish Processing Firms
Figure 10. Market Share Changes for Surviving Sablefish Processing Firms
Figure 11. Composite Market Share Changes in the Sablefish Processing Sector by 1999-2000
Figure 12. Unit Quasi Rents, Variable Processing Cost and Fish Cost as Share of Sablefish Wholesale Price
\[ \text{VAR:} \ 79.69 \% \uparrow \ 71.49 \% \]

\[ \text{UPC:} \ 0.34 \rightarrow 0.34 \]

\[ \text{WP:} \ 2.48 \rightarrow 4.15 \% \ 4.46 \% \]

\[ \text{EXP:} \ 6.31 \rightarrow 3.52 \% \ 4.95 \% \]

\[ S \text{ARLCE} \]
Figure 13. Efficiency and Distributional Impacts of IFQ Policy Design
Figure 14. Efficiency and Distributional Impacts of Allocating Quota Only to One Sector (IFQ or IPQ)

<table>
<thead>
<tr>
<th>Concentration Index</th>
<th>Halibut</th>
<th></th>
<th>Sablefish</th>
<th></th>
<th>B.B. Red King Crab</th>
<th></th>
<th>Opilio Crab</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>C4 mean range</td>
<td>57.1</td>
<td>54.9</td>
<td>58.6</td>
<td>66.5</td>
<td>63.1</td>
<td>64.5</td>
<td>63.3</td>
<td>62.9</td>
</tr>
<tr>
<td></td>
<td>53.3-100</td>
<td>51.3-100</td>
<td>58.3-100</td>
<td>58.3-100</td>
<td>na</td>
<td>na</td>
<td>na</td>
<td>na</td>
</tr>
<tr>
<td>C8 mean range</td>
<td>77.4</td>
<td>76.9</td>
<td>81.9</td>
<td>88.6</td>
<td>93.7</td>
<td>93.1</td>
<td>90.9</td>
<td>89.4</td>
</tr>
<tr>
<td></td>
<td>71.9-100</td>
<td>77.1-100</td>
<td>70.8-100</td>
<td>87.3-100</td>
<td>na</td>
<td>na</td>
<td>na</td>
<td>na</td>
</tr>
<tr>
<td>HHI mean range</td>
<td>1101</td>
<td>1026</td>
<td>1367</td>
<td>1464</td>
<td>1307</td>
<td>1381</td>
<td>1333</td>
<td>1378</td>
</tr>
<tr>
<td></td>
<td>892-3677</td>
<td>864-5128</td>
<td>876-9420</td>
<td>1157-5123</td>
<td>na</td>
<td>na</td>
<td>na</td>
<td>na</td>
</tr>
</tbody>
</table>
North Pacific Crab Association  
4335 Leary Way NW  
Seattle, WA 98107  

Bering Sea Crab  
Processor Cost and Revenue Information  

April 8, 2002  

Fisheries cost and revenue information is relevant to the crab rationalization discussion for several reasons. Historical information sheds light on the relative positions of the various sectors from a financial perspective. The data derived from activities post rationalization can assist the Council and the public in reviewing whether the goals of the program have been achieved, and can be useful in making adjustments as needed to refine the program.

Obtaining accurate cost and revenue data can be difficult, time consuming and expensive. Much of the data is highly sensitive and treating it in a manner to preserve confidentiality is important to the suppliers of data. Cost and revenue information can also easily be misunderstood or, when taken out of context, misused. It is therefore critical that the Council provide an appropriate collection, collation and filtering system to address legitimate concerns about the dissemination and use of the data.

The processing sector understands that cost and revenue information will be a component to a rationalization program that includes the processing sector. The processing companies involved in the NPCA volunteered at the February, 2002 NPFMC meeting to provide cost and revenue information to ensure that the Council has the tools it needs to structure, and adjust, a rationalization program for the BSAI crab fishery.

In order to provide a glimpse into the process to gather and collate such data, and to provide the Council with some preliminary, though not complete, data to use in its deliberation, the processors elected to voluntarily provide summary cost and revenue information.

Procedure:

Facilitated by the North Pacific Crab Association, six processing firms engaged in the BSAI crab fisheries supplied a neutral CPA firm (Moss Adams LLC) with detailed variable cost and revenue information for the Bristol Bay red king crab and Opilio fisheries. Moss Adams in turn compiled the data, accomplished a conversion of revenue and cost information to a harvest year basis, with all data provided in an FOB Alaska format.

Moss Adams was selected to compile the data because it is auditor for most of the firms involved, and could therefore easily review the data for accuracy. Data from other sources were subjected to a review for accuracy, but were necessarily limited in scope and number to achieve an initial data submission for the April Council meeting. Not all firms were invited to participate at this stage because of the need to limit the amount and
scope of data considering our goal of providing some information to the Council at the April, 2002 meeting. For these reasons, the six firms selected, and only those firms, were requested to provide data.

Each participating firm was provided an identical working sheet and set of instructions to supply the data requested. The data was to be provided for each year 1996 through 2000, a period of both large and small harvests, separated by species. The firms posed questions for the categorization of cost or revenue data; in this way we were able to address common problems to ensure that the participating firms treated information consistently.

Revenues to be reported included all revenues from FOB the point of sale, net of commissions paid to independent brokers or sales agents. Consequently, the reported revenues include sales FOB plant and sales FOB other points such as Seattle. It includes the sale of production as produced in Alaska and sales of repacked or re-graded product. Moss Adams was able to calculate an FOB Alaska sales amount by subtracting from these revenues the amount of freight of product to the sales point, and cold storage, handling and repacking costs incurred by the processor. With the exception of a very small amount of product, all production was sold the year of harvest; the small amount of inventory not sold at year-end was reported based on the average sales value achieved during the year.

Costs reported were variable costs only; those costs included any cost that varied based upon the quantity of production. It excluded any costs that were fixed or unaffected by volume. Examples of costs that were excluded are salaried personnel, depreciation, costs of financing, any overhead costs, sales expenses, repair and maintenance expenses and the like. These costs were excluded because such costs must be allocated by activity, and it would be an arbitrary assignment of such costs to a particular fishery activity.

The data reported to you states costs netted back to those incurred FOB Alaska to correspond to the FOB Alaska revenues also reported. Thus, for example, the costs of freight of production to the point of sale, cold storage and handling and cost of repacking are excluded from the calculations.

The difference between variable costs and revenues amount to the contribution to the processor for non-variable costs, overhead and profits, and are sometimes called the “quasi-rents” derived from the fishery. They do not by themselves imply a profit (or a loss) for the processor.
### Processing Costs and Revenues Worksheet

**Company Name**  

**Production Facility Name**  

**Species (Circle One)**  
- Opilio
- Bristol Bay Red King Crab

**Year of Production**  
(One sheet for each year, 1996-2000)

**Location of production (circle one)**  
- Islands
- Dutch

**Pounds Purchased**  

**Finished Pounds**  

**Revenues**  
(total dollars received)

Are revenues stated on a FOB-plant basis, C&F, both or other basis?

**Variable costs (see notes for definitions):**

- **Payments to fishermen**  
- **Taxes paid by processor for raw crab purchases**  
- **Custom processing fees you paid**  
- **Direct Labor costs**  
- **Observer costs (including transportation)**  
- **Utility costs (including fuel)**  
- **Housing, transportation and food**  
- **Packaging materials and supplies**  
- **Freight of production**  
- **Storage and handling of production**  
- **Cost of repacking**
DO NOT INCLUDE ANY FIXED OR OVERHEAD COSTS IN THESE COST CATEGORIES.

Notes to Cost of Production Worksheet:

Variable costs are direct costs that vary with both season length and volume of production.

If you had product custom processed by another plant, include the revenues from the sale of production and report the custom processing fees you paid on the appropriate line.

If you custom processed product for someone else, exclude the variable costs and the revenues associated with that production.

Revenues should include all receipts from the sale of finished products, including products repacked by you or for your account after initial production. Revenues should be net of any brokerage fees paid to any independent broker making the sale on your behalf.

Direct labor costs EXCLUDES management or salaried labor, but includes all costs of processing labor, such as employer taxes, employer paid insurance, 401k contributions of employer in addition to the wages paid. The insurance costs should include any insurance related to direct labor; health (if any) insurance, worker's compensation or Jones Act coverage, including payment of deductibles or claims if self insured.

Utility costs include public or privately supplied utilities, including fuel, water, power, and sewer.

Housing, transportation and food category should include any expenses incurred for processing labor not listed in the labor category. It may include for example employer supplied special clothing, airfares, medical costs paid by the employer but not covered by insurance.

Packaging materials and supplies should include fiber, banding materials, shrink-wrap, pallets, labels and anything else required to enclose and ship the finished product. This category should also report the cost of shipping packaging to the plant. Processing expendables of any sort are included in this category.

Freight of production. This should be zero if you reported sales on an FOB plant basis. If you reported sales from a different delivery point, the cost of freight and handling to that delivery point should be reported here. For example, sales that are FOB Seattle would include the freight from the plant to Seattle, and the cost of that freight would be reported on this line.
Storage and handling of production should include cold storage and handling costs incurred by you prior to sale.

Costs of repacking should include all charges associated with repacking crab that are sold by you after repacking.
NORTH PACIFIC CRAB ASSOCIATION

BERING SEA OPILIO CRAB
CATCHER VESSEL COSTS AND REVENUES
AND
BERING SEA RED KING CRAB
CATCHER VESSEL COSTS AND REVENUES

HARVEST YEARS
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
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<th></th>
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<th></th>
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</thead>
<tbody>
<tr>
<td>Annual Harvest in Pounds</td>
<td>64,363,158</td>
<td>117,179,683</td>
<td>240,433,650</td>
<td>182,678,507</td>
<td>30,258,170</td>
<td>634,913,168</td>
</tr>
<tr>
<td>Percentage of Annual Harvest Represented</td>
<td>3.26%</td>
<td>3.26%</td>
<td>3.26%</td>
<td>3.85%</td>
<td>3.18%</td>
<td>3.43%</td>
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<tr>
<td>Revenues per Delivered Pound</td>
<td>$1.29</td>
<td>$0.78</td>
<td>$0.56</td>
<td>$0.95</td>
<td>$1.85</td>
<td>$0.65</td>
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<tr>
<td>Total Variable Costs as a Percentage of Total Revenues</td>
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<td>51%</td>
<td>54%</td>
<td>49%</td>
<td>49%</td>
<td>50%</td>
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<tr>
<td>Total Variable Costs per Delivered Pound</td>
<td>$0.62</td>
<td>$0.38</td>
<td>$0.30</td>
<td>$0.46</td>
<td>$0.90</td>
<td>$0.43</td>
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North Pacific Crab Association  
Bristol Bay Red King Crab Catcher Vessel Costs and Revenues  

<table>
<thead>
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</thead>
<tbody>
<tr>
<td>Annual Harvest in Pounds</td>
<td>8,319,611</td>
<td>8,720,403</td>
<td>14,120,487</td>
<td>10,949,856</td>
<td>7,468,240</td>
<td>49,576,597</td>
</tr>
<tr>
<td>Percentage of Annual Harvest Represented</td>
<td>4.66%</td>
<td>4.29%</td>
<td>6.54%</td>
<td>7.05%</td>
<td>4.74%</td>
<td>5.67%</td>
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<td>Revenues per Delivered Pound</td>
<td>$4.00</td>
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<td>$2.65</td>
<td>$6.77</td>
<td>$4.79</td>
<td>$4.18</td>
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<td>Total Variable Costs as a Percentage of Total Revenues</td>
<td>46%</td>
<td>54%</td>
<td>47%</td>
<td>44%</td>
<td>48%</td>
<td>46%</td>
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<tr>
<td>Total Variable Costs per Delivered Pound</td>
<td>$1.82</td>
<td>$1.74</td>
<td>$1.25</td>
<td>$2.73</td>
<td>$2.29</td>
<td>$1.93</td>
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Crab Harvesting Vessel
Cost and Revenue Worksheet

Vessel Name

Species (Circle One)  Opilio  Bristol Bay Red King Crab

Year of Harvest  ___________________ (one sheet for each year, 1996-2000)

AFA qualified?  Yes  No  (Circle One)

Pounds Sold  ___________________

Revenues  ___________________ (total gross amount)

Variable Costs (See Notes For Definition)

Fuel, oil, hydraulic fluids  ___________________

Insurance  ___________________

Crew costs  ___________________

Bait  ___________________

Gear Expenses  ___________________

Fisheries related taxes  ___________________

Observer costs  ___________________

Miscellaneous  ___________________

Notes:

INCLUDE VARIABLE COSTS ONLY. DO NOT INCLUDE ANY FIXED COSTS IN THE COST DATA.

Fuel should include fuel from the beginning of the voyage to its termination, regardless of the origination and destination port. It should be the same fuel expense used to calculate the net revenues for crew share calculation.

Insurance costs are included only if they are specifically for the crab fishery. If Hull and Machinery is paid on a year round basis, for example, do not include it. If it is
bought month to month, and crab fishing is the only activity for the month, then include the cost. P&I should be reported here on the same basis as Hull and Machinery.

Crew costs should include crew share, airfares (if paid by the boat owner), food (if paid by the boat owner), and any gear provided for the crew (if paid by the boat owner).

Gear expenses include any expendables used during the season, including any amount for pot loss.

Fisheries related taxes would be the line for any taxes deducted directly from the gross receipts of the vessel. Sales tax and ASMI tax are two examples.

Observer costs should include travel, insurance, food, etc, plus the cost of the observer.

Miscellaneous costs are any variable costs not captured by the specific categories listed. Examples might include port and harbor charges. Do not include pot storage costs, but do include the cost of transporting pots to and from storage for the season.
NORTH PACIFIC CRAB ASSOCIATION

ACCOUNTANT’S REVIEW REPORT
and
BERING SEA OPILIO CRAB
PROCESSING COSTS AND REVENUES AND
BRISTOL BAY RED KING CRAB
PROCESSING COSTS AND REVENUES

HARVEST PERIODS ENDED
ACCOUNTANT'S REVIEW REPORT

To the Directors
North Pacific Crab Association

We have reviewed the accompanying schedules of Bering Sea Opilio Crab Processing Costs and Revenues and Bristol Bay Red King Crab Processing Costs and Revenues of members of the North Pacific Crab Association for each of the five harvest periods ended December 31, 2000, 1999, 1998, 1997, and 1996. Management of the participating members indicated in Note 1 is responsible for the schedules.

Our review was conducted in accordance with attestation standards established by the American Institute of Certified Public Accountants. A review is substantially less in scope than an examination, the objective of which is the expression of an opinion on the schedules of crab revenues and costs. Accordingly, we do not express such an opinion.

Based on our review, nothing came to our attention that caused us to believe that the accompanying schedules of Bering Sea Opilio Crab Processing Costs and Revenues and Bristol Bay Red King Crab Processing Costs and Revenues are not presented, in all material respects, in conformity with accounting principles generally accepted in the United States of America.

Moss Adams LLP

Seattle, Washington
April 5, 2002
<table>
<thead>
<tr>
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<tr>
<td>% of Annual Harvest Represented</td>
<td>30%</td>
<td>36%</td>
<td>41%</td>
<td>41%</td>
<td>43%</td>
<td>39%</td>
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<tr>
<td>Revenues Per Finished Pound</td>
<td>$3.44</td>
<td>$2.38</td>
<td>$2.14</td>
<td>$2.97</td>
<td>$4.55</td>
<td>$2.66</td>
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<tr>
<td>Payment to Fishermen Per Finished Pound</td>
<td>$2.14</td>
<td>$1.25</td>
<td>$0.89</td>
<td>$1.59</td>
<td>$2.90</td>
<td>$1.37</td>
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<td>Payment to Fishermen as a Percentage of Total Revenues</td>
<td>62%</td>
<td>53%</td>
<td>42%</td>
<td>53%</td>
<td>64%</td>
<td>51%</td>
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<tr>
<td>Other Variable Costs Per Finished Pound</td>
<td>$0.73</td>
<td>$0.55</td>
<td>$0.44</td>
<td>$0.48</td>
<td>$0.79</td>
<td>$0.52</td>
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<td>Other Variable Costs as a Percentage of Total Revenues</td>
<td>21%</td>
<td>23%</td>
<td>21%</td>
<td>16%</td>
<td>17%</td>
<td>19%</td>
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<tr>
<td>Total Variable Cost Including Fish Cost Per Finished Pound</td>
<td>$2.87</td>
<td>$1.80</td>
<td>$1.34</td>
<td>$2.07</td>
<td>$3.69</td>
<td>$1.88</td>
</tr>
<tr>
<td>Total Variable Costs Including Fish Cost as a Percentage of Revenues</td>
<td>84%</td>
<td>75%</td>
<td>62%</td>
<td>70%</td>
<td>81%</td>
<td>71%</td>
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</tbody>
</table>

See accountant's review report and accompanying notes.
<table>
<thead>
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<td>7,468,240</td>
<td>49,578,597</td>
</tr>
<tr>
<td>% of Annual Harvest Represented</td>
<td>40%</td>
<td>34%</td>
<td>40%</td>
<td>37%</td>
<td>40%</td>
<td>38%</td>
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<tr>
<td>Revenues Per Finished Pound</td>
<td>$8.30</td>
<td>$6.46</td>
<td>$5.65</td>
<td>$11.59</td>
<td>$9.12</td>
<td>$8.04</td>
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<tr>
<td>Payment to Fishermen Per Finished Pound</td>
<td>$6.21</td>
<td>$5.04</td>
<td>$4.29</td>
<td>$9.80</td>
<td>$7.45</td>
<td>$6.40</td>
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<tr>
<td>Payment to Fishermen as a Percentage of Total Revenues</td>
<td>75%</td>
<td>78%</td>
<td>76%</td>
<td>85%</td>
<td>82%</td>
<td>80%</td>
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<tr>
<td>Other Variable Costs Per Finished Pound</td>
<td>$0.75</td>
<td>$0.67</td>
<td>$0.69</td>
<td>$0.97</td>
<td>$0.88</td>
<td>$0.79</td>
</tr>
<tr>
<td>Other Variable Costs as a Percentage of Total Revenues</td>
<td>9%</td>
<td>10%</td>
<td>12%</td>
<td>8%</td>
<td>10%</td>
<td>10%</td>
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<tr>
<td>Total Variable Cost Including Fish Cost Per Finished Pound</td>
<td>$6.96</td>
<td>$5.71</td>
<td>$4.98</td>
<td>$10.77</td>
<td>$8.33</td>
<td>$7.19</td>
</tr>
<tr>
<td>Total Variable Costs Including Fish Cost as a Percentage of Revenues</td>
<td>84%</td>
<td>88%</td>
<td>88%</td>
<td>93%</td>
<td>91%</td>
<td>89%</td>
</tr>
</tbody>
</table>

See accountant's review report and accompanying notes.
NORTH PACIFIC CRAB ASSOCIATION
NOTES TO SCHEDULES OF PROCESSING COSTS AND REVENUES

Note 1 - North Pacific Crab Association

The North Pacific Crab Association (the Association) is a non-profit organization formed to promote the interest of Alaskan crab processors. The schedules of crab processing costs and revenues of the Association have been prepared based on information provided by members of the Association and include; Icicle Seafoods, Inc., Westward Seafoods, Inc., Norquest Seafoods, Inc., Unisea, Inc., Yardarm Knot, Inc., and Snpac Products, Inc.

Note 2 - Basis of Presentation

Harvest Period - Amounts reported in the accompanying schedules are reported on the harvest period basis, which is defined as the operating cycle in which the product was harvested and processed.

Bering Sea Opilio Crab - Amounts presented for opilio crab include activities of the members in the Pribilof Islands and Dutch Harbor, Alaska.

Bristol Bay Red King Crab - Amounts presented for king crab include activities of the members in Dutch Harbor, Alaska.

Processing Costs - Variable processing costs include production costs, exclusive of raw product costs, on a FOB Alaska basis and therefore, do not include any costs to transport the product to market or cold storage related costs.

Finished Pounds - Finished pound calculations are based upon the actual finished pounds of production of the participating members.

Annual Harvest - Amounts reported for the "Annual Harvest" are derived from the initial review draft of the "Bering Sea Crab Rationalization Program Alternatives Report" (March 2002, pages 88-89, tables 2.3-1 and 2.3-2), prepared by the North Pacific Fishery Management Council.
NORTHLAND FISHERIES, INC.

130 Nickerson St. Suite 212
Seattle, WA 98109
(206)285-5100
Fax (206)285-9054

1-25-02

Mr. David Benton
Chairman
North Pacific Council
P. O. Box 20735
Juneau, Alaska 99802

Dear Mr. Benton:

I sent a letter to you on November 25th, 2001 outlining our position regarding the BSAI Crab fishery rationalization process. I intended to give public testimony during the last North Pacific Council meeting in reference to the letter I sent, but was unable to attend due to a family member matter.

I will be at the next council meeting and would like to bring these matter back to your attention prior to the council meeting. Along with this letter I have included for your review the letter I had sent on 11-15-01. If you have any comments or questions prior to the council meeting I would appreciate either a phone call or e-mail regarding any issues you might have. I will be in my office all next week and would appreciate the opportunity to speak to you by phone, I have included my numbers so you can contact me with a time when we could speak. My e-mail address is mmaring@polmarfisheries.com, office number (206)285-5100 and fax (206)285-9054.

Best Regards,

Mark F. Maring
President
NORTHLAND FISHERIES, INC.

130 Nickerson St. Suite 212
Seattle, WA 98109
(206) 285-5100
Fax (206) 285-9054

11-25-01

Mr. David Benton
Chairman
North Pacific Council
P.O. Box 20735
Juneau, Alaska 99802

Dear Mr. Benton:

I am addressing this letter to you regarding the current proposals that address and outline which processors will be awarded the opportunity to continue to participate in future BSAI crab fisheries once rationalization has been implemented. The structure envisioned by the options under consideration, at least those of which I am aware and have had the opportunity to read and review to date, appears to seriously discount any consideration of the contributions of past participants and focuses the potential benefit almost entirely on current participation. As a continuous participant in the BSAI crab fishery since 1988, I find this highly inequitable. Additionally, due to the specific circumstances of our situation, the extremely narrow “eligibility” criteria of only 1998 or 1999 would eliminate our company from having further participation in the crab fishery.

I would appreciate the ability to outline the history of our company and try to explain why we feel the Eligible Processors dates criteria used for the current proposals should be modified to either 1) expand slightly or, 2) allow hardship cases to be considered.

- We are in favor of and support most aspects of a program which will rationalize the
BSAI crab fishery. In fact, we have supported the concept since it was first discussed in 1992. However, when it takes a form that appears to specifically trivialize the contributions made by long term participants and will exclude the long term historical participants, in favor of newer entrants, it becomes difficult to support. I am hopeful that this is not the design or intentions and would like to work with other participants to reach a common ground which is more equitable for the greatest number of parties.

- The processing vessel Northland has been operating in the Alaskan crab fishery since 1978. The vessel not only processed crab but it also participated in the Salmon and Herring fisheries. We purchased the P/V Northland in 1988 and participated in the crab fishery every year through 1997. After the 1997 Opilio crab fishery we experienced a major mechanical problem with the main engine. It was determined that the engine could not be repaired and would have to be replaced. Cost estimates at that time were over $850,000.

- Simultaneous to this mechanical failure, one of the principal shareholders of the company filed a law suit. The suit prevented the company from operating until certain issues were resolved.

- These business matters were not resolved until the spring of 2000. This resolution now allows the company to be in a position to again utilize the P/V Northland.

As we all know the crab fishery has experienced a traumatic down turn since 1999. This major decline in the fishing stocks prompted the majority of the processors to tie up their floating processors until there is improvement in the fishery. It made no financial sense for them to deploy a floating processor for such a marginal fishery. It made even less sense for us to engage in a significant and major repair expense to participate in the late 2000 or 2001 fishery.

The years that are being considered to determine future participation are 1998 or 1999. If you qualify under these terms there are a variety of options on what species and areas will be used to determine what percentage of the harvestable quota you might qualify to process. The current proposal implements a cut off date to determine qualifications. If you qualify, then you are able to go back three years as well as forward from the qualification years, to determine at what level you can participate in the future. If you go back to 1995 to determine the activity for the future years, our company participated in 1995, 1996 and 1997 which is 1/2 of the entire period being considered.

- If we had not experienced the difficulty with the main engine after the 1997 crab fishery and had the problem compounded by the partner issue, we would have had continuous participation and at minimum would have participated in the 1998 crab fishery which would qualify us under the current proposal.

We missed this cut off date by One Season, after having been actively processing crab in
Alaska for the prior ten (10 years) from 1988 through 1997, not missing even one year during this time period. I feel that a company which has been active in the fishery for so many years, to be precluded from participating because of a circumstance which was out of our control is not a reasonable result or the intention of this public process.

As this process has slowly developed over the past decade and in particular as it appeared to have finally gained real momentum in the past couple of years we stayed in touch with industry members regarding these matters. I was always under the assumption that we should reasonably expect to be included in the processing sector. Especially in light of the fact that we only missed the proposed deadline by a single season and have been active longer than most floating processors currently working in Alaska today.

Knowing that the final determination is going to be made soon, I want to bring this matter to the forefront to make sure we are included in this fishery for the future.

I would like to propose that you include the year 1997 in the qualification period or add in the qualification period a hardship consideration. I have a hard time believing that the intent of this process is to exclude long term participants.

In closing, I want to make sure that all parties know that we are not only involved with this processor but also have several crab catching vessels working in Alaska, all of whom have been there for many, many years. We rely on this fishery for our livelihood, as do multiples of families which we employ.

We are enthusiastic about what appears a real possibility of the rationalization process moving forward. After having been involved through the 1988, 1992 and 1995 attempts, it is sometimes easy to believe it will escape us again. We support its implementation this time and look forward to the sanity it may install for the prosecution of these fisheries.

I would like to extend my appreciation in advance for your consideration and understanding of our position regarding the matters I addressed above.

Best Regards,

Mark P. Maring

cc Mr. David Fluharty
cc Mr. Dennis Astin, Vice Chair
cc Mr. John Bundy
cc Stephanie Madsen
cc Mr. Robert Penney
cc Robin Samuelsen
cc Mr. Jim Balsiger
### POSSIBLE CAP VALUES FOR C/P VESSEL'S

<table>
<thead>
<tr>
<th>Western Aleutian Brown Crab at 2000 Wholesale Price's</th>
<th>Recovery Rate = 0.58%</th>
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<tr>
<td>GHL of 2,700,000 LBS.</td>
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<tr>
<td>40% 626,400 LBS. Finished Product @ 7.22$ = 4,522,608$</td>
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<tr>
<td>30% 469,800 LBS. Finished Product @ 7.22$ = 3,391,956$</td>
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</tr>
<tr>
<td>20% 313,200 LBS. Finished Product @ 7.22$ = 2,261,304$</td>
<td></td>
</tr>
<tr>
<td>10% 156,600 LBS. Finished Product @ 7.22$ = 1,130,652$</td>
<td></td>
</tr>
</tbody>
</table>

**Review Draft Appendix 2-3 on Page 2 - Table 1**

### OPILO - C/P : 50,000,000 LB. PROJECTED GHL x 0.62% Recovery

<table>
<thead>
<tr>
<th>Frozen Sections</th>
<th>Value</th>
</tr>
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<tbody>
<tr>
<td>8% 2,480,000 LBS. @ 4.16$</td>
<td>10,316,800$</td>
</tr>
<tr>
<td>5% 1,550,000 LBS. @ 4.16$</td>
<td>6,448,000$</td>
</tr>
<tr>
<td>1% 310,000 LBS. @ 4.16$</td>
<td>1,289,600$</td>
</tr>
</tbody>
</table>

### OPILO - C/P : 28,000,000 LB. PROJECTED GHL x 0.62% Recovery

<table>
<thead>
<tr>
<th>Frozen Sections</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>8% 1,388,800 LBS. @ 4.16$</td>
<td>5,777,408$</td>
</tr>
<tr>
<td>5% 868,000 LBS. @ 4.16$</td>
<td>3,610,880$</td>
</tr>
<tr>
<td>1% 173,600 LBS. @ 4.16$</td>
<td>722,176$</td>
</tr>
</tbody>
</table>

**Review Draft Appendix 2-3 on Page 2**
## POSSIBLE CAP VALUES FOR CATCHER VESSELS

**PRICE'S REFLECT 2000/2001 ALUETIAN IS. BROWN CRAB EX-VEssel PRICE**

<table>
<thead>
<tr>
<th>EASTERN REGION</th>
<th>WESTERN REGION</th>
</tr>
</thead>
<tbody>
<tr>
<td>40% 1,200,000 LBS. @ 3.50$ = 4,200,000$ / 1,080,000 LBS. @ 3.15$ = 3,402,000$</td>
<td></td>
</tr>
<tr>
<td>30% 900,000 LBS. @ 3.50$ = 3,150,000$ / 810,000 LBS. @ 3.15$ = 2,551,500$</td>
<td></td>
</tr>
<tr>
<td>20% 600,000 LBS. @ 3.50$ = 2,100,000$ / 540,000 LBS. @ 3.15$ = 1,701,000$</td>
<td></td>
</tr>
<tr>
<td>10% 300,000 LBS. @ 3.50$ = 1,050,000$ / 270,000 LBS. @ 3.15$ = 850,500$</td>
<td></td>
</tr>
</tbody>
</table>

Review draft - page 102 and 103  Table: 2.5-1 and 2.5-2

Proposed ownership caps - Review draft - page 16, 16-3

### %'s 2000 PRICES FOR OPILO WITH A 50,000,000 LB. PROJECTED G.H.L.

<table>
<thead>
<tr>
<th>%</th>
<th>4,000,000 LBS. @ 1.85$ = 7,400,000$</th>
</tr>
</thead>
<tbody>
<tr>
<td>8%</td>
<td>2,500,000 LBS. @ 1.85$ = 4,625,000$</td>
</tr>
<tr>
<td>5%</td>
<td>500,000 LBS. @ 1.85$ = 925,000$</td>
</tr>
</tbody>
</table>

### 2000 PRICES FOR OPILO WITH A 28,000,000 LB. PROJECTED G.H.L.

<table>
<thead>
<tr>
<th>%</th>
<th>2,240,000 LBS. @ 1.85$ = 4,144,000$</th>
</tr>
</thead>
<tbody>
<tr>
<td>8%</td>
<td>1,400,000 LBS. @ 1.85$ = 2,590,000$</td>
</tr>
<tr>
<td>5%</td>
<td>280,000 LBS. @ 1.85$ = 518,000$</td>
</tr>
</tbody>
</table>

Review Draft - page 102 / Table 2.5-1
Qualifying Year Options and the Initial Allocation:

To determine the initial allocation of QS first requires rules for determining eligibility for an allocation and rules for establishing the basis of those initial allocations. The next step in defining an initial allocation is to select qualifying years on which the allocation will be based. The Council motion includes several options for qualifying years for each fishery under consideration for rationalization. In this section, the initial distribution in each fishery is analyzed using each of the qualifying year options. To simplify the analysis, the options for each fishery are analyzed independently. The section concludes with a brief discussion of the overlapping participation in the different BSAI crab fisheries.

The analysis is conducted on a vessel basis. A more accurate estimate of the distribution would be based on ownership information. Ownership data, however, are unavailable for this analysis. To determine eligibility to receive an initial allocation the analysts considered the activity of each vessel individually. In addition, the distributions are estimated based on the activity of individual vessels. So, if a vessel engaged in activity that met the eligibility requirements for a distribution, the distribution was estimated using only the activity of the vessel that met the eligibility requirements. Amendment 10 creates some exceptions to the LLP requirements that would entitle some persons to LLP licenses that do not meet these requirements. For example, in certain instances replacement vessels could be used to meet the LLP requirements. Records concerning the qualification of persons under the Amendment 10 exceptions to the LLP requirements are not yet available, so currently, the most complete analysis is based on activities of single vessels. In addition, the suboption that would allow vessel substitution for determining an allocation applies only to transfers of LLP licenses. Application of this suboption might allow some persons to base their distributions on the history of a vessel other than the one creating the right to the LLP. Graphs are used to illustrate the allocations under the different options for qualification years for each fishery. To protect confidentiality, the allocations are shown in groups of 4 vessels with vessel groupings made in a descending order from the largest estimated allocation to the smallest allocation. The last and smallest grouping contains between 4 and 7 estimated allocations, since at least 4 persons' activities must be included under confidentiality rules. The estimated allocation shown for each group is the average allocation to members of that group. The allocation is shown in pounds, applying the total catch from the most recent year in the fishery to the share allocations. The harvests from that season are also shown using the same grouping method to allow comparison of the allocations with the current fishing activity. Each legend shows the total number of vessels that would receive an allocation under each option and the number of vessels that fished in the comparison season. Because allocations are averages it is possible that the largest allocation to a single vessel in a group is significantly different from the average of the four vessels, particularly in the groupings of the largest allocations in the fisheries with the fewest participants. In fisheries with either few options or few vessels receiving allocations, bar graphs are used to show the allocations. Unfortunately, these graphs are difficult to read in fisheries where the number of persons receiving allocations and the number of options are relatively large. Histograms are used to show the initial allocations in place of the bar graphs in those fisheries. In addition to the graphs, a table is presented which shows the average of the four largest allocations, the mean allocation, and the median allocation under each option.22

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21 It should be noted that these allocations are based on vessels and not vessel owners. Therefore, persons that own more than one vessel could be included in more than one of the histograms. These levels cannot be used to determine caps.

22 The mean allocation is the average allocation. The median allocation is the allocation at the midpoint in the distribution, for which half of the allocations are larger and half of the allocations are smaller.
The Bering Sea C. Opilio Fishery.

The Council motion includes the following qualifying year options for the distribution of QS in the Bering Sea C. opilio fishery:

1.4.2.1 Opilio (EBS snow crab)
   Option 1. 1994 - 1999 (6 seasons)
     (a) Best 5 seasons
   Option 2. 1992 - 1999 (8 seasons)
     (a) Best 7 seasons
   Option 3. 1995 - 1999 (5 seasons)
     (a) All seasons
     (b) Best 4 seasons
   Option 4. 1996 - 2000 (5 seasons)
     (a) Best 4 seasons

Figure 3.3-2 is a graph of the distribution in the Bering Sea C. opilio fishery under the different qualifying year options. Table 3.3-5 shows the mean, median, and average of the four largest allocations under the different options. Both the figure and table show that the allocations are quite similar. The mean (or average allocation) and the median (the midpoint in the distribution) are both slightly less than one-half of one percent. The vessels receiving the highest allocations will receive substantially higher allocations than most other vessels, receiving more than twice the median or the mean. The average allocation to these vessels is slightly more than one percent of the total allocation. Under all of the options the mean, median, and average of the four largest allocations are approximately the same. The number of vessels receiving an allocation ranges from 243 under Options 3A and 3B to 251 under Option 2A.

Table 3.3-5 Mean, median, and average of the four largest allocations under the different options in the Bering Sea C. opilio fishery.

<table>
<thead>
<tr>
<th>Fishery</th>
<th>Mean</th>
<th>Median</th>
<th>Average of four largest allocations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bering Sea Opilio</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Option 1A - 1994 - 1999 (Best 5 seasons)</td>
<td>0.004</td>
<td>0.004</td>
<td>0.010</td>
</tr>
<tr>
<td>Option 2A - 1992 - 1999 (Best 7 seasons)</td>
<td>0.004</td>
<td>0.004</td>
<td>0.010</td>
</tr>
<tr>
<td>Option 3A - 1995 - 1999 (All seasons)</td>
<td>0.004</td>
<td>0.004</td>
<td>0.010</td>
</tr>
<tr>
<td>Option 3B - 1995 - 1999 (Best 4 seasons)</td>
<td>0.004</td>
<td>0.004</td>
<td>0.011</td>
</tr>
<tr>
<td>Option 4A - 1996 - 2000 (Best 4 seasons)</td>
<td>0.004</td>
<td>0.004</td>
<td>0.010</td>
</tr>
</tbody>
</table>

Source: NPFMC Crab Database 2001 - Version 1

23 The vessels in various groupings may change by alternative, since their overall ranking in the fleet may change.
Table 3.3-12 shows the mean, median, and average of the four largest allocations under the different qualifying year options in the Western Aleutian Islands (Adak) golden king crab fishery. Figure 3.3-8 is a graph of the distribution in the fishery under the different options. The table and graph show substantial variation in the distribution of the allocations under the different options. The average allocation to the four leading vessels varies by more than 5 percent under the options, with the leading four vessels receiving an average allocation of more than 22 percent under Option 3A and an average allocation of slightly more than 16 percent under Option 1B. Options 1A and 1B include substantially more vessels in the allocation (22 vessels) than the other options (which include between 10 and 14 vessels in their allocations). The median (midpoint) of the allocation distribution is slightly larger under Options 3A and 3B (approximately 4 and 4.5 percent, respectively) than under the other options (all of which have a median of approximately 2.5 percent).

Table 3.3-12 Mean, median, and average of the four largest allocations under the different qualifying year options in the Western Aleutian Islands (Adak) golden king crab fishery

<table>
<thead>
<tr>
<th>Fishery</th>
<th>Mean</th>
<th>Median</th>
<th>Allocation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Western Aleutian Islands (Adak) Golden King Crab</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Option 1A - 1992-1993 to 1998-1999 (All seasons)</td>
<td>0.045</td>
<td>0.022</td>
<td>0.170</td>
</tr>
<tr>
<td>Option 1B - 1992-1993 to 1998-1999 (Drop one season)</td>
<td>0.045</td>
<td>0.023</td>
<td>0.167</td>
</tr>
<tr>
<td>Option 2A - 1995-1996 to 1998-1999 (All seasons)</td>
<td>0.071</td>
<td>0.026</td>
<td>0.212</td>
</tr>
<tr>
<td>Option 2B - 1995-1996 to 1998-1999 (Drop one season)</td>
<td>0.071</td>
<td>0.025</td>
<td>0.210</td>
</tr>
<tr>
<td>Option 3A - 1996-1997 to 1998-1999 (All seasons)</td>
<td>0.100</td>
<td>0.026</td>
<td>0.210</td>
</tr>
<tr>
<td>Option 3B - 1996-1997 to 1998-1999 (Drop one season)</td>
<td>0.100</td>
<td>0.026</td>
<td>0.213</td>
</tr>
<tr>
<td>Option 4A - 1996-1997 to 2000-2001 (Best 4 seasons)</td>
<td>0.091</td>
<td>0.026</td>
<td>0.213</td>
</tr>
</tbody>
</table>

Source: NPRMC Crab Database 2001 - Version 1

Table 3.3-13 shows the mean, median, and average of the four largest allocations under the different qualifying year options in the Eastern Aleutian Islands (Dutch Harbor) golden king crab fishery. Figure 3.3-9 is a graph of the distribution in the fishery under the different options. The table and graph show more similarity in the allocations under the different options than in the Western Aleutian Islands (Adak) golden king crab fishery. The average allocation to the four leading vessels varies by at most 2.5 percent under the options, with the leading four vessels receiving an average allocation of almost 18 percent under Option 2A and an average allocation of almost 15.5 percent under Option 4A. The mean and median allocations, however, differ substantially under the different alternatives. The mean, which is a function of the number of vessels receiving an allocation, ranges from slightly more than 5 percent under Options 1A and 1B to slightly more than 9 percent under Options 3A and 3B. The median (or the midpoint in the allocation distribution) is approximately 1.5 percent under Options 1A and 1B and is almost 9 percent under Option 3B. The reason for the low median allocation under Options 1A and 1B is likely that these allocation alternatives include additional vessels that receive relatively small allocations. The number of vessels receiving an allocation under the Options ranges from 11 under Option 3A and 3B to 19 under Options 1A and 1B.
Table 3.3-13 Mean, median, and average of the four largest allocations under the different qualifying year options in the Eastern Aleutian Islands (Dutch Harbor) golden king crab fishery

<table>
<thead>
<tr>
<th>Fishery</th>
<th>Mean</th>
<th>Median</th>
<th>Average of four largest allocations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eastern Aleutian Islands (Dutch Harbor) Golden King Crab</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Option 1A - 1992-1993 to 1998-1999 (All seasons)</td>
<td>0.053</td>
<td>0.014</td>
<td>0.172</td>
</tr>
<tr>
<td>Option 1B - 1992-1993 to 1998-1999 (Drop one season)</td>
<td>0.053</td>
<td>0.014</td>
<td>0.170</td>
</tr>
<tr>
<td>Option 2A - 1995-1996 to 1998-1999 (All seasons)</td>
<td>0.077</td>
<td>0.060</td>
<td>0.179</td>
</tr>
<tr>
<td>Option 2B - 1995-1996 to 1998-1999 (Drop one season)</td>
<td>0.077</td>
<td>0.054</td>
<td>0.178</td>
</tr>
<tr>
<td>Option 3A - 1996-1997 to 1998-1999 (All seasons)</td>
<td>0.051</td>
<td>0.054</td>
<td>0.172</td>
</tr>
<tr>
<td>Option 3B - 1996-1997 to 1998-1999 (Drop one season)</td>
<td>0.051</td>
<td>0.088</td>
<td>0.169</td>
</tr>
<tr>
<td>Option 4A - 1996-1997 to 2000-2001 (Best 4 seasons)</td>
<td>0.063</td>
<td>0.074</td>
<td>0.154</td>
</tr>
</tbody>
</table>

Source: NPFMC Crab Database 2001 - Version 1

Table 3.3-14 shows the mean, median, and average of the four largest allocations under the different qualifying year options for "GHL Split" option that would base the allocation to each participant on the combined history in the Eastern and Western Aleutian Islands golden king crab fishery. Figure 3.3-10 is a graph of the distribution in these fisheries under the different options. The average allocation to the four leading vessels varies by at most 2.5 percent under the options, with the leading four vessels receiving an average allocation of almost 18 percent under Option 3A and an average allocation of approximately 15.5 percent under Option 1B. The mean and median allocations, however, differ substantially under the different alternatives. The mean, which is a function of the number of vessels receiving an allocation, ranges from approximately 4 percent under Options 1A and 1B to slightly more than 8 percent under Options 3A, 3B, and 4A. The median (or the midpoint in the allocation distribution) is slightly less than 1.3 percent under Options 1A and 1B and is almost 8 percent under Option 3B. The reason for the low median allocation under Options 1A and 1B is likely that these allocation alternatives include additional vessels that receive relatively small allocations. The number of vessels receiving an allocation under the Options ranges from 12 under Option 3A, 3B, and 4A to 23 under Options 1A and 1B.²⁴

Table 3.3-14 Mean, median, and average of the four largest allocations under the different qualifying year options for combining the allocations in the Eastern and Western Aleutian Islands golden king crab fishery

<table>
<thead>
<tr>
<th>Fishery</th>
<th>Mean</th>
<th>Median</th>
<th>Average of four largest allocations</th>
</tr>
</thead>
<tbody>
<tr>
<td>GHL Split EAI (Dutch Harbor)/Western Aleutian Islands (Adak) Golden King Crab</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Option 1A - 1992-1993 to 1998-1999 (All seasons)</td>
<td>0.043</td>
<td>0.013</td>
<td>0.157</td>
</tr>
<tr>
<td>Option 1B - 1992-1993 to 1998-1999 (Drop one season)</td>
<td>0.043</td>
<td>0.013</td>
<td>0.155</td>
</tr>
<tr>
<td>Option 2A - 1995-1996 to 1998-1999 (All seasons)</td>
<td>0.071</td>
<td>0.049</td>
<td>0.172</td>
</tr>
<tr>
<td>Option 2B - 1995-1996 to 1998-1999 (Drop one season)</td>
<td>0.071</td>
<td>0.049</td>
<td>0.179</td>
</tr>
<tr>
<td>Option 3A - 1996-1997 to 1998-1999 (All seasons)</td>
<td>0.083</td>
<td>0.069</td>
<td>0.178</td>
</tr>
<tr>
<td>Option 3B - 1996-1997 to 1998-1999 (Drop one season)</td>
<td>0.083</td>
<td>0.078</td>
<td>0.173</td>
</tr>
<tr>
<td>Option 4A - 1996-1997 to 2000-2001 (Best 4 seasons)</td>
<td>0.083</td>
<td>0.083</td>
<td>0.169</td>
</tr>
</tbody>
</table>

Source: NPFMC Crab Database 2001 - Version 1

²⁴A complete analysis of the option for combining the allocations from the Eastern and Western Aleutian Islands requires a vessel by vessel comparison of the allocations, which is not completed for this draft.
CRAB RATIONALIZATION

Refining the Problem Statement:

The Council should provide a more explicit policy goal in the problem statement concerning its goals regarding relative bargaining power of harvesters and processors.

If the Council has a desired outcome relative to the sharing of either 1st wholesale revenues or the joint profits of the harvesting and processing sectors, it should seek an enhanced analysis that would allow it to choose from a variety of reference points.

The range of options for the distribution of benefits include:
- equal split
- split proportional to investment (as adjusted for factors such as depreciation, risk, malleability, etc.)
- split proportional to the relative dependence on crab by eligible harvesters and eligible processors
- "status quo ante" as a snapshot at the time of council action,
- "status quo ante" as an average of baseline years chosen of distribution of quota shares
- "status quo ante" as of the one of the dates at which the Council committed to rationalize crab (1987, 1992, 1995, 1998)

Enhanced Analytical Elements:

In order for the Council to evaluate the various reference points and to conduct subsequent impact analyses, it needs an analysis which provides:

- information on relative dependence of eligible crab harvesters and eligible crab processors on crab vs other fisheries. (similar to table 2.6-4 – include information on the % of harvest processed by non-eligible processors by year.)

- information on relative capital investment (new cost, depreciated value, replacement cost) of eligible crab harvesters and eligible crab processors in crab versus other fisheries. This should include information on relative portions of investment that are specific to crab.

- information on relative revenue shares by year, of the 1st wholesale value of crab by harvesters and processors in the crab fisheries over the qualifying years by crab species. This should include correlation of revenue shares to GHLs.
Include Reasonable Alternatives Within the EIS as Required by NEPA

The range of alternatives should include an alternative which seeks to provide protections for working fishers, communities, and processors within the framework of a One Pie ITQ system. This could be achieved with the a couple modifications of the One Pie ITQ alternative in the present analysis.

As noted on page 335 of the analysis, the Canadian Groundfish Development Authority administers a 10% set aside in the One Pie groundfish ITQ program, for the purpose of: "regional development, market and employment stabilization and sustainable fishing practices." Their program uses 10% of the allocation as leverage to protect processors and community interests.

- The One Pie Alternative should include the option to reserve (0-20%) of QS pool for allocation to eligible processors (as defined by 2.1) to be distributed according to the formula in 2.3. This allocation would be in lieu of IPQ allocations.

- The One Pie Alternative should include a binding arbitration provision to ensure an equitable price formation mechanism.

- The One Pie Alternative should include the option to specify the percentage of the revised CDQ allocation for St. George and St. Paul in lieu of regionalization.

The Council should not box itself into a position whereby it is forced to choose a sub-optimal Two Pie alternative only because the One Pie alternative was never fully developed to provide processor and community protections.

Seeking Common Ground with Scott Matalich:

A One Pie ITQ, allocated only to harvesters, is likely to increase harvester bargaining power.

Elongation of the season is likely to reduce processor bargaining power.

(— Corollary: Shortening the season is likely to have reduced harvester bargaining power.)

Rationalization has the potential to increase profitability for both harvesters and processors.

A One Pie ITQ can be designed that makes most processors and harvesters better off.

If the Council has a specific policy goal about distribution of benefits it should be explicit about that goal.

Sectors who expect to be made worse off by the design of a program will attempt to derail adoption of the program.
Problem of Excessive Shares in The Brown Crab Fishery

My name is Kevin Suydam, owner of the Crab vessel “Lady Alaska”. I have invested in excess of $500,000 in equipment and gear, which is for Brown Crab use exclusively. This was at a time of 12 month long seasons leaving un-harvested Quota at the time of Season closures. This was at the time of the least number of participants (less than 20) that this Fishery has ever had. Initially, it was determined that the NPFMC Council should not include Brown Crab in rationalization. It was only by lobbying of certain Brown Crab Owners with excessive shares that it was brought in the Rationalization Process. Now we are trying to rationalize the Brown Crab Fishery years ahead of its time. The Brown Crab Fishery is the youngest having starting in 1981, 30 years after the Bristol Bay red king crab Fishery.

The concern of rationalizing Brown Crab is the staggering, huge windfall allocations awarding excessive Quota Shares, compounded with having no way to enforce ownership caps. This is against National Standard 4. To give an example by referring to pages of the latest draft, you find that the Top 4 vessels in the Opilio Fishery (page 194) have an average initial allocation of 1% giving a combined 4 vessel amount of 4% of the Opilio fishery. In the Western Aleutians Brown Crab (page 205) the Top 4 vessels have an average initial allocation of 21.3% each which gives a combined 4 vessel amount of 85.2% of the fishery. In the Eastern Aleutian Brown Crab (page 206) the Top 4 vessels have an average allocation of 15.4% each which gives a combined 4 vessel amount of 61.6% of the Fishery. There are 1 or 2 vessels that don’t have other Fisheries other than Brown Crab. You have heard testimony saying that Brown crab is all they have. What they neglected to tell you is that their Brown Crab History are equivalent in value to about 5-6 Opilio Vessel histories. These individuals are currently selling out of the Fishery and will receive huge windfalls. On the other hand, I only wish to remain in the Fishery with at least enough quota to make it economically feasible to do so based on my huge investment in this Fishery.

Another concern is of enforcing ownership caps. It may already be too late in the Brown Crab fishery. Recently there have been more ownership changes by sales of Brown Crab vessels, than in any of the other Fisheries. There are additional pending Brown Crab Vessel purchases in the many millions of dollars. There are latent Catch Processor licenses being re-activated into the Brown Crab Fishery. If the Council Staff could be given the time and instructions to research this activity to find out where ownership interests are, as well as realizing that there are pending vessel sales of which are not yet recorded; I believe the Council would shocked at it’s findings. It is possible for one company to control this Brown Crab Fishery given the low number of existing participants that will be awarded these excessive shares. I ask that the NPFMC Council take measures to prevent this Fishery be dominated by one company.

I realize it is the position of the Council to reward Historical Participation when allocating fishing privileges. The Brown crab fishery is an anomaly to that position. By rewarding historical participation, as strictly as is done in other fisheries; the Council will have a hand in creating the excessive share problem compounded by having no ability to enforce ownership caps. Therefore I am asking that the Council leave open an escape route to remove Brown Crab
from the rationalization process if it is determined to be fatally flawed by excessive shares and having no way to enforce ownership caps.

National Standards, NEPA Guideline requirements, as well as NOAA General Counsel statements; say that we consider use of years through Final Action. I have been testifying to this for many meetings now. I am asking this again. It has been suggested there may not be enough time now. Yet I have heard testimony by others who have come to the meetings for the very first time and others bringing up new issues for the very first time that will have their issues addressed and analyzed. My request has strong legal merit and ramifications, and needs to be analyzed. I am asking for the additional year 2000/2001 be added for analysis.

Thank you for your time and attention, Kevin Suydam
PROPOSED MOTIONS:

ADD OPTION 5 TO 1.4.2.7.


WHY?

- When developing a fishery management plan, the Council and the Secretary must take into account the following factors
  
  A) present participation in the fishery
  B) historical fishing practices in, and dependence on, the fishery
  C) the economics of the fishery
  D) the capability of fishing vessels used in the fishery to engage in other fisheries
  E) the cultural and social framework relevant to the fishery and any affected fishing communities, and
  F) any other relevant considerations

- All of the options currently being analyzed fail to consider present participation. In fact three of the options only consider years up until 1998/1999.

- The options also fail to consider factors C, E, and F. In fact, the only factors analyzed under these options are B (historical practices) and D.

- Adding Option 5 would take into account all of the factors, including historical practices.

- Option 5 is consistent with National Standards 1 and 4.

- Option 5 is consistent with NEPA Guidelines.

- Option 5 takes into consideration comments made by NOAA GC recognizing the importance of present participation. Initial Review Draft pg. 15.

- We are merely asking that this be analyzed.

REASONS WHY THESE YEARS ARE NOT APPROPRIATE FOR OTHER FISHERIES

- What is good for one fishery, is not necessarily good for the others. In fact, that is precisely why some of the crab fisheries are not currently being considered for rationalization. Each fishery must be considered individually.
• If there was ever a time to look at present participation, this is it. In fact, it is questionable whether this fishery should even be included in the rationalization process. As stated in the Initial Review Draft on page 136, "[r]ationalization is a tool to primarily address concerns of overcapitalization and overfishing. If the Council cannot answer yes to the following three questions, then the fisheries is not ripe for rationalization: 1) Is there documented overcapitalization in the harvesting and/or processing sector as a result of this fishery? 2) Is the participation level high enough to generate a race for the fish under shorter and shorter seasons? 3) Are there outstanding biological or management concerns, i.e. overfishing, bycatch, etc. that warrant rationalization as a management tool?" The answer is "no" to all three questions in the Brown Crab fishery.

• This fishery is UNIQUE. Its uniqueness cannot be overstated!!! Low participation, excessive shares, and full utilization only being met recently. In addition there is no way to enforce ownership caps in this fishery.
April 2, 2002

Chairman David Benton
North Pacific Fishery Management Council
605 West 4th Avenue, Suite 306
Anchorage, AK 99501-2252

Dear Chairman Benton,

On behalf of the 300 plus members of the Deep Sea Fishermen’s Union of the Pacific (DSFU) we want to thank you for the appointment of Beau Bergeron, our Executive Director, to the Council’s IFQ Implementation and Cost Recovery Committee. Beau will bring a deep skill set and dedication to the committee.

DSFU is an independent union and the oldest organization of crewmen and skippers in the North Pacific. It was founded in 1912 and is composed of longliners who fish primarily in the Gulf of Alaska and the Bering Sea. Many of our members worked aboard vessels during the qualifying years for the original Individual Fish Quota (IFQ) process and allocation.

The Union and its members were very active in the development and implementation process. It is truly unfortunate, especially in retrospect, that crew members did not receive any initial allocation. Discussions about this aspect of IFQ inappropriately replied to crew members as “ancillary to the operation” and a potential source of “bookkeeping nightmares.” Both categorizations were false and demean the absolutely essential role we play as well as the continuing professionalism exhibited by Union members.

Since that time, many crewmembers have invested heavily in IFQ purchases in order to regain the immense amount of collective bargaining ability we lost with the implementation of this system. Our Union is uniquely qualified to comment on the IFQ process and its impact on crew members (working fisherman) and the fishery. The
Captain and Crew Quota Ownership provision in the Crab Rationalization effort is an opportunity not available to us at the onset of IFQ.

With Crab Rationalization we now, collectively, have the opportunity to learn from our experience and ensure this provision is included in the program. Captain/Crew Quota Ownership Share fosters job security, stability of the market and protects the fishery. DSFU is fully and enthusiastically supportive of the inclusion of the Captain/Crew Quota Ownership Share in the Crab Rationalization proposal. Thank you in advance for your consideration. Additionally, we will certainly be available to the Council and the Advisory Panel to lend our insight and experience to what we feel is an extremely important part of this program.

Sincerely,

Pat Hunter
President
April 2, 2002

David Benton
Chairman
North Pacific Fisheries Management Council
605 West 4th Avenue
Anchorage, Alaska 99501-2252

RE: Crab Rationalization

Dear Chairman Benton:

It is my understanding that there are a number of proposals meant to address rationalization of the crab industry. Some of these proposals could eliminate any future participation by the community of Atka in the crab industry.

Atka has not in the past been able to participate in the crab industry due to isolation and lack of infrastructure. The Community Development Quota (CDQ) program has provided infrastructure to enable residents of Atka to participate in the commercial halibut fishery. The small local shore-based plant must diversify operations in order to provide the village with a stable economic base using what is available around the island of Atka.

The Aleutian Pribilof Islands Community Development Association (APICDA) has future plans for expanding operations of Atka Pride Seafoods to include crab. Proposals that restrict participation in the industry by the people who live in the area are unjust and unreasonable. The City of Atka supports the proposal of APICDA that reads as follows:

"Any limitation of future crab processing entities, whether as a result of crab processor quota shares, the formation of cooperatives, or some other limitation, shall not apply to a CDQ community that does not have a shore side crab processing facility, providing the crab processing facility constructed is owned at least fifty percent by the CDQ group representing that community."

Thank you for your consideration.

Sincerely,

[Signature]
Julie Dirks
City Administrator

Cc: Atka City Council
APICDA
AGENDA C 5(a) Comment

Alaska Crab Coalition
3901 Leary Way N.W., Suite #6
Seattle, Washington 98107
206.547.7560
Fax 206.547.0130
ace-crabak@mca.com

DATE: March 18, 2002

TO: Ed Dersham, Chairman
Alaska Board of Fisheries

FROM: Arni Thomson, Executive Director

RE: COMMENT ON COMMITTEE A REPORT, PROPOSAL 422,
ADAK RED KING CRAB MANAGEMENT PLAN

To establish a concurrent opening date of the Bristol Bay king crab fishery and the Adak red king crab fishery in order to keep the number of participants to a minimum as a stock protection measure, would be highly allocative and not sound policy for the State of Alaska. The ACC reiterates the need to set the opening date to 10 days following the closure of the Bristol Bay king crab season, so the 21 permanent LLP qualified vessels can have an equal opportunity to participate in the fishery.

- Seven committee participants, including the ACC, PNCIAC and the City of Unalaska supported the differential opening dates, while only two participants supported the concurrent season opening date.

- Adopting a regulation for concurrent opening of the Adak red king crab fishery with the Bristol Bay king crab fishery will allocate almost the entire GHL to a handful of vessels that fish the adjacent Adak golden king crab fishery. A concurrent opening date will provide a special opportunity for 5 – 6 vessels to concurrently fish two king crab fisheries at the same time, while the 21 Bristol Bay qualified vessels will be denied the opportunity for a fair start in the fishery—by the same regulation.

- Adopting staggered season opening dates for the Adak and Bristol Bay red king crab seasons will not negatively effect the 5 – 6 golden king crab vessels, it will just provide all participants with a fair start opportunity.

See the attachments from the NPFMC BSAI Crab Rationalization Program Alternatives, January 2002:
1. Figure 3.4-9, Western Aleutian Islands (Adak) Red King Crab Fishery; and
2. Figure 3.4-8, Western Aleutian Islands (Adak) Golden King Crab Fishery
The graphs illustrate the benefits of geographic proximity. There is a strong correlation between at least two of the top four vessels in (group #1) that have the largest catch histories in the Adak golden king crab fishery and the Adak red king crab fishery.

This is in part due to the fact that at least two of the vessels are operating in the golden king crab fishery at the time the red king crab fishery opens and they have the advantage of minimal startup costs, including an observer onboard, and geographic proximity to the Adak red king crab area.

The top four vessels in each fishery, in the NPFMC rationalization program could each share 15-25% of the king crab allocations in the Western Aleutian Islands red and golden king crab fisheries under a quota share program.

cc: Chris Oliver, Executive Director, NPFMC
The Western Aleutian Islands (Adak) Red King Crab Fishery

Figure 3.4-9 shows the distribution of harvests in the Western Aleutian Island (Adak) red king crab fishery. The distributions in this fishery follow no apparent pattern but as with the other fisheries are generally flatter in years when more vessels participated. The average harvests of the four leading vessels ranged from slightly more than 15 percent in the 1994-1995 season to 25 percent in the 1995-1996 season, when only 4 vessels participated in the fishery. Mean harvests in the fishery range from slightly more than 5 percent in 1994-1995 season to 25 percent in the 1995-1996 season.

Figure 3.4-9 Distribution of Harvests in the Western AI Red King Crab Fishery
The Western Aleutian Island (Adak) Golden King Crab Fisheries.

Figure 3.4-8 shows the distribution of harvests in the Western Aleutian Island (Adak) golden king crab fishery. The distributions of this fishery have fluctuated greatly, as the number of vessels participating in the fishery has fluctuated greatly. The four leading vessels have typically harvest between 15 and 20 percent of the total harvest. In two season, however, the average harvests of these vessels was slightly more than 10 percent. In the two most recent seasons, the average harvest of the leading 4 vessels was approximately 20 percent of the total harvest. Mean harvests in the fishery range from less than than 5 percent in 1994-1995 season to over 33 percent in the 1998-1999 season, when only 3 vessels participated in the fishery.

Distribution of harvests in the Western Aleutian Islands (Adak) Golden King Crab Fishery

Figure 3.4-8 Distribution of Harvests in the Western Aleutian Islands Golden King Crab Fishery

January 2002
DATE: March 21, 2002

TO: Ed Derham, Chairman
    Alaska Board of Fisheries

FROM: Arnith Thomson, Executive Director
    Alaska Crab Coalition

RE: RC 69
    REQUEST FOR CONSIDERATION - SURVEY
    REQUIREMENTS FOR THE ADAK RED KING
    CRAB AREA FROM 172 - 179 WEST LONGITUDE

The ACC wishes to comment on the request for reconsideration of the state waters survey in the area from 172 - 179 West longitude.

The ACC requests that if the BOF takes up the Adak issue again, that allowance be made for larger boats to participate in a survey, and a commercial fishery, in the federal waters, within the area proposed for development of a state waters small boat survey and fishery.

The area under consideration is very extensive and the ACC has been informed by some of its members that most of the historic red king crab grounds within this area are in federal waters. This information was not available to the public during committee deliberations. Industry did not have time to consider a complementary federal waters survey and development of a fishery management plan and a parallel federal waters fishery. Unless a survey and a fishery in federal waters is included in this Board action, there is a strong possibility for substantial foregone harvests of king crab in this area.

The federal waters survey and fishery request are in accordance with the FMP Management Objectives 2 and 7, calling for maximum economic and social benefits to the nation over time; and to provide fisheries research, data collection and analysis to ensure a sound information base for management decisions. The request is also in accordance with National Standard 1, to achieve optimum yield; and National Standard 3, an individual stock of fish shall be managed throughout its range...

The ACC does not agree with RC 69's (Dick Powell) statement that very few persons, other than brown king crabbers will be interested in assuming the financial risks to bid on a survey in this area. ACC has at least four members with Adak red king crab LLPs with vessels greater than 100 feet in length that are interested in participating in the survey. To make the federal waters survey financially feasible for single line pot fishermen, it is recommended that the survey be conducted immediately following this fall's Petrel Bank red king crab fishery, when vessels will already have incurred their startup and observer costs, and the same observers can be used for an additional short term survey. Conducting the survey in the winter months will give preferential treatment to a handful of brown crab vessels already operating on adjacent grounds.

Thank you for your consideration.
Biographical Sketch

Don A. Dillman
Social & Economic Sciences Research Center
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dillman@wsu.edu

Dr. Dillman is the Thomas S. Foley Distinguished Professor of Government and Public Policy in the Departments of Sociology and Rural Sociology, and Deputy Director for Research and Development in the Social and Economic Sciences Research Center (SESRC) at Washington State University. In 1970, he was founding coordinator of the SESRC’s Public Opinion Laboratory (1970-1973), one of the first university-based telephone survey laboratories in the United States.

He is recognized internationally as a major contributor to the development of modern mail and telephone survey methods. His book, Mail and Telephone Surveys: The Total Design Method (1978), was the first to provide detailed procedures for conducting surveys by these methods. It was recognized by the Institute for Scientific Information as a "Citation Classic", and has now been cited in more than 1,750 scientific publications. In 1991 he was appointed (under the Intergovernmental Personnel Act) as the senior survey methodologist in the Office of the Director, U.S. Bureau of the Census, a position he held until 1995, where he provided leadership for the development of new questionnaire designs and procedures for the 2000 Decennial Census and other government surveys. This and related work on other federal agency surveys led to his receiving the Roger Herriot Award for innovation in federal statistics in September 2000.

He has three degrees from Iowa State University (B.S. Agronomy, 1964; M.S. Rural Sociology, 1966; Ph.D. Sociology, 1969), from which he received a Distinguished Alumni Citation in 2001. He came to Washington State University in 1969 as an assistant professor and has served the University as Chair of the Department of Rural Sociology (1973-81); Interim Chair, Department of Child and Family Studies (1984-85); Interim Community Resource Development Program Leader for Cooperative Extension (1978); and Director of the SESRC (1986-1996).

Throughout his 32-year career at Washington State University, Dr. Dillman has maintained an active research program on the improvement of survey methods and how information technologies influence rural development. He has served as investigator on 71 grants and contracts worth nearly $10 million, and written 180 publications, including 9 books. Recent books include: How To Conduct Your Own Survey (1994, with Priscilla Salant), Against All Odds: Rural Community in the Information Age (1994, with John Allen), Mail and Internet Surveys: The Tailored Design Method (2000), and Survey Nonresponse (2002, eds. Groves, Dillman, Little and Eltinge).
He is 2001-2002 President of the American Association of Public Opinion Research, which he previously served as Secretary (1996) and Councilor-at-Large (1999). Other significant accomplishments include being selected as a Fellow in Class I (1980-83) and advisor to Class XI (1990-93) of the Kellogg Foundation’s National Fellowship Program; President (1984-85) of the Rural Sociological Society, a national professional association, recipient of its Outstanding Service Award for co-editing Rural Society in the United States: Issues for the 1980’s (1983), and Excellence in Research Award (1998); and election as a Fellow by the American Association for the Advancement of Science (1987) and the American Statistical Association (1995). At Washington State University he was the 1985 presenter of the Distinguished Faculty Address, 1994 recipient of the College of Liberal Arts Distinguished Achievement Award, and 1995 winner of the University Sahlin Faculty Excellence Award for Research.

Since 1980, Dr. Dillman has presented seminars at more than 30 universities throughout the United States, and lectured in England, Sweden, Ireland, The Netherlands, Canada, Republic of China, Guam, and New Zealand. He was Guest Professor at the German Center for Survey Methods and Analysis in Mannheim, Germany in 1985, 1987, and 2001, and has served frequently as an instructor at the University of Michigan's Annual Summer Survey Institute since 1988. He regularly presents workshops on designing surveys and has delivered more than 50 keynote or other major invited addresses to various organizations. He has also served as a consultant on survey methods to many government agencies and private organizations.

Dr. Dillman was raised on a farm near Chariton, Iowa, and was married in 1964 to Joyce Jolly Dillman (B.S., M.S., Iowa State University), associate professor in the Department of Human Development at Washington State University.

Comments on the Matulich and Clark Report

"Efficiency and Equity Choices in Fishery Rationalization Policy Design"

Robert Halvorsen
Professor of Economics
Department of Economics
University of Washington

April 2002
Introduction

The Matulich and Clark paper reports the results of an attempt to determine the policy impacts of the individual fishery quota (IFQ) program for the North Pacific halibut and sablefish fisheries. They assume that the change in economic welfare emanating from the implementation of the IFQ program can be measured as the change in "quasi-rents" retained by processors, which they define as the change in revenues in excess of all variable processing costs. Data for the study were obtained from a sample of processors, who were asked to estimate their total revenue, total raw fish cost, and several cost items assumed to be equal in aggregate to total variable processing costs.

The study is ambitious, but critical defects in its theoretical and empirical methodology invalidate its results. The fundamental theoretical problem is that the quasi-rent measure used to evaluate welfare changes is not consistent with economic theory and would not provide reliable estimates of changes in welfare even if it were estimated accurately. Furthermore, the empirical methodology is deeply flawed and would be incapable of providing reliable estimates of welfare change even if a theoretically correct measure were being used. In short, the study measures the wrong thing, and measures it poorly.

The Measure of Welfare Change

Quasi-rents are fundamentally a short-run concept. The short-run is defined as the period of time during which at least one of the firm's input quantities cannot be changed. It should be noted that, although it is customary for expository reasons to use capital inputs as examples of fixed inputs, and labor and materials inputs as examples of variable inputs, some capital inputs may in fact be variable in the short-run (e.g., motor vehicles, personal computers), and some labor and materials inputs may be fixed (e.g., because of transportation costs, job-specific human capital, or contractual commitments).

The difference in the short-run between the firm's total revenue and total expenditures on variable inputs is defined as the quasi-rent to the fixed inputs. That is, the amount in excess of the amount required to keep the fixed inputs in their current use. Thus a decrease in quasi-rents would indicate a decrease in the firms' welfare in the short-run.

In the long-run, by definition, all inputs are variable, and the amount required to keep inputs in their current use is equal to what they could earn elsewhere, including a normal rate of return to capital. Therefore the relevant concept for measuring a firm's welfare change in the long-run is that of economic profit. Quasi-rents would have no operational meaning, being simply equal to economic profit if correctly measured.

There is no direct connection between the economic concepts of the short- and long-run and calendar time. Instead, the amount of time required before all inputs can be considered variable will vary across industries, although it is plausible that in any given
industry the number of inputs that are fixed will decrease with the length of time being considered.

Thus the first-step in attempting to use quasi-rent data to measure changes in a firm's welfare should be a careful evaluation of which, if any, inputs are fixed, given the period of time over which changes are being evaluated. Simply assuming that labor and material inputs are variable and all other inputs are fixed, as done by Matulich and Clark, is not adequate even for a period as short as a year, and is clearly unjustified for the seven-year period over which they are evaluating changes.

To illustrate the type of error their assumption can introduce in the measurement of welfare change, consider the results of applying Matulich and Clark's definition of quasi-rents to evaluate changes that are distant enough in time for all inputs to be variable. Further suppose for ease of exposition that in both periods the price of processed fish is $1.00, the cost of raw fish is $0.40, and average cost is $0.50. Thus economic profit per unit would be equal to $0.10 in both periods and the firm's welfare would be unchanged. Nevertheless, if the firm had become more labor intensive over time, the unit quasi-rent as calculated by Matulich and Clark would have indicated a decrease in welfare. For example, if average costs were split equally between capital and labor costs in the first period, but labor costs accounted for 80% of average costs in the second period, the unit quasi-rent as calculated by Matulich and Clark would have decreased from $0.35 to $0.20, a decrease of 43%.

While this example is hypothetical, it does illustrate that quasi-rent as evaluated by Matulich and Clark does not provide reliable estimates of changes in welfare over longer periods of time. More specifically, increases in labor intensity, other things equal, will result in decreases in welfare as evaluated by their measure.

Lastly, even if reliable estimates of welfare changes were obtained, their normative significance would depend in part on the benchmark on which they were based. Matulich and Clark choose as their benchmark the welfare of processors in 1992-1993, asserting that this period represented an open-access long-run equilibrium. One reason for doubting this assumption is that it is not clear that the fishery would have stabilized at the 1992 levels in the absence of an IFQ program. If not, then a more appropriate benchmark would be the counterfactual case of how the fishery would have developed in the absence of a program.

More directly, the 1992-1993 experience reflected the fact that fishery participants expected an IFQ program to be implemented, and this provided incentives for different behavior than would have occurred in an open-access equilibrium. For example, harvesters might have considered it worthwhile to fish at a loss in order to try to capture or protect catch history.
Data Acquisition and Analysis

Matulich and Clark obtained the data used to estimate changes in quasi-rents from a questionnaire distributed to a sample of processors. The principal types of data requested are total revenue, total raw fish cost, and total variable processing costs, defined as the aggregate of several specific cost elements, including custom processing fees, wage and housing costs for direct labor, and packaging and freight costs. Data on total revenue and total raw fish cost were verifiable from Alaska Department of Fish and Game data, the data for variable processing costs were not.

Economists using survey research techniques have noted that the design of a questionnaire can result in a number of different types of biases. In particular, respondents may engage in strategic misrepresentation of the data if it is clearly in their economic interests to do so. Therefore, one of the most important protocols for survey design is to avoid providing material that establishes a clear link between a participant’s responses and his or her economic interests.

The survey design used by Matulich and Clark clearly violates this protocol. The material accompanying the questionnaire noted that Professor Matulich was the principal investigator, that he had written an article showing that the type of program used for halibut and sablefish transfers wealth from processors to harvesters, and that the purpose of this survey was to see if that was true empirically. It was further noted that the purpose of the study was to obtain information for use in evaluating future rationalization programs, in particular to help policy makers to avoid unintended distributive effects, and that distributional impacts would be based on measuring changes in processors’ total revenue minus various processing costs. This material can be expected to have helped participants to have realized that there were incentives for misrepresenting data, specifically by overstating the increase in variable costs over time, for which there was no independent source of data.

An important difficulty in assessing the treatment of a number of empirical issues is that the discussion in the report is often qualitative where it would normally be expected to be quantitative. Examples include the section on data problems where it is noted that it was “not uncommon” for aggregation problems to prevent accurately measuring variable processing costs, and that “some” firms were unable to access historical data. No information is provided on the number of firms that were eliminated from the sample for these reasons. Similarly, they report that there were a “few” instances” where inventory issues were “problematic”.

In addition, Matulich and Clark report that some firms were considered to be outliers, usually by exhibiting unrealistically high quasi-rents. These firms were contacted for an explanation, and if it was not satisfactory, the firm was dropped from the sample or its data replaced by the sample average. The number of firms considered outliers, how many were considered to report too high quasi-rents, how many justified their data, were dropped, or had their data replaced by sample averages, is not specified.
Lastly, and most surprisingly, Matulich and Clark do not report the number of participants included in the final data. They report that the number of buyers/processors asked to participate in the survey was 53 for halibut and 46 for sablefish, accounting for 88% to 96% of all fish purchased, and that the retained survey data accounts for 52% to 61% of fish purchased. Given the degree of concentration in these fisheries, this may or may not represent a substantial percentage of the number of total firms.

Matulich and Clark do note that the final sample does not include data for any firms that exited the fisheries, which accounted for one-fifth of the total 1992-1993 catch in both fisheries. Although these firms might be expected to have been less profitable than the surviving firms, they are assumed to have had the same quasi-rent share in 1992-1993 as the surviving firms. Similarly, surviving firms that lost market share are assumed to have had the same quasi-rent share as the firms increasing market share.

Concluding Comments

Matulich and Clark conclude from their analysis that 82% of the halibut processing sector (as measured by raw fish weight rather than number of firms) lost quasi-rents relative to the pre-IFQ period, with the average loss being 56%. Even more dramatic results are reported for the sablefish processing sector. However, these results cannot be considered to be reflective of the actual effects on the economic welfare of processors.

The basic problem with their approach is that the results depend on the estimates of total variable processing costs, which in turn depend on arbitrary, and unrealistic, assumptions concerning which inputs are variable over a seven-year time span. In addition, estimation of total variable costs conditional on these assumptions depends on survey data from processors, who can be expected to clearly realize that there are incentives for strategic misrepresentation.
Although I did see Vince taking a class on TV, in Juneau, this story is fiction. Vince would NEVER behave in such a ludicrous fashion. I hope the contrast with his actual persona makes this a funny story, in this light.

On the other hand, this story isn’t about Vince at all - there is a substitution code at work. In this sense, we have an exact though somewhat unorthodox, current statement.

Here is the key:
Anchorage meetings = open access crab fishery
Juneau meetings = ITQ crab fishery
Anchorage house, Juneau house, airplane = capital investments
Dr. Matulich = Dr. Matulich
Mr. Oliver = fishery managers
Mr. Balsiger, et al = major ITQ recipients, major ports
Mr. Austin, et al = minor ITQ recipients, minor ports
Mr. Samuelsen, et al = other communities, future entrants to fishery
Mr. Penny = sports fishing
Mr. Hanson, et al = Robert’s rules, conservation, international relations
Capt. O’Shea = major processors

UNIT QUASI RENTS: How to Rationalize the NPFMC

This is a story about Economics, so it starts as the economists always do: "Assume that the NPFMC requires each Council Member to pay his or her own travel costs for meetings, and that it has always done so." This isn’t the way the Council actually works, but it is the way fishing works.

This all happened before Vince left, so it serves him right. One night on the TV, a college class in Public Policy was broadcast all over Juneau. There was the teacher, and there was the class - and look! One of them was Vince O’Shea. What if they asked Dr. Scott Matulich to teach one of those classes?

Assume that they did.

At the next council meeting, there sits Vince, thinking about what he’d learned in class. He looks across the room at Bob Penny. "Look at all the money that guy’s got," he thinks. "He lives in Anchorage. His variable costs for these meetings are zero. He’s taking home a ton of money. Matulich’s right. I’ve got to increase my Unit Quasi Rents. ¹"

So, Vince stays over an extra day, and buys a house in Anchorage. Next meeting, Vince is on the way to Anchorage, sitting on the plane. He’s got

¹"Unit Quasi Rents" = Net revenue, after variable costs are deducted / meeting
a week worth of food, all prepared in advance by Mrs. O'Shea. He's got his cell phone, and he's going to his new house. All this meeting is going to cost him, is the lights for the house. His Unit Quasi Rents have gone way up. Suddenly he's struck by a thought: "Wait a minute! Why am I spending all this money on plane tickets?"

By the third Council meeting, everyone has noticed the big changes in Vince. Not only is he more confident, because he now has Unit Quasi Rents as big as Bob Penny, everyone also knows he's got a new house in Anchorage, and a new airplane. He's flying himself to the meetings.

Jim Balsiger is concerned. He looks across the room at Vince. "I don't know how he does it," he thinks. "I've got to get to an economist."

Dr. Scott is already taken. Jim goes to consult another economist - any other economist. He says, "I don't really understand it, but Vince says it has to do with Unit Quasi Rents."

"Unit Quasi Rents? That doesn't mean anything!" The Professor says, "That guy just spent his pension on a house in Anchorage and a new airplane! What you really need to do is increase efficiency. Look around you - you've got two guys from Anchorage and five guys from Juneau. What you guys from Juneau should do, is all pitch in and buy Chris Oliver a house. Then meet in Juneau! That's rational."

That is what they decide to do. Chris is happy. Who wins, who loses?


Dennis Austin, John Bundy, Dave Fluharty, and Roy Hyder all can fly to Juneau cheaper than Anchorage - win, but they aren't happy about the food in Juneau.

Robin Samuelsen and Stosh Anderson have to pay more to go to Juneau, but then, they get to visit the Governor more often - win.

Bob Penny doesn't care about Unit Quasi Rents. It's restful getting out of Anchorage and fishing in S.E. for a change. No big deal.

Dave Hanson, Tony DeGange and Stetson Tinkham don't get to vote, anyway.

Vince is sore. He still has the houses in Juneau and Anchorage and the plane. He wants everyone to pay him back. He gets Congress to stop the NPFMC move, then goes to Atlantic States.
AGENDA C 5(a) Comment

Alaska Crab Coalition
3901 Leary Way N.W., Suite #6
Seattle, Washington 98107
206.547.7560
Fax 206.547.0130
ace-crabak@msn.com

DATE: March 18, 2002

TO: Ed Dersham, Chairman
Alaska Board of Fisheries

FROM: Arni Thomson, Executive Director

RE: COMMENT ON COMMITTEE A REPORT, PROPOSAL 422,
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cc: Chris Oliver, Executive Director, NPFMC
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Distribution of harvests in the Western Aleutian Islands (Adak) Golden King Crab Fishery

Figure 3.4-8 Distribution of Harvests in the Western Aleutian Islands Golden King Crab Fishery
DATE: March 21, 2002

TO: Ed Derham, Chairman
     Alaska Board of Fisheries

FROM: Arni Thomson, Executive Director
       Alaska Crab Coalition

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The ACC wishes to comment on the request for reconsideration of the state waters survey in the area from 172 – 179 West longitude.

The ACC requests that if the BOF takes up the Adak issue again, that allowance be made for larger boats to participate in a survey, and a commercial fishery, in the federal waters, within the area proposed for development of a state waters small boat survey and fishery.

The area under consideration is very extensive and the ACC has been informed by some of its members that most of the historic red king crab grounds within this area are in federal waters. This information was not available to the public during committee deliberations. Industry did not have time to consider a complementary federal waters survey and development of a fishery management plan and a parallel federal waters fishery. Unless a survey and a fishery in federal waters is included in this Board action, there is a strong possibility for substantial foregone harvests of king crab in this area.

The federal waters survey and fishery request are in accordance with the FMP Management Objectives 2 and 7, calling for maximum economic and social benefits to the nation over time; and to provide fisheries research, data collection and analysis to ensure a sound information base for management decisions. The request is also in accordance with National Standard 1, to achieve optimum yield; and National Standard 3, an individual stock of fish shall be managed throughout its range.

The ACC does not agree with RC 69’s (Dick Powell) statement that very few persons, other than brown king crabbers will be interested in assuming the financial risks to bid on a survey in this area. ACC has at least four members with Adak red king crab LLPs with vessels greater than 100 feet in length that are interested in participating in the survey. To make the federal waters survey financially feasible for single line pot fishermen, it is recommended that the survey be conducted immediately following this fall’s Petrol Bank red king crab fishery, when vessels will already have insured their startup and observer costs, and the same observers can be used for an additional short term survey. Conducting the survey in the winter months will give preferential treatment to a handful of brown crab vessels already operating on adjacent grounds.

Thank you for your consideration.
April 2, 2002

David Benton
Chairman
North Pacific Fisheries Management Council
805 West 4th Avenue
Anchorage, Alaska 99501-2252

RE: Crab Rationalization

Dear Chairman Benton:

It is my understanding that there are a number of proposals meant to address rationalization of the crab industry. Some of these proposals could eliminate any future participation by the community of Atka in the crab industry.

Atka has not in the past been able to participate in the crab industry due to isolation and lack of infrastructure. The Community Development Quota (CDQ) program has provided infrastructure to enable residents of Atka to participate in the commercial halibut fishery. The small local shore-based plant must diversify operations in order to provide the village with a stable economic base using what is available around the island of Atka.

The Aleutian Pribilof Islands Community Development Association (APICDA) has future plans for expanding operations of Atka Pride Seafoods to include crab. Proposals that restrict participation in the industry by the people who live in the area are unjust and unreasonable. The City of Atka supports the proposal of APICDA that reads as follows:

"Any limitation of future crab processing entities, whether as a result of crab processor quota shares, the formation of cooperatives, or some other limitation, shall not apply to a CDQ community that does not have a shore side crab processing facility, providing the crab processing facility constructed is owned at least fifty percent by the CDQ group representing that community."

Thank you for your consideration.

Sincerely,

Julie Dirks
City Administrator

Cc: Atka City Council
    APICDA
April 2, 2002

Chairman David Benton
North Pacific Fishery Management Council
605 West 4th Avenue, Suite 306
Anchorage, AK 99501-2252

Dear Chairman Benton,

On behalf of the 300 plus members of the Deep Sea Fishermen's Union of the Pacific (DSFU) we want to thank you for the appointment of Beau Bergeron, our Executive Director, to the Council's IFQ Implementation and Cost Recovery Committee. Beau will bring a deep skill set and dedication to the committee.

DSFU is an independent union and the oldest organization of crewmen and skippers in the North Pacific. It was founded in 1912 and is composed of longliners who fish primarily in the Gulf of Alaska and the Bering Sea. Many of our members worked aboard vessels during the qualifying years for the original Individual Fish Quota (IFQ) process and allocation.

The Union and its members were very active in the development and implementation process. It is truly unfortunate, especially in retrospect, that crew members did not receive any initial allocation. Discussions about this aspect of IFQ inappropriately replied to crew members as "ancillary to the operation" and a potential source of "bookkeeping nightmares." Both categorizations were false and demean the absolutely essential role we play as well as the continuing professionalism exhibited by Union members.

Since that time, many crewmembers have invested heavily in IFQ purchases in order to regain the immense amount of collective bargaining ability we lost with the implementation of this system. Our Union is uniquely qualified to comment on the IFQ process and its impact on crew members (working fisherman) and the fishery. The
Captain and Crew Quota Ownership provision in the Crab Rationalization effort is an opportunity not available to us at the onset of IFQ.

With Crab Rationalization we now, collectively, have the opportunity to lean from our experience and ensure this provision is included in the program. Captain/Crew Quota Ownership Share fosters job security, stability of the market and protects the fishery. DSFU is fully and enthusiastically supportive of the inclusion of the Captain/Crew Quota Ownership Share in the Crab Rationalization proposal. Thank you in advance for your consideration. Additionally, we will certainly be available to the Council and the Advisory Panel to lend our insight and experience to what we feel is an extremely important part of this program.

Sincerely,

Pat Hunter
President
North Pacific Fisheries Management Council  
605 West 4th Avenue, Suite 306  
Anchorage, Alaska 99501-2252

Mr. Chairman and Council Members.

Having read testimony from the congressional hearings on IFQ’s, I’m mad enough to bite the heads off a keg of rusty nails. Let’s not beat around the bush, don’t believe for a second that the IFQ hearings in Washington, D.C. presented a balanced or representative view of the program. Some elements concerning IFQ’s and processor views need clarification, and you need to be aware of where most fishermen really stand. I’m a 20-year resident commercial fisherman from Homer, Alaska. Two decades ago I started on the deck of the esteemed Oscar Dyson’s, Peggy Jo. I’ve fished from southeast to Nome, seined for salmon and herring, cradled and longlined, owned and ran a Bristol Bay operation for 16 years. I currently own and run a 32-foot boat fishing for halibut, employing my family and others from Alaska as crew members. I know of what I speak.

First: No processor IFQ’s. They just want another AFA, or some method so they can own the fishermen. I’m getting the distinct impression the deck’s getting stacked against folks like myself. You hear fishermen back processor IFQ’s? Here’s the back room deal. I have a friend with a 58-foot dragger and a major processor tells him, “You back us on processor IFQ’s and when you’re ready to get out we’ll buy your boat and your fishing rights”. Well, this friend of mine is going to retire in 5 years and that sounds appealing. He doesn’t think about the next generation, he just wants his retirement plan. The same scenario is being played out with crab. Probe below the surface of the supposed support by fishermen for processor quota and this is what you will find. But where does that put the new entrants or remaining fishermen 15 years from now? Fishermen will be nothing more than indentured servants. The fishery will be owned by a few big operators and the rest of us are cheap labor.

I’ve bought into this IFQ program, as has my crew. No big windfalls here. Put up my house, boat, pile of cash, and several loans to participate. Does the program work? You bet. Best innovation in Alaska fisheries in the last 100 years. And I can provide a long list of small boat owners like myself who agree. Interestingly enough, a whole pile of them from Kodiak, a town which originally hated the IFQ idea. You’ll find a vastly different sentiment in Kodiak today. Back to the detractors. Of course the processors hate the IFQ program. They’re still back in the 1880’s, wanting to own the fishermen and sell frozen halibut and canned salmon complete with skin and bones, a leftover product of a bygone era.

I see Mr. Hoard, from Icicle, claiming 100% of the value of the IFQ fishery went to the harvesting sector. Did he say that with a straight face? Last time I checked every pound of halibut and sablefish comes across a dock and has to be bought or handled by a processor before it goes to the next link in the chain. Icicle has a plant in Seward, the number 2 port for IFQ landings. Petersburg, a major southeast port, is home territory for Icicle. What’s stopping them from
buying until their heart's content in either port? Homer, where Icicle had a plant, is the number 1 port for IFQ deliveries. After a plant fire Icicle chose not to rebuild in Homer. However, an IFQ fisherman came in and put up The Fish Factory, invested hundreds of thousands of dollars in a fine, small processing facility 200 feet from where the old Icicle plant stood. Invested money right here. Created jobs right here. Icicle? They used the insurance money from the burned Homer plant to buy into Bering Sea pollock via the Northern Victor, a floating processor. Interestingly Icicle fought the AFA tooth and nail until they bought into the club. Voila, suddenly it's a wonderful program. And how much good does their pollock operation do for any coastal community? Well, I see their processor every summer anchored in Beaver Inlet, well south of Dutch Harbor, probably avoids a town fish tax, 2 or 3 big trawlers delivering to them. Those boats effectively have no choice, have to deliver to Icicle. Workers aboard the processor can't readily get to town, and 3 guys on each dragger who can't wait to get out of Dutch. So the bulk of the proceeds stay off the beach, hardly anyone goes to town and at the end of the season they all go south. You tell me how much good that does for our coastal communities?

The bottom line with respect to the current IFQ program is: the lay of the land has changed and our traditional processors don't like it, and unless they can get another AFA, don't want to play a new game; they're rather fond of the "my way or the highway" approach. See what that's done for the salmon business? Icicle and their cohorts want it like it was during the halibut derbies, which was only about a 10 year period in this 125 year commercial fishery. The fishermen really had no choice then. The big processors were the only game, primarily only those with big freezer capacity participated, effectively freezing out the small buyer. They sold fresh fish for 10 days a year, stuck the rest in the freezer and doled it out for 11 1/2 months. The Matulich Study is seriously flawed in this area. Considering the 6 years prior to the IFQ program as the norm is a joke. The derbies were an aberration, an anomaly, the end result of a system which became flawed. (You suppose getting $250,000 + from the processors for the study influenced the outcome of Dr. Matulich's work)? The IFQ program on the other hand makes sense from a biological, market, and safety standpoint. It is much easier to manage with far less waste. People want fresh fish and can get it 8 months out of the year, not just a few days. Undoubtedly, the current fishery is much safer than the derbies. The IFQ program provides all these benefits. It works. The one serious innovation the program could use, where biologically feasible, is moving towards a year-round fishery. Interestingly enough, it is our tradition-bound processor contingent leading the opposition to this idea.

At the hearings, I see no testimony from the regular fisherman. No one like myself, a purely independent operator who happens to think the IFQ program has more attributes than flaws. Yet we make up the bulk of the IFQ fleet. Mr. Hoard speaks to footing the bill for the lost opportunities in the halibut and sablefish business. Did anybody ask him to elaborate? Or did everyone just nod their head in assent? If they've lost opportunity it's because they refuse to participate. Obviously, the major processors hate to bid for fish. They want leverage, guarantees, indebtedness, whatever it takes to make fishermen deliver to them. Interestingly, several of the "major" processors were founded by upstart fishermen, but today these same processors want to make sure this never happens again by having a closed class for themselves. They own facilities in the middle of richest fishing grounds in North America and they don't get product, get left out? Last time I checked it was easy to get product—open up the wallet. All that fish is passing right under their nose, where many have, or had operations. That's equivalent to me whining I have no opportunity to catch a fish while 60 million pounds of Alaskan halibut is caught all around me. Ridiculous. We watched Icicle all my years in Bristol Bay. They came in looking good in 1979, a new concept, innovators, floating processors. But the innovation seemed to stall right there, and slowly but surely, like an aging athlete they lost their edge, became unresponsive, heavy with
middle management, no one could give you a direct answer. For the most part, price paid for product began to lag year after year. By 1996, my last year, a large portion of their Bristol Bay salmon fleet fished for them because of inertia or they had to, owed them money. Not to just pick on one outfit, the feeling was similar with other major processors. They failed to evolve, unlike some processors, those that ran leaner with fewer people, less service but higher prices for fish. That's where a lot of fishermen migrated. Same with the IFQ program. Many fishermen don't put a lot of stock in company jackets and hats, a company barbecue, or an expeditor with rides to the airport. Pay me the price and I'll buy my own hat. Get rid of that company driver, save yourself some bucks, and I'll catch my own ride. Many processors remain cumbersome and stodgy, and rather than lose some bulk and get in shape, they want you to promise them a steady diet of bon buns in the form of guaranteed fishermen and product, and no new entrants in the processing arena if possible. I hope you maintain a hearty skepticismism when speaking with these processors and their representatives.

If the only voices you hear or listen to are those of the "big dogs", then you've left out a formidable number of Alaskan citizens and fishermen. I do not wish ill luck on the processors. I would rather brag about them as leaders and innovators in my industry. I know many fine folks who work for various processors, but the looming specter of tying me or any other fisherman to a specific processor is an onerous and chilling prospect. What it boils down to from the processor's desired angle is "you can own your quota, but we'll own you". I truly hope you will be an advocate for the industry as a whole, which includes numerous fishermen like myself, and consider us when making your decisions. We are the fiber of Alaskan coastal communities. An aside I just learned a few days ago. You are probably aware of the new plan in Chignik for salmon. Are you aware that some fishermen hope to bring in a small processor owned by Ray Wadsworth (raised in Seldovia), a longtime Alaskan fisherman. Ray also invented a machine to extract pin bones from salmon fillets. The idea is to have high quality, vacuum bagged, boneless sockeye fillets. Maybe it'll work, maybe it won't. Well, Norquest, a Chignik processor, has been posturing, warning "their" boats should any of them attempt to sell any fish to this upstart operation. Now I don't have anything against Norquest, know and like several of the principal owners, but you can see the problem. Norquest figures that when they bought into Chignik, they also received a guaranteed portion of the fleet. Now somebody may upset, what is to their way of thinking, their franchise rights. There is a lot of pressure on fishermen to remain "in bounds", and not supply any new operation with product. Let's remember, Norquest began with a bunch of upstarts who left Icicle. We do need new and radical thinking in Alaska salmon fisheries, but here is a prime example of why limiting processors may limit innovation. So set up a situation where new entrants are locked out of processing, or boats are tied to a processor and you take a big step backwards. Talk to folks, if they're not too intimidated, in Sand Point about Trident, effectively the only market in town. Residents operate with the constant reminder of retribution if they don't toe the line. Those people might as well be Appalachian coal miners from 1920, owing their soul to the company store. Anyone can appreciate Chuck Bundrant's ability to build a power house business. I'd not kick him in the shins over that. But remember, he was once an upstart fisherman too, figured he might rather try things his way instead of selling to the same old outfit. Don't close that same door in face of future generations.

Sincerely,

David Whitmire
Alaska Fisheries Conservation Group
BSAI crab vessel owners from Washington, Oregon and Alaska
Box 910 Woodinville, WA 98072 (206) 849-6752 Fax (425) 823-3964

Proposed Revisions to Bering Sea Crab
Rationalization Alternatives (March 2002)

ISSUE ONE:

Problem Statement on Page 1: Remove "Bycatch and its associated mortalities and landing deadloss."

Justification: National Standard 8 in MSA’96 requires that “conservation and management measures minimize, to the extent practicable, bycatch and the mortality of bycatch and the mortality of bycatch that cannot be avoided.”

ADFG Regional Report #4K00-61 shows that

A. Female snow crab have accounted for less than one percent of all snow crab bycatch.

B. 94% of snow crab bycatch were legal males greater than 3.1-inches in carapace width.

C. Snow crab bycatch will continue to be dominated by mature males greater than 3.1-inches in carapace width.

D. ADFG’s best estimate of snow crab bycatch mortality is 25% because of concerns over freezing of crabs resulting from wind-chill exposure during the winter crab fishery.

E. If 25% was a reasonable estimate, you would expect to see a comparable degree of deadloss from deliveries in Dutch Harbor and Saint Paul during the same period.

F. Note: the Alaska Board of Fisheries was petitioned by a Bering Sea crab fisherman last October to shut down the winter fishery in January and, instead, open the Opilio fishery in April. The Board turned him down by a unanimous vote 7-0.
Instead, the 2001 Crab SAFE indicates on Page 47 that snow crab deadloss in the period 1990-1998 averaged only 1.3%.

Likewise, the 2001 SAFE also reports on Page 47 that "observer data collected during 1998 and 1999 snow crab seasons indicate that sorted bycatch typically is returned to the sea in less time than the 5-minutes that crabs were exposed to wind chill during the laboratory study."

Page 50 of the 2001 SAFE shows that snow crab bycatch mortality as a percent of abundance averaged less than one-half of 1 percent from 1994-1999.

Conclusion: Bycatch and bycatch mortality in the snow crab fishery is minimized to the extent practicable. Therefore, it should not be used as a legitimate purpose for rationalization.

ISSUE TWO

Effect of the crab buyback program on current BSAI crab fleet size: On Page 11 of the Crab Rationalization Document under Alternative 1 add

"NMFS estimates that the Crab Buyback Program, alone, will permanently eliminate 60-vessels in 2002."

-End-
SUSTAINABLE FISHERIES ACT

REPORT
OF THE
COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION
ON
S. 39

MAY 23, 1996.—Ordered to be printed

U.S. GOVERNMENT PRINTING OFFICE
WASHINGTON : 1996
Agreements (PIAFAs). Specifically, it would authorize the Secretary of State to negotiate and enter into a PIAFA at the request of, and with the concurrence of, the Governor of a Pacific Insular Area to allow foreign fishing within the EEZ adjacent to that Pacific Insular Area. The Western Pacific Council would act on behalf of Pacific Insular Areas for which there is no Governor.

PIAFAs: (1) would be required to provide for observer coverage; (2) would not be subject to provisions of section 201 of the Magnuson Act related to the calculation of total allowable levels of foreign fishing; (3) could not exceed three years in duration nor supersede any GIFA; and (4) could not be negotiated with a nation that is in violation of any GIFA. Fees collected under a PIAFA may be in excess of administrative costs and would be used for fishery conservation and management purposes in the Pacific Insular Area to which the agreement pertains.

Prior to entering into a PIAFA, the Governor of a Pacific Insular Area, in concurrence with the Western Pacific Council, would develop a three-year conservation and management plan for which funds generated from the agreement would be used. Funds could also be allocated for other marine and coastal-related uses but only after conservation and management costs have been met. The expenditure of funds generated by a PIAFA is intended to benefit the people and resources of these western Pacific areas and in doing so benefit the Nation.

Section 106(e) would amend section 205(a) of the Magnuson Act dealing with import prohibitions to require certification by the Secretary of State of any foreign nation that fails to enter into an international bycatch agreement. As amended, section 205 would require the Secretary of the Treasury, upon receipt of such a certification, to impose trade sanctions on fish and fish products from the foreign nation involved.

Section 106(f) would amend section 206(e) of the Magnuson Act on large-scale driftnet fishing to eliminate duplicative annual reporting requirements.

**Section 107.—National Standards**

Section 107 would amend section 301(a) of the Magnuson Act to modify and expand upon the national standards for conservation and management with which fishery management plans and regulations must be consistent. Section 107(a) would amend national standard five to require conservation and management measures, where practicable, to "consider" efficiency, rather than "promote" efficiency. In the past, this national standard has been used to, among other things, justify ecologically wasteful, but economically efficient practices such as roe stripping. The goal of this amendment is not to eliminate efficiency as a consideration in the development of plans and regulations, but rather to ensure that it is balanced with the requirements of other national standards.

Section 107(b) would add three new national standards at the end of section 301(a) of the Magnuson Act. New national standard eight would require that conservation and management measures take into account the importance of the harvest of fishery resources to minimize (to the extent practicable) adverse economic impacts on, and provide for the sustained participation of, fishing commu-
nities, but would prevent such measures from having an economic allocation as their sole purpose. This standard is not intended to constitute a basis for allocating resources to a specific fishing community or provide preferential treatment based on residence in a fishing community. As clearly stated in existing national standard four, conservation and management measures shall not discriminate between residents of different States, and any necessary allocation or assignment of fishing privileges must be fair and equitable to all fishermen. This standard also is not intended to be used as a basis for circumventing conservation requirements.

New national standard nine would require that conservation and management measures minimize, to the extent practicable, bycatch and the mortality of bycatch which cannot be avoided. The priority for reducing bycatch under the new standard would be to minimize or avoid catching bycatch species where possible. Fish that are bycatch and cannot be avoided should, to the extent practicable, be returned to the sea alive. The Committee anticipates that ecological interrelationships of fish species in the ecosystem will be an important consideration in determining the practicability of minimizing bycatch.

New national standard ten would require that conservation and management measures promote the safety of human life at sea. The Committee recognizes that commercial fishing is a difficult and sometimes hazardous occupation and encourages efforts to protect crew safety. However, the standard is not intended to give preference to one type of management system over another. To reiterate, existing national standard four states that conservation and management measures shall not discriminate between residents of different states, and any necessary allocation or assignment of fishing privileges must be fair and equitable to all fishermen. In addition, national standard five states that no conservation and management measure shall have an economic allocation as its sole purpose.

Section 108.—Regional Fishery Management Councils

Section 108 of the reported bill would amend section 302 of the Magnuson Act which establishes the eight Councils and procedures for their operation and administration. Section 108(a) would make a number of changes to the Council's makeup. With respect to the Mid-Atlantic Council, this section would add two positions for North Carolina to the Council membership increasing the number of voting members from 19 to 21 and increasing the number of members appointed by the Secretary from 12 to 13. The amendment, though, would not expand or change the geographical or ocean area for which the Mid-Atlantic Council has authority.

With respect to the Pacific Council, this section would increase the number of voting members from 13 to 14 and require the appointment of a voting member who represents an Indian tribe with Federally-recognized fishing rights from California, Oregon, Washington, or Idaho.

With respect to Atlantic highly migratory species (HMS), subsection 108(a)(7) would move the existing authority in section 304(f)(3) of the Magnuson Act (giving the Secretary management authority for such fisheries) to section 302(a). The language is iden-
PROPOSED SEASON DATE CHANGE FOR THE SNOW CRAB FISHERY
REPORT TO THE ALASKA BOARD OF FISHERIES

ALASKA
DEPARTMENT OF FISH AND GAME

Regional Information Report No. 4K00-61

Alaska Department of Fish and Game
Division of Commercial Fisheries
211 Mission Road
Kodiak, Alaska 99615

October 2000
carapace width (CW) smaller than the 4-in CW industry standard for retention. So, although relatively few female and sublegal male snow crab were captured during the snow crab fishery, the annual estimated percentage of legal-sized males that were captured but not retained during 1994-1999 ranged from 25% to 40%. Nearly 100% of the non-retained male snow crab that have been captured during the commercial fishery were morphologically mature, regardless of size (R.S. Otto, NMFS Kodiak, pers. comm.). Bycatch of female snow crab, which have accounted for less than 1% of the snow crab bycatch, has also been dominated by mature animals.

The 2000 snow crab open-access season was delayed until April and prosecuted under a greatly reduced guideline harvest level of 28.5 million pounds. Observer data indicates that 4.5 million crabs, roughly 17% of all snow crabs captured during the fishery, were discarded during that season. An estimated 94% of those discarded crabs were non-retained legal males ≥ 3.1-in CW, indicating that 16% of captured legal males were not retained for processing. The lower bycatch rate observed during the 2000 snow crab season is likely due to the low abundance of male snow crab < 4-in CW as estimated from the 1999 National Marine Fisheries Service eastern Bering Sea trawl survey (Stevens, et al. 2000). The lower bycatch rate in the 2000 season may also be attributable to an exploitation rate on legal males ≥ 4-in CW that was roughly 1/3 of that used in earlier seasons.

Although the current escape mechanisms should allow for reduced bycatch relative to that seen under prior regulations, there has been no opportunity to evaluate the bycatch levels during the commercial fishery under those new regulations. It should be noted that there are other factors besides escape mechanisms that are important in affecting bycatch rates. Those factors include: the guideline harvest level; the areas fished; soak times used; industry choices on minimum size for retention of legal-sized males; and the abundance of the portion of the population targeted by the directed fishery relative to the abundance of the portion that occurs as bycatch. Regardless of the magnitude of bycatch that will occur under the current escape mechanism regulations, distribution patterns indicate that the snow crab bycatch will continue to be dominated by mature males ≥ 3.1-in CW.

Snow Crab Bycatch Mortality Issues

Analysts for a Rebuilding Plan for the Bering Sea C. opilio Stock (NPFMC 2000) used 25% as a "best estimate" for the bycatch mortality rate during the snow crab fishery under the current fishery conditions; i.e., the analysts assumed that 25% of bycatch snow crab captured during the snow crab fishery die as a direct result of handling and discarding. Those analysts assumed that bycatch mortality in the snow crab fishery was higher than in any other Bering Sea crab fisheries. In large part, their assumption of higher bycatch mortality in the snow crab fishery was due to concerns over freezing of crabs resulting from wind-chill exposure during the winter snow crab season. As discussed below, however, the actual short- and long-term effects due to handling on the survivorship of bycatch snow crab during the snow crab fishery remain unknown.

The effects on survivorship due to handling undoubtedly vary among crabs of different sizes and shell ages. Effects also vary due to the conditions particular to each vessel, due to sorting facilities and methods of vessels, and due to prevailing wind and temperature conditions. Factors that can affect survivorship of bycatch crabs include injuries due to impact and tearing and freezing due to extreme cold or to wind-chill at less extreme temperatures. Injuries to the shell can increase susceptibility to infection or to predation by sand-fleas. Time of aerial exposure on deck prior to
Stock Assessment and Fishery Evaluation Report
for the
KING AND TANNER CRAB FISHERIES
of the
Bering Sea and Aleutian Islands Areas

2001 Crab SAFE

Compiled by

The Plan Team for the King and Tanner Crab Fisheries
of the Bering Sea and Aleutian Islands

With Contributions by

C. Armistead, F. Bowers, M. Cavin, W. Donaldson, A. Gilson, R. Gish,
G. Harrington, G. Kruse, K. Marby, R. Morrison, R. Otto, D. Pengilly, L. Rugolo,
J. Soong, B. Stevens, D. Witherell, I. Vining, and J. Zheng

October 2001

North Pacific Fishery Management Council
605 W. 4th Avenue, #306
Anchorage, AK 99501
BSAI Crab Bycatch
prepared by Dave Witherell, NPFMC staff

What is bycatch?

Bycatch of crab occurs in the directed crab pot fisheries and other fisheries, including groundfish and scallop fisheries. In the crab fisheries, crab bycatch includes females of target species, sublegal males of target species, and non-target crab. In all other fisheries, crabs are a prohibited species, so every crab caught incidentally is considered bycatch.

How many crabs are taken as bycatch?

The following tables show the numbers of crab taken as bycatch in these fisheries.

### Byscatch of *C. opilio* crabs (numbers of crab) in Bering Sea fisheries, 1994-2000.

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<th>Year</th>
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<th>groundfish trawl</th>
<th>groundfish fixed gear</th>
<th>scallop dredge</th>
<th>Total</th>
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<td>0</td>
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<td>2000</td>
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### Byscatch of Bristol Bay red king crabs (numbers of crab) in Bering Sea fisheries, 1994-2000.

<table>
<thead>
<tr>
<th>Year</th>
<th>directed crab pot</th>
<th>groundfish trawl</th>
<th>groundfish fixed gear</th>
<th>scallop dredge</th>
<th>Total</th>
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<tbody>
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<td>1994</td>
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<td>280,096</td>
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<th>groundfish fixed gear</th>
<th>scallop dredge</th>
<th>Total</th>
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<tr>
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<td>50,218</td>
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<tr>
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<td>5,854,168</td>
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<tr>
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<td>*</td>
<td>901,619</td>
<td>*</td>
<td>*</td>
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<tr>
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<td>1,002,074</td>
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<td>53,614</td>
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Do all these crabs die?

**Crab Fisheries**

Some crabs taken as bycatch die due to handling mortality. Several laboratory and field studies have been conducted to determine mortality caused by handling juvenile and female crab taken in crab fisheries. There are a variety of effects caused by handling, ranging from sublethal (reduced growth rates, molting probabilities, decreased visual acuity from bright lights, and vigor) to lethal effects. Studies have shown a range of mortality due to handling based on gear type, species, molting stage, number of times handled, temperature, and exposure time (Murphy and Kruse 1995). Handling mortality may have contributed to the high natural mortality levels observed for Bristol Bay red king crab in the early 1980's (65% for males and 82% for females), that along with high harvest rates, resulted in stock collapse (Zheng et al. 1995). However, another study concluded that handling mortality from deck impacts and temperature was not responsible for the decline on the red king crab fishery (Zhou and Shirley 1995, 1996).

Byersdorfer and Watson (1992, 1993) examined red king crab and Tanner crab taken as bycatch during the 1991 and 1992 red king crab test fisheries. Instantaneous handling mortality of red king crab was <1% in 1991, and 11.2% in 1992. Stevens and MacIntosh (1993) found average overall mortality of 5.2% for red king crabs and 11% for Tanner crabs on one commercial crab vessel. Authors recommend these results be viewed with caution, noting that experimental conditions were conservative. Mortality for red king crab held 48 hours was 8% (Stevens and MacIntosh 1993, as cited in Queirolo et al. 1995). A laboratory study that examined the effects of multiple handling indicated that mortality of discarded red king crabs was negligible (2%), although body damage increased with handling (Zhou and Shirley 1995).

Delayed mortality due to handling does not appear to be influenced by method of release. In an experiment done during a test fishery, red king crab thrown off the deck while the vessel was moving versus those gently placed back into the ocean showed no differences in tag return rates (Watson and Pengilly 1994). Handling methods on mortality have been shown to be non-significant in laboratory experiments with red king crab (Zhou and Shirley 1995, 1996) and Tanner crab (MacIntosh et al. 1996). Although handling did not cause mortality, injury rates were directly related to the number of times handled.

Mortality of crabs is also related to time out of water and air temperature. A study of red king crabs and Tanner crabs found that crabs exposed to air exhibited reduced vigor and righting times, feeding rates (Tanner crabs), and growth (red king crabs) (Crafs and Clair 1989). For surviving females, there was no impact on survival of eggs or larvae. Cold air resulted in leg loss or immediate mortality for Tanner
crabs, whereas red king crabs exhibited delayed mortality that occurred during molting. A relationship was developed to predict mortality as the product of temperature and duration of exposure (measured as degree hours). Median lethal exposure was -8°C for red king crab and -4.3°C for Tanner crab. For example, if crabs were held on deck for 10 minutes and it was -23°C (10 degrees below zero Fahrenheit) outside, about 15% of the king crab and 50% of the Tanner crab would die of exposure. Because BSAI crab fisheries occur from November through March, cold exposure could cause significant handling mortality to crabs not immediately returned to the ocean. Zhou and Shirley (1995) observed that average time on deck was generally 2 to 3 minutes, and they concluded that handling mortality was not a significant source of mortality.

Further research has indicated that windchill may be an important mortality factor. In 1997, a laboratory study examined the effects of cold windchill temperature on mortality, limb loss, and activity (righting response) for sublegal sized male Tanner crabs (Zhou and Kruse, 1998, Shirley 1998). The study found significant inverse relationships between windchill and crab mortality, limb loss, and activity. Crabs were exposed to combinations of temperatures and wind speeds for a duration of 5 minutes, then placed in seawater tanks and held for 7 days. Zhou and Kruse (1998) found that virtually all crabs died when exposed to wind speeds greater than 7.7 m/s (15 nautical miles per hour) and air temperatures less than -10.4°C (13.3°F). Stronger winds, even at warmer temperatures (but still below freezing), can have the same effect. Shirley (1998) estimated that 50% of the crabs would die in windchill temperatures of -11°C (this windchill temperature can result from air temperatures of 21°F and wind speeds of 30 nautical miles per hour). He concluded that “The effects of windchill on sublegal Tanner crabs is dramatic, and undoubtedly results in decreased recruitment to adult stocks”.

On the other hand, there is evidence from the fishery itself that windchill during the snow crab fishery may not be as important a mortality factor as would be expected from the laboratory study on Tanner crabs (Shirley 1998) and prevailing weather conditions. The primary evidence in this regard is the low rate of deadloss that occurs during the snow crab fishery. The snow crabs that are delivered to processors are generally subjected to the similar windchill exposures before being sorted on deck and deposited into the holding tank as are non-legal snow crabs and Tanner crabs before they are sorted and discarded. Data collected by onboard observers during the 1999 snow crab fishery indicate that bycatch crabs generally are not exposed to the air any longer than the retained catch (D. Tracy, ADF&G, pers. comm). The effects of windchill on snow crabs have not been directly studied. It would, however, be expected for retained legal snow crabs (males, generally > 101 mm CW) to show similar effects due to windchill as bycatch Tanner crabs due to the morphological similarity of snow and Tanner crabs and because bycatch Tanner crabs also tend to be males > 101 mm CW (D. Tracy, ADF&G, pers. comm). Because snow crabs are typically kept in holding tanks for one to three weeks prior to offloading at processors (R. Morrison, ADF&G, pers. comm), high rates of deadloss would be expected in the deliveries if on-deck wind chill exposure resulted in mortality rates comparable to those experienced by Tanner crabs in the laboratory study. Commercial catch statistics from the 1990 through 1998 snow crab seasons, however, indicate that the annual deadloss averaged only 1.3% of the total delivered snow crabs and ranged from 0.7% to 2.0%. Such low rates of deadloss, despite the low temperatures and high winds that can occur in the Bering Sea during the snow crab fishery, may be reflective of features of fishing vessels and fishing practices that serve to protect captured and sorted crabs from windchill exposure. Shelter decks, storm walls, use of totes, and leeward alignment of vessels during gear retrieval, for example, would tend to protect crabs from windchill exposure during sorting. However, these low rates of deadloss are averages from throughout the season. Higher rates of deadloss may be found in crab deliveries made during periods following more severe weather conditions. Additionally, observer data collected during the 1998 and 1999 snow crab seasons indicate that sorted bycatch typically is returned to the sea in less time than the 5 minutes that crabs were exposed to windchill during the laboratory study (D. Tracy, ADF&G, pers. comm). Data on limb autotomies collected from bycatch Tanner crabs by onboard observers during the...
1999 snow crab season also indicate that the effects of wind chill in practice is less than that predicted from laboratory studies and prevailing weather. Examination of 1,718 bycaught *Bairdi* prior to discarding during the 1999 season indicates a limb autotomy rate of only 0.3%—well below the limb autotomy rates observed in the laboratory study for windchills associated with high mortality rates. In summary, although it has been conclusively shown that windchill can effect high rates of mortality in Tanner crabs, there is also evidence that exposure of captured crabs to such windchill may not be common during actual fishing. Laboratory experiments on the effects of windchill on snow crabs are currently being conducted (Shirley, pers. comm.).

### Trawl Fisheries

The effect of crab bycatch on crab stocks is somewhat tempered by survival of discarded crabs. There have been numerous studies conducted on crab bycatch mortality, with each study having different objectives, methodology, and results. A summary of these studies is provided below, but many questions remain unanswered. Stevens (1990) found that 21% of the king crabs and 22% of the Tanner crabs captured incidentally in BSAI trawl fisheries survived at least 2 days following capture. Blackburn and Schmidt (1988) made observations on instantaneous mortality of crab taken by domestic trawl fisheries in the Kodiak area. They found acute mortality for softshell red king crab averaged 21%, hard shelled red king crab 1.2%, and 12.6% for Tanner crab. Another trawl study indicated that trawl induced mortalities aboard ship were 12% for Tanner crab and 19% for red king crab (Owen 1988). Fukuhara and Worlund (1973) observed an overall Tanner crab mortality of 60-70% in the foreign Bering Sea trawl fisheries. They also noted that mortality was higher in the summer (95%) than in the spring (50%). Hayes (1973) found that mortality of Tanner crab captured by trawl gear was due to time out of water, with 50% mortality after 12 hours. Natural Resource Consultants (1988) reported that overall survival of red king crab and Tanner crab bycaught and held in circulation tanks for 24-48 hours was <22%. In other analyses, the estimated mortality rate of trawl bycaught red king crab and Tanner crab was 80% (NPFMC 1993, 1995).

### Other Groundfish Fisheries

Some crabs are caught incidentally by non-trawl gear in pursuit of groundfish, and a portion of these crabs die. No field or laboratory studies have been made to estimate mortality of crab discarded in these fisheries. However, based on condition factor information from the trawl survey, mortality of crab bycatch has been estimated and used in previous analyses (NPFMC 1993). Discard mortality rates for red king crab were estimated at 37% in longline fisheries and 37% in pot fisheries. Estimated bycatch mortality rates for Tanner crab were 45% in longline fisheries and 30% in pot fisheries. No observations had been made for snow crab, but mortality rates are likely similar to Tanner crab. In the analysis made for Amendment 37, a 37% mortality rate was assumed for red king crab taken in longline fisheries and an 8% rate for pot fisheries. Observer data on condition factors collected for crab during the 1991 domestic fisheries suggested lower mortality of red king crab taken in groundfish pot fisheries. Bycatch mortality rates used in the analysis of Amendment 37 (NPFMC 1996) for snow crabs were 45% in longline fisheries and 30% in pot fisheries.

### Scallop Fishery

Observations from scallop fisheries across the state suggest that mortality of crab bycatch is low relative to trawl gear due to shorter tow times, shorter exposure times, and lower catch weight and volume. For crab taken as bycatch in the Gulf of Alaska weathervane scallop fishery, Hemrick (1973) estimated that about 30% of Tanner crabs and 42% of the red king crabs bycaught in scallop dredges were killed or injured. Hammerstrom and Merritt (1985) estimated mortality of Tanner crab at 8% in Cook Inlet.
Kaiser (1986) estimated mortality rates of 19% for Tanner crab and 48% for red king crab bycaught off Kodiak Island. Urban et al. (1994) reported that in 1992, 13-35% of the Tanner crab bycaught were dead or moribund before being discarded, with the highest mortality rate occurring on small (<40 mm cw) and large (>120 mm cw) crabs. Delayed mortality resulting from injury or stress was not estimated. Mortality in the Bering Sea appears to be lower than in the Gulf of Alaska, in part due to smaller sizes of crab taken. Observations from the 1993 Bering Sea scallop fishery indicated lower bycatch mortality of red king crab (10%), Tanner crab (11%) and snow crab (19%). As with observations from the Gulf of Alaska, mortality appeared to be related to size, with larger and smaller crabs having higher mortality rates on average than mid-sized crabs (D. Penguily, ADF&G, unpublished data). Immediate mortality of Tanner crabs from the 1996 Bering Sea scallop fishery was 12.6% (Barnhart and Sagalkin 1998). Delayed mortality was not estimated. In the analysis made for Amendment 41, a 40% discard mortality rate (immediate and delayed mortality combined) was assumed for all crab species.

So what are the population impacts of bycatch?

By applying mortality rates estimated from scientific observations to the number of crabs taken as bycatch, it is possible to estimate the relative impacts of bycatch on crab populations. Discard mortality rates have been established in previous analysis (NPFMC 1999), and may be species or fishery specific. Bycatch mortality rates in trawl, dredge, and fixed gear fisheries for all crab species were set at 80%, 40%, and 20% respectively. For crab fisheries, mortality rates were averaged across different fisheries. Rates used were 24% for C. opilio, 20% for C. bairdi, and 8% for blue king crab and red king crab. The following tables show the resulting discard mortality estimates, the estimated population size based on the NMFS trawl survey, and the percentage of the population removed due to bycatch mortality.

<table>
<thead>
<tr>
<th>Year</th>
<th>Bycatch (millions)</th>
<th>Mortality (%)</th>
<th>Abundance (millions)</th>
<th>Bycatch (%)</th>
</tr>
</thead>
<tbody>
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<td></td>
</tr>
<tr>
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<td>0.11</td>
<td></td>
</tr>
<tr>
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</tr>
<tr>
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</tr>
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<table>
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<tr>
<th>Year</th>
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<th>Mortality (%)</th>
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What about unobserved mortality?

In addition to those crabs that are captured as bycatch, fishing activities can also cause crab mortality in ways that cannot be directly observed. A summary of these potential unobserved mortalities are discussed below.

Crab Fishery

Catching mortality is ascribed to those crabs that enter a pot and are eaten by other pot inhabitants before the pot is retrieved. Catching mortality likely occurs during the molting period, when crabs are more susceptible to cannibalism. Most crab fisheries are set to occur outside of the molting season, and catching mortality in these fisheries may be limited to octopus or large fish entering a pot. Because no evidence of crab is left in the pot, these mortalities remain unassessed.

Mortality is also caused by ghost fishing of lost crab pots and groundfish pots. Ghost fishing is the term used to describe continued fishing by lost or derelict gear. The impact of ghost fishing on crab stocks remains unknown. It has been estimated that 10% to 20% of crab pots are lost each year (Meyer 1971, Kruse and Kimker 1993). Based on skipper interviews, about 10,000 pots were estimated lost in the 1992 Bristol Bay red king, and Bering Sea Tanner and snow crab fisheries (Tracy 1994). Fewer pots are expected to be lost under pot limit regulations and shorter seasons. Bob Schofield, a major crab pot manufacturer, testified at the January 1996 Council meeting that he was making fewer pots since inception of the pot limit. He estimated that 6,461 pots were replaced in 1995. It is not known how long lost pots may persist and continue to fish, or just litter the bottom.

A sonar survey of inner Chiniak Bay (Kodiak, Alaska) found a high density of lost crab pots (190 pots) in an area of about 4.5 km² (Vineng et al. 1997). Underwater observations indicated that crabs and fish were common residents of crab pots, whether or not the pot mesh was intact. Intact pots recovered from the Chiniak Bay study area often contained crabs (primarily Tanner crabs) and octopus. High (1985) and High and Worlum (1979) observed that 20% of legal sized male red king crab and 8% of the sublegals captured by lost pots failed to escape.

Crabs captured in lost pots may die of starvation or by predation. Captured crab are subject to cannibalism (Paul et al. 1993), and predation by octopus, halibut and Pacific cod (High 1976). Crabs may have limited abilities to withstand starvation. In a simulated field study, 39% mortality of Tanner crabs was observed after 119 days of starvation (Kimker 1994). In a laboratory study, 10% of the Tanner crabs tested died of starvation in 90 days. Of the 90% that had survived 90 days, all later died even though they were freely fed (Paul et al. 1993). However, highest survival rates for juvenile king crabs fed a variety of diets were from those treatments receiving no food, even for extended period of 3 to 4 months (Shirley, unpublished data). To reduce starvation mortality in lost pots, crab pots have been...
required to be fitted with degradable escape mechanisms. Regulations required #120 cotton thread from 1977-1993. Beginning in 1993, regulations required #30 cotton thread or 30-day galvanic timed release mechanisms. A #30 cotton thread section is also required in groundfish pots. The average time for #30 cotton twine to degrade is 89 days, and the galvanic timed release about 30 days to degrade. Pots fitted with an escape mechanism of #72 cotton twine had a fishable life of 3-8 years and documented retention of up to 100 crabs per lost pot (Meyer 1971). High and Wolund (1979) estimated an effective fishing life of 15 years for king crab pots. Pots without escape mechanisms could continue to catch and kill crabs for many years, however testimony from crabbers and pot manufacturers indicate that all pots currently fished in Bering Sea crab fisheries contain escape mechanisms.

Mortality of crab caused by ghost fishing is difficult to estimate with precision given existing information. Mortality caused by continuous fishing of lost pots has not been estimated, but unbaited crab pots continue to catch crabs (Breen 1987, Meyer 1971), and pots are subject to rebaiting due to capture of Pacific cod, halibut, sablefish, and flatfish. In addition to mortality of trapped crab by ghost pots, and predation by octopus and fish, pot mesh itself can kill crabs. Lost pots retrieved by NMFS trawl surveys occasionally contain dead crabs trapped in loose webbing (Brad Stevens, NMFS, pers. comm). Pot limits and escape mechanisms may have greatly minimized ghost fishing due to pot loss in recent years.

Another very minor source of human induced crab mortality is direct gear impacts. Direct gear impacts result from a pot landing on the ocean floor when it is being set, presumably damaging any crab on which it lands. With reasonable assumptions, direct gear impacts are only a very minor source of mortality, however. An estimate of this impact can be derived by multiplying the number of pot lifts, the area they occupy, and relative crab density within areas fished in the Bering Sea. Assuming that pots land on different areas after each lift, and crab pots are set non-randomly over areas with relatively high density of crabs in directed fisheries, the total number of crab impacted can be roughly estimated. For 1993 the red king crab fishery, assuming a density of 5,000 red king crab of all sizes per square mile (density data from Stevens et al. 1998), a maximum of about two thousand red king crab were impacted (NPFMC 1996). Similarly, a maximum of 9,000 Tanner crabs (assuming 10,000 crab/mile2) and 110 thousand snow crabs (assuming 75,000 crab/mile2) were impacted by direct gear impacts in respective crab fisheries in 1993. It is not known what proportion of these crab die when a crab pot lands on them.

Trawl Gear

Not all crabs in the path of a trawl are captured. Some crab pass under the gear, or pass through the trawl meshes. Non-retained crabs may be subject to mortality from contact with trawl doors, bridles, footrope, or trawl mesh, as well as exposure to silt clouds produced by trawl and dredge gear. Only a few studies have been conducted to estimate catchability of crabs by trawl gear, and these studies are summarized below.

In one experiment to measure non-observable mortality, 169 red king crabs were tethered in the path of an Aleutian combination trawl (Donaldson 1990). The trawl was equipped with a footrope constructed of 14 inch bobbins spaced every 3 feet, separated by 6.5 inch discs. Thirty-six crabs (21.3%) were recovered onboard the vessel in the trawl. Divers recovered 46.2% of the crabs not captured by the trawl. Another 32.5% were not recovered but assumed to have interacted with the trawl. Of the 78 crabs not retained in the trawl, but captured by divers, only 2.6% were injured. If all injured crabs die, the non-observable mortality rate for trawl gear on red king crabs is estimated at 2.6% (Donaldson 1990). It should be noted that hard shelled crabs were used in this experiment; higher impacts would be expected if softshelled crabs were tested. Additionally, some areas have had higher intensity of bottom trawling than other areas, thus potentially exposing some crabs to multiple interactions with trawl gear.
In 1995, NMFS used underwater video cameras to observe the interaction of trawl gear with king and Tanner crabs (Craig Rose, NMFS, unpublished data). The experiment was conducted in Bristol Bay in an area with large red king crabs and Tanner crabs. Three types of trawl footropes were examined and they are as follows: a footrope with 3-4 foot lengths of 6" discs separated by 10" discs (called disc gear), a footrope with 24" rollers (tire gear), and an experimental float/chain footrope with the groundgear suspended about 8" off the seafloor. For disc gear, preliminary analysis indicated that all red king crab encountered entered the trawl and about 76% of the Tanner crabs were caught. Tire gear captured fewer king crabs (42%) and Tanner crabs (1%). The float/chain gear did not catch any of the crabs encountered. At the December 1995 Council meeting, excerpts of the NMFS video were shown to the Council and public. Trawl industry representatives testified that groundgear used to harvest finfish in this area depended on target species and bottom type, with tire gear type footropes used in hard bottom areas, and disc type gear used on smooth bottom areas. Testimony also indicated that variability existed in groundgear used among vessels, but that on average, most gear used in Bristol Bay trawl fisheries would be comprised of groundgear with discs or rollers larger than the disc gear tested and smaller than the tire gear tested.

The NMFS underwater video observations were further analyzed to determine the proportion of red king crab that were injured by passage under bottom trawl footropes (Rose 1999). Injury rates of 5% to 10% were estimated for crabs that encountered, but were not captured, in the center section of the trawl.

REFERENCES


Hemlock, D.P. 1973. Sea scallop, Psethopecten catinus, investigations in Alaska. Alaska Department of Fish and Game, Division of Commercial Fisheries, Completion Report 5-23-R.


Law Revises Standards for Scientific Study

Agencies to Face Challenges on Health and Environment Research

BY ANDREW C. REVKIN

It does not even take effect until next Oct. 1. But a little-noticed law called the Data Quality Act, signed into the waning days of the Clinton administration, has set off a fierce debate over how best to weigh health and environmental risks.

The law, supported and largely written by industry-backed groups — requires the government for the first time to set standards for the quality of scientific information and statistics disseminated by federal agencies. It would create a system in every government agency under which the could point out errors in reports and regulations.

If it complains were true, the agency would have to explain the data from government Web sites and publications: More broadly, opponents of the new law say that while nobody wants the government to lie, the new regulation could undermine valuable government efforts to convey information on issues like climate change and cancer risks.

The National Academy of Sciences is convening a meeting today at which officials from government regulatory agencies, lawyers and experts from industry, science and environmental groups will discuss the law's potential for harm and good.

Even before the law takes effect, one of the groups that helped write it has already cited it in a petition requesting the withdrawal of a report regarding ozone.

The petition, sent to the Center for Regulatory Effectiveness, was in a Feb. 11 letter to the White House Office of Science and Technology Policy that a government assessment of the regional impacts of climate change is "alarmed" and based on flawed computer models.

If the center prevails, the study — the product of 10 years of work and criticism by independent scientists — could be removed from government Web sites and files. Many climate scientists, even some whose criticisms of early drafts were quoted in the center's petition, say the challenge is unjustified.

THURSDAY, MARCH 21, 2002

New York Times

A law passed quietly is facing loud debate on how rules evolve.

A law passed quietly is facing loud debate on how rules evolve.

parties, which are mainly emitted by diesel engines and power plants and have been linked increasingly to lung and heart ailments.

Many industry officials say the rule is too broad and the E.P.A. should first find which types of small particles are hazardous. Supporters of the regulation, which have not yet taken effect, say it would take years of additional study to pinpoint the exact hazard, but people are dying from such pollution now.

Senator James M. Jeffords, the Vermont independent who is chairman of the Senate environment committee, said the goal of the law is "legislatively necessary," but it should be written to benefit effective government.

Opponents of government action say the guidelines, instead of hastening...
The Data Quality Act was quietly enacted in December 2000 as 27 lines in a giant budget bill.

It required the government to create procedures for ensuring that scientific data and statistics disseminated by federal agencies are sound and useful. Agencies must distribute drafts of their science quality procedures by May 1 and send the final versions to the White House Office of Management and Budget by July 1. The Bush Administration will check to be sure that agencies meet its standards.

The effort is being overseen by Dr. John D. Graham, an expert on risk and regulation from Harvard who last year became the administrator of the Office of Information and Regulatory Affairs, the Office of Management and Budget. Dr. Graham has been using strict analytical methods to study the ways that federal agencies generate and analyze scientific data and has made him one of the leaders in the field.

He said that the administration's goal was to ensure that all government agencies, particularly those that issue regulations, use scientific data that is accurate, sound, and useful.

"The Data Quality Act is a step in the right direction," Dr. Graham said. "It requires agencies to be transparent and accountable in the way they use scientific data. This is a major step forward in ensuring that we have the best available information to make decisions that affect the public."

But overall, he said, he is concerned that "the data quality is not consistently good across agencies."

"Many experts on regulations say that if the guidelines are implemented properly, they could spur agencies to carefully and openly review the quality of the information they use to make decisions."

Currently, most agencies, including the EPA, have not yet implemented the requirements of the Data Quality Act. The Obama Administration is expected to release guidelines for implementing the act next month.

Dr. Graham said he is "determined to ensure that the government is using the best available scientific data to make decisions that affect the public."

"We need to make sure that the data we use to make decisions is accurate and reliable," he said. "This is a major step forward in ensuring that we have the best available information to make decisions that affect the public."

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COMMENTS AND RECOMMENDATIONS FOR CRAB RATIONALIZATION ELEMENTS AND OPTIONS FOR
THE NPFMC
Revised 4-12-02

Arni Thomson, Executive Director, Alaska Crab Coalition

- The ACC recommends the NPFMC send the draft analysis of Bering Sea Crab Rationalization Alternatives out for public review in preparation for NPFMC final action in June, 2002.

- The ACC supports the Advisory Panel motion of April 11, 2002, which incorporates refinements to the crab rationalization analysis.

RECOMMENDATION:
1. ACC has submitted substitute language for Option 2, 1.4.1, basis for initial allocation of QS. (See attachment). The AP has added the revised option and it is now option 4 in the AP minutes. The ACC revised language retains the link of quota share eligibility to the vessel upon which it was earned and allows for combining Amendment 10 catch histories of original and replacement vessels. In addition, it now incorporates the Belling Henkel sub option that allows for limited combining of Amendment 10 qualified LLPs. For situations of combined LLPs and initial eligibility for quota shares, vessel owners must choose the catch history, on a fishery by fishery basis, of one or the other vessel, but not both. This prevents double dipping on the initial allocation and maintains the one-boat one-history policy.

The discussion on page 284, paragraphs 2, and 3, substantiates the potential extent of the problem of dilution of quota shares to bona fide vessel owners if the requirement of a U.S. owned and documented vessel is not included for initial allocation. The staff analysis notes that the industry list (ACC) of non-U.S documented vessels submitted to the NPFMC, that 16 of 24 vessels on the list are qualified for permanent LLPs and 13 of those are over 165 feet in length and barred from reentry to the U.S. 13 of these are catcher processors. 6 vessels have interim permits. The impact of the ACC proposed option would prevent those U.S. persons holding the LLPs based on the catch of these vessels from utilizing the catch history of these vessels for stacking purposes. The ACC options would prevent eligibility and stacking of the catch history from these boats and other boats sold out of the fishery but that are still U.S. documented, regardless of stacking permitted by Amendment 10.

A NMFS LLP list (April 2, 2002, attachment), shows the Aleutian/Ocean Ballard group has 4 LLP sets, 3 stacked on the Aleutian Ballard and one, with no current vessel name identified. The Ballard group sold two vessels out of the fishery last year and retained the LLPs and fishing rights. The Seawind Fisheries group have 2 latent catcher processor sets on the record with no current vessel name, Adak Enterprise and American Empire. Both vessels are in Russia. The Seawind 2 (also in Russia) is no longer on the NMFS list. The Deep Sea Harvester is still registered on the NMFS list, but no current vessel name for it. This vessel is also in Russia. Two partners are both claiming rights for the Jacqulyn R, also in Russia. It would be significant if 2 sets of QS are issued for that vessel. ACC has reviewed the NMFS list carefully and to the best of our knowledge, ACC’s vessel requirement which allows for Amendment 10 replacement vessels does not impact any of the legitimate vessels. Previous concerns expressed in public testimony about replacement vessels such as the Pinnacle and Controller Bay have been dealt with in Amendment 10.

98.5% of the eligible vessels on the LLP data base have a straight-through continuous vessel catch history for all qualification periods. The uncertainties of the NMFS RAM appeals and adjudication process in regards to the implementation of Amendment 10 and the exemptions, which could eventually allow stacking and combining of up to 5-7% of catch history, leads the ACC to continue supporting Option 2.

2. COMMENT ON Option 1.7.2., Initial issuance of catcher processor quota shares:

ACC’s preferred option is 1.7.2.1.1 Catcher processors shall be granted CP QS in the same manner as catcher vessels. This option insures that CPs will receive equal amounts of catching and processing history, for the same qualifying period will be used for both catching and processing.

3. COMMENT, the need for clarification of the state voluntary cooperative program—6.1—page 288. It needs to be clear the voluntary cooperative is voluntary and that disincentives will not be required if vessel owners do not form coops. Vessel owners should want to join coops for reasons of efficiency. If the fleet is going with a two pie program to access ITQs, they need as much flexibility as possible and they need to keep costs down. Coop formation requires extensive legal fees. Groups of fishermen will likely voluntarily form coops with processors for efficiency, once they sort out who their markets will be.
4. **COMMENT ON preferred options for skippers and crew, elements 1.8.1**

   a. **Option 2, First Right of Refusal on Quota Shares Transfers, element 1.8.1, page 333:** The analysis now describes a serious program that could definitively aid skippers and crew to become vested quota share owners ("owners on board"). The provisions and guidelines are noted on page 333 and provide significant protection for insuring skipper and crew ownership of QS in the future. It is also clear to see that it will work quite well in tandem with a specially developed NMFS administered IFQ loan program, similar to the sablefish and halibut loan program. The Council crab rationalization committee report recommended both of these options for skippers, with the first right of refusal shares being capped at 10%.

   b. **Option 4, IFQ loan program, page 336:** Clarify that NMFS has provided the NPFMC with a report on the existing loan program and that report should be included as an appendix in the document. At this point the report is referred to as anecdotal information. I spoke with Mike Grable, NMFS, WA, DC about it and he said he would call the NPFMC about it, they did officially submit it. The report is very positive. It shows that over $18 million has been loaned out to fishermen from 1998 through 2001. The amount of the loans is split equally between Alaskans and non-residents from other states. Copies are available.

The combination of the low interest loan program and the right of first refusal after initial allocation, on 10% of the QS offered for sale will have an effect similar to the "owner on board" proposal. Captains and crew become invested owners in the fishery. Also, an estimated 35% of the skippers are already vested owners.

**COMMENTS on the issue of skipper allocations are noted below:**

- The ACC has six out of nine Board members that are skippers and they were operating vessels in the Bering Sea this winter. None of these skippers, nor other Board members support an initial allocation of quota share for skippers. However, they endorse the right of first refusal on 10% of the initial allocation of QS and the assessment for a skipper and crew IFQ loan program.

- ACC boat owners feel it is not fair and equitable for skippers to get allocations for free, with no vessel maintenance obligations and expenses. This will disrupt partnership shares and overall, dilute the partnership and corporate ownership shares in vessels. The average vessel gross stock revenue has decreased by two thirds since 1999, from almost $1 million per year to $330,000 the current fall and winter crab season. Vessel owners can ill afford any further diminution of their business equities. Allocating 10% - 20% of the quota share from a vessel to a skipper could equate to 25% of the net revenue.

- Several of the skippers involved in the Council process are already minority owners in vessels. The remainder of the skippers actively seeking skipper allocations have either made conscious decisions not to invest in vessels, as a matter of career and lifestyle choices, or, they have sold vessels in the past and in doing so, they have signed off on all fishing rights.

- Some of the skippers own 10-50% ownership in one vessel, while operating another vessel. A skipper allocation will enable the skipper to bring additional quota share from the boat he is operating to the boat he owns.

- Some skippers have turned down very reasonable buy-in offers because they other other priorities. It is common practice in the crab industry for vessel owners to invite skippers to invest in vessels at least at the 10% level. Numerous skippers have declined that option in preference for investments in other areas such as: real estate properties, Bristol Bay salmon boats and permits, and the stock market.

5. **RECOMMENDATION analyze an additional cap option between 1% and 5%-3% ownership cap. 1.6.3, page 5, AP minutes in the Bering Sea crab fisheries. Also, variable caps for different fisheries should be considered, particularly small GHL fisheries may warrant higher caps.**

6. **COMMENT, use caps present a very real problem in regards to achieving the benefits of Rationalization, namely reducing the fleet overcapacity. Use caps will defeat stacking and leasing. Elements 1.7.4, Page 226. Ownership caps should be the guide on use.**

7. **COMMENTS on conservation measures related to concerns about deadloss, catch accounting and incidental catch, elements 1.7.3. Element 1.7.3, options 1-2-3-4 all suggest a prohibition on discards. Related to this, refer to pages 140-144 and section 3.2.11, page 156. FMP issues to consider under rationalization. The issues of discards and size limits are category 3 management measures, reserved to the Board of Fisheries, and if placed under Council jurisdiction, which 1.7.3 implies, would require an FMP amendment to change it to a category 1 management measure. See minimum size limits discussion, page 158 and also the discussion under bycatch limits, page 160. It is advisable to leave these measures as category 3 measures in the FMP. The BOF members, ADFG and industry have been addressing these issues for many years and they have the expertise. These issues should be addressed following a presentation from ADFG.**
RECOMMENDATION: Consider recommending that options 1, 2, 3 and 4 be dropped from the analysis and replaced with a generic statement, whereby the Council would state their concerns and then recommend that "ADFG and BOF address the concerns of discards, bycatch, incidental catch and the need for bycatch reduction, improved in-season monitoring to coincide with implementation of a rationalization program."
(The AP added in the ACC language as a new option.)

8. COMMENTS on binding arbitration, element 2.8.3, and page 320 and Appendices 3-4A and 3-4B in the analysis. The benefit of final-offer arbitration implicit in the industry proposed model suits the crab industry, despite what the analysts say about it possibly increasing dispute rates. It is an expedited process, that can be conducted quickly to meet industry operation schedules. It also has a precedent in Newfoundland with the snow crab fishery.

RECOMMENDATION: Support the Council establishing a small industry work group to further flesh out the necessary mechanisms for a workable arbitration system.

9. COMMENT on sideboards, element 1.8.5. In regards to GOA crab fisheries the BOF has just established Superexclusive designations for Kodiak tanner crab and Chignik king and tanner crab fisheries. This designation will protect the small boat local fleets that now dominate the tanner crab fisheries that just reopened in 2001. There are over 200 vessels involved in the Kodiak tanner fishery now, and only an estimated 13 of these are BSAI qualified crab LLP vessels. The Bering Sea crab fleet has effectively been excluded from the GOA crab fisheries. It is also noteworthy that a petition has recently been submitted to the CFEC for limited entry in the Kodiak tanner crab fishery.

ACC supports the AP options for sideboards on BSAI crab boats in the GOA groundfish fisheries.

10. COMMENT ON Qualifying Periods for Determination of the QS Distribution: Elements 1.4.2.8, Western Aleutian Islands Adak king crab, the issue of the fisheries being appropriate for rationalization: Tables 3.3-12 for golden king crab, page 205 and Table 3.3-15 on page 209, Adak red king crab show the leading four vessels in both fisheries will share on average 16-22% of each of the golden king crab QS under any of the options, and 18.5-19.5% on average each of the Adak red king crab for either of the two qualifying periods under consideration. Due to confidentiality guidelines, ownership data that would enable projected allocations to be aggregated to show the actual distribution of allocations, is unavailable to analysts.

The net effect of rationalization of these two fisheries will be that up to 80% of the QS in each fishery will be controlled by four vessels. At least two of the top four vessels have QS in both fisheries, and two vessels are owned by one entity—which controls almost 50% of the QS in both fisheries. Two of the top four vessels are catcher processors. On the other hand, 19 additional golden king crab vessels and 22 additional red king crab vessels will share less than 20% of the remaining QS in each fishery.

RECOMMENDATION: The NPFMC should consider dropping Adak red king crab from the rationalization analysis to prevent allocation of excessive quota shares to four vessels.
1.2 Persons eligible to receive an initial allocation of QS must be:

* * *

Option 2 (revised):

A person, defined as a U.S. citizen that owns a MarAd certified and/or USCG documented BSAI crab vessel that (i) was used to satisfy the General Qualification Period (GQP) and Endorsement Qualification Period (EQP) landings requirements of the License Limitation Program (LLP), and (ii) either was used to satisfy the Recent Participation Period (RPP) landings requirement of Amendment 10 or meets the exemption requirements of Amendment 10; or (iii) a person who has purchased an LLP, with GQP, EQP, and RPP qualifications to remain in a fishery is eligible to obtain a distribution of QS on the history of either the vessel on which the LLP is based or on which the LLP is used, NOT both.

1.4.1

* * *

(b) Basis for QS distribution.

Option 2 (revised):

For eligibility criteria in paragraph 1.2, the distribution of QS to the LLP license holder shall be on a fishery-by-fishery basis. Such distribution shall be based on (i) the catch history of the vessel on which the LLP license and endorsements are used; or (ii) the catch history of the vessel from which the LLP license and endorsements were transferred to the vessel on which the LLP license and endorsements are used. For the purposes of this paragraph, vessels shall include those replaced in accordance with Amendment 10 to the LLP. With the exception of Amendment 10 replacement vessels, catch histories from different vessels shall not be combined for any single fishery, nor shall distribution of QS be based, in whole or in part, on any catch history of any vessel not lawfully U.S. documented and endorsed as a fishing vessel at the time such distribution is made. License transfers for purposes of combining LLPs must have occurred by January 1, 2002.
Rationale for Option 2 (revised)

Catch histories from different vessels should not be combined for any single fishery. To allow combination of catch histories for a given fishery in a quota program would treat very disproportionately the investments made in vessels, on the one hand, and paper histories, on the other. The investment in a vessel with a certain catch history far exceeds an investment in the same catch history simply transferred to another vessel. Therefore, it is fundamentally unfair, in a quota program, to distribute quota on a basis that treats these investments as though they were equal. Moreover, allowing combined catch histories in a single fishery would reward speculation on the future quota program, at the expense of others who invested in more than just paper. An obvious exception is presented by a replacement vessel qualified under Amendment 10, where combining two partial catch histories is essential.

It is true that the LLP provides for permit stacking. A collateral effect is, in some cases, the combination of catch histories from the same fishery. In a license limitation program, this accumulation of paper catch histories in one fishery does not dilute the investments of the vessel owners, because each continues to harvest whatever amount of crab that skill, resource conditions, fleet size, and so forth, allow in that fishery.
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- **M:** Crab Market
- **H:** Crab Harvesting
- **P:** Crab Processing
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- GP indicates that the license is for a processing facility.
- The notes column includes additional information about the license holder and the vessel's current status.
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*Note: CV stands for Crab Vessel, Interim indicates the license is not yet issued.*
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Table 3.3-12 shows the mean, median, and average of the four largest allocations under the different qualifying year options in the Western Aleutian Islands (Adak) golden king crab fishery. Figure 3.3-8 is a graph of the distribution in the fishery under the different options. The table and graph show substantial variation in the distribution of the allocations under the different options. The average allocation to the four leading vessels varies by more than 5 percent under the options, with the leading four vessels receiving an average allocation of more than 22 percent under Option 3A and an average allocation of slightly more than 16 percent under Option 1B. Options 1A and 1B include substantially more vessels in the allocation (22 vessels) than the other options (which include between 10 and 14 vessels in their allocations). The median (midpoint) of the allocation distribution is slightly larger under Options 3A and 3B (approximately 4 and 4.5 percent, respectively) than under the other options (all of which have a median of approximately 2.5 percent).

Table 3.3-12 Mean, median, and average of the four largest allocations under the different qualifying year options in the Western Aleutian Islands (Adak) golden king crab fishery

<table>
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<tr>
<th>Fishery</th>
<th>Mean</th>
<th>Median</th>
<th>Average of four largest allocations</th>
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<tr>
<td>Western Aleutian Islands (Adak) Golden King Crab</td>
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<tr>
<td>Option 1A-1992-1993 to 1998-1999 (All seasons)</td>
<td>0.045</td>
<td>0.022</td>
<td>0.170</td>
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<td>Option 1B-1992-1993 to 1998-1999 (Drop one season)</td>
<td>0.045</td>
<td>0.023</td>
<td>0.167</td>
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<td>Option 2A-1995-1998 to 1998-1999 (All seasons)</td>
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<td>0.025</td>
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<tr>
<td>Option 3A-1996-1997 to 1998-1999 (All seasons)</td>
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<td>Option 4A-1996-1997 to 2000-2001 (Best 4 seasons)</td>
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Source: NPFMC Crab Database 2001 - Version 1

Table 3.3-13 shows the mean, median, and average of the four largest allocations under the different qualifying year options in the Eastern Aleutian Islands (Dutch Harbor) golden king crab fishery. Figure 3.3-9 is a graph of the distribution in the fishery under the different options. The table and graph show more similarity in the allocations under the different options than in the Western Aleutian Islands (Adak) golden king crab fishery. The average allocation to the four leading vessels varies by at most 2.5 percent under the options, with the leading four vessels receiving an average allocation of almost 18 percent under Option 2A and an average allocation of almost 15.5 percent under Option 4A. The mean and median allocations, however, differ substantially under the different alternatives. The mean, which is a function of the number of vessels receiving an allocation, ranges from slightly more than 5 percent under Options 1A and 1B to slightly more than 9 percent under Options 3A and 3B. The median (or the midpoint in the allocation distribution) is approximately 1.5 percent under Options 1A and 1B and almost 9 percent under Option 3B. The reason for the low median allocation under Options 1A and 1B is likely that these allocation alternatives include additional vessels that receive relatively small allocations. The number of vessels receiving an allocation under the Options ranges from 11 under Option 3A and 3B to 19 under Options 1A and 1B.
Table 3.3.15 shows the mean, median, and average of the four largest allocations under the different qualifying year options in the Western Aleutian Islands (Adak) red king crab fishery. Figure 3.3.11 is a graph of the distribution in the fishery under the different options. The average allocation to the four leading vessels is similar under the different options, varying by slightly more than 1 percent. The median (midpoint) allocation differs by less than one-quarter of one percent under the two allocation options. Under both options allocations would be made to 28 vessels.

Table 3.3.15 Mean, median, and average of the four largest allocations under the different qualifying year options in the Western Aleutian Islands (Adak) red king crab fishery

<table>
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<td>Option 1B - 1992 - 1996 (Best 2 seasons)</td>
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Source: NPFMC Crab Database 2001 - Version 1

Figure 3.3.11 Allocation in the Western Aleutian Island Red King Crab Fishery

Allocation in the Western Aleutian Islands (Adak) Red King Crab Fishery (based on percentage of total allocation)

24Since this fishery has been closed since the 1995-6 season, no graph of the activity in the fishery is provided, and allocation estimates are based only on the percent of the total allocation.
Alternative 1: A CDQ group may operate a shoreside processing facility in a CDQ community without obtaining individual processor quota (IPQ) shares if the CDQ group owns at least fifty percent (50%) of the company:

Option 1: There is no limitation on the amount of crab the CDQ company can purchase and process.

Option 2: The amount of crab that the CDQ company can purchase and process at the facility is limited to no more than four percent (4%) of the TAC for that species for that year. The CDQ company may purchase and process at the facility more than the four percent subject to all other rules applicable to processor quota shares.

Sub-Option 1: Limited to CDQ communities that do not have a shoreside crab processing facility as of April 1, 2002.

Alternative 2: If a processor who owns IPQ shares transfers those shares outside of the community in which the shares were established, a CDQ group may process the same amount of crab at a shoreside processing facility in which it owns at least fifty percent (50%) in the community without the accompanying IPQ shares.

Alternative 3: A CDQ group shall have the right of first refusal to purchase any IPQ shares that may be for sale, providing the IPQ shares purchased shall only be used in a CDQ community at a shoreside processing facility that is owned at least fifty percent (50%) by the CDQ group that purchased the shares.

Alternative 4: In St. George, a CDQ group may process up to eight percent (8%) of the opilio TAC, providing it is processed at a shoreside facility that is owned at least fifty percent (50%) by the CDQ group. In Atka, a CDQ group may process an unlimited amount of the TAC for any Aleutian Islands crab fishery, providing it is processed at a shoreside facility that is owned at least fifty percent (50%) by the CDQ group.

Option 1: No IPQ shares may be processed at that facility.

Alternative 5: IPQ shares that are initially located in St. George may not be processed at any other location.
April 12, 2002

Agenda Item C-5
Recommendations for Conservation Elements in the Crab Analysis

AMCC remains concerned about the sequence of decisions for crab rationalization. The Council is making a decision about an economic model without complete evaluation of the conservation elements that should be part of such a major management change. The Crab FMP EIS is the place where a full analysis is intended to be done, yet that will be after the major economic decisions have been made.

However, given that we cannot change the sequence of decisions for crab, AMCC recommends the following:


   The reason to rationalize the crab fishery is to achieve better conservation of crab populations that are at extremely low abundance and in some case declared overfished. Yet the analysis does not contain clear objectives for conservation and the discussion is not conclusive about how conservation benefits will occur or how assumed benefits will be measured.

   • To the extent possible, the document should contain objectives for conservation. For example, it is widely accepted that longer soak times will result in a lot less discards. What goals do the Council and Board of Fisheries have for bycatch reduction?

   • The document should contain a more rigorous discussion about what will actually happen on the grounds in a rationalized fishery. Some of the issues discussed in the current draft may not represent real life. For example, to what extent will rationalization really lengthen the seasons or will the behavior of the fleet be more influenced by when processors are set up to accept deliveries? Are there conservation implications for season length that should be addressed?


   If the June document cannot contain a full conservation section with objectives, options and full analysis, then we urge the Council to ensure that the Crab FMP EIS does.

   • We urge the Council to collaborate with the Board of Fisheries on the EIS to 1) design conservation objectives, 2) develop options for how those objectives will be met and implemented by the Board, and 3) determine how success will be evaluated over time.
April 9, 2002

David Benton, Chair
North Pacific Fishery Management Council
605 W. 4th Ave.
Anchorage, AK 99501

Dear Chairman Benton,

Attached is a copy of the 500 Alaskans Open Letter to you, Governor Knowles and the Alaska congressional delegation and the petition signed by those 500 Alaskans. AMCC, and a continually growing number of Alaskans, are fully behind conservation and community goals for rationalization.

We remain extremely concerned about the economic model that would award quotas to processing corporations to buy and process Alaska’s crab and groundfish. We believe there are other and more appropriate ways to support the processing sector that will result in a dynamic and competitive industry open to innovation. As a matter of public policy, we are concerned about processing quota because of the controlling effects on markets, independent fishermen, coastal communities and the public process. We don’t think it is the government’s job to limit who can buy and process Alaska’s fish.

Sincerely,

Dorothy Childers
Executive Director
500 Alaskans for Protecting Alaska's Fishing Future and Our Coastal Communities

An Open Letter to Governor Knowles, Senator Stevens, Senator Murkowski and Congressman Young, and the North Pacific Fishery Management Council:

We call on the State of Alaska, Congress, and fishery managers to require clear standards for conservation and communities before any new individual fishing quota or other limited access programs are approved.

We oppose the award of processing quota because of the controlling effect on markets, fishing families, coastal communities, and the public process. Government should not limit to whom Alaska's independent fishermen can sell their catch.

I want our leaders to look out for the next generation of fishing families. Let's keep our livelihoods from going the way of the family farm.

Linda Bahkian, Sita P.W. Wegen

Choose Your Future

- If you care about the future of Alaska's coastal communities
- If you want to make sure independent Alaskan fishermen keep fishing
- If you want to protect independent fishermen and the fishery management system from being co-opted by large corporations...

Call or write to Gov. Knowles and our congressional delegation today. Urge them to ensure that future limited access fisheries meet conservation and community standards to: 1) ensure good stewardship, 2) protect opportunities for independent fishing families, and 3) preserve healthy competition among seafood processors. Processors and fishermen are both part of Alaska's seafood industry. But limiting who can buy fish by allocating processing quota will have controlling effects on markets, fishing families, and the public process. There are other ways to generate economic benefits for the processing sector. Let's look at alternatives that are good for all Alaskans!

ALASKA MARINE CONSERVATION COUNCIL
P.O. Box 10145 • Anchorage, AK 99510 • (907) 277-5337
www.akmarlinc.org

Alaska fisheries belong to the people. I want to see the next generation of fishermen work for their families and take care of our heritage.

Bob Stover, Unalaska

Sen. Knowles
(202) 224-5084
Fax (202) 224-5337

Sen. Stevens
(202) 224-5084
Fax (202) 224-5337

Sen. Murkowski
(202) 224-6685
Fax (202) 224-5337

Congressman Don Young
(202) 225-5963
Fax (202) 225-6425
500 Alaskans for Conservation and Communities
in the Development of
Future Individual Fishing Quota Programs

I join my fellow Alaskans in calling on Congress, the State of Alaska and fishery managers to require strong standards for conservation and community stability within any new individual quota or other limited access program.

I oppose the award of processing quota and government limitation of the number of processors because of the controlling effect on markets, fishermen, communities, and the public process.

Congress, the State, and fishery managers must ensure that conservation goals are met and that independent fishermen and coastal communities receive equitable treatment.

Fishery management programs that limit access to the public’s resource must:

- Reward clean fishing (promote low bycatch and minimize impact on ocean habitat)
- Create opportunity for future generations of independent fishermen
- Prevent excessive consolidation and vertical integration of the seafood industry
- Preserve healthy competition among seafood processors and prohibit processor monopolies
- Promote healthy community fishing economies and maintain diverse independent fishing fleets
- Recognize historic regional fishing and processing patterns
- Require good stewardship of the public’s marine resources as a condition for continuing participation in IFQ fisheries

(Petitions will be presented to Congress, Gov. Knowles & North Pacific Fishery Management Council)
AMCC opposes processor quotas

By DEANNA COOPER  
Mirror Writer

The Alaska Marine Conservation Council (AMCC) is calling on Alaska's leaders to advance fisheries conservation and protect the livelihoods of independent fishermen, in efforts now underway to privatize access to Alaska's federally managed fisheries.

According to their March 12 press release, the North Pacific Fishery Management Council is searching for management innovations to slow the pace of fishing, improve fishing practices, and maintain a healthy processing sector. Individual fishing quota programs, or IFQs, are high on the fishery managers' list of options for ending the race for fish.

One potential element of pending privatization plans is a proposal to compensate processors for their investments by awarding them with exclusive privileges in perpetuity to buy and process Alaska's fishery resources.

AMCC opposes this option.

Their call comes in the form of open letters to Gov. Knowles, the Alaska congressional delegation, and the North Pacific Fishery Management Council. The letters, which ran as ads in state newspapers on March 13, display the names of 500 Alaskans from coastal towns across the state in support of these goals.

"We are asking our leaders to consider the 500 Alaskans who are speaking with one voice from communities directly affected by decisions about Alaska's fisheries," said Dorothy Childers, AMCC executive director. "Most are people who are not flying to meetings and making regular trips to Juneau and Washington, D.C. They are diverse constituents whose views are not regularly heard by decision makers."

Awarding processing quota limits while independent fishermen may sell their catch. Alaskans are concerned that processing corporations will control markets, independent fishermen, communities, and ultimately the public process.

"Some Alaskans say they are concerned about vertical integration of the seafood industry in which processing companies would own the vessels, plants and markets while fishermen work for a wage," said Childers.

"Alaska's experience with this system was when canneries controlled the entire salmon industry. The need to overturn this "feudal system" was a driving force behind statehood in 1959," she said.

"IFQs, if designed right, can be tools for conservation management. But awarding processing quota is a dangerous idea that will take our fisheries down a path to control by corporations and a death spiral for independent fishing families," said Bob Storrs, Unalaska fisherman. "It might not happen right away — but it will happen — and our children will pay the price."

"AMCC recognizes that resolving problems faced by the processing sector could improve the overall business environment," Childers said. "We are asking State and federal agencies to sit down together, identify the needs, and craft appropriate solutions using all the tools available. It's not the government's job to limit who can buy Alaska's fish. It is the government's job to find ways to support the industry. We need Gov. Knowles to gather an array of people to explore options that are good for all Alaskans."
April 12, 2002

The Honorable Tony Knowles
Box 110001
Juneau, Alaska 99811-0001

Dear Governor Knowles,

As small independent processors and buyers of Alaska fishery resources we are concerned regarding imminent decisions to rationalize Alaska’s federally managed fisheries. In April, the North Pacific Fishery Management Council is scheduled to vote on a plan to limit access to Bering Sea crab fisheries. The Council will also decide whether or not to award processor quota, or the “two-pie” system, to companies currently involved in crab processing. After crab rationalization is decided, fishery managers will consider plans for groundfish fisheries.

As processors and buyers of Alaska fishery resources we oppose the “two-pie” system because of the impact this control would have on our ability to supply a diversity of product to our markets. We do not support a system that locks each fisherman to specific processors forever. The last time this happened was during Alaska territory days when a limited number of canneries controlled the salmon, the fishermen and the markets.

Please support us in our effort to preserve the competitive business environment that is central to a healthy economy. Alaskans and the State accrue tremendous benefits from our valuable fishery resources in the form of revenue and jobs. We need a healthy processing and harvesting sector for the seafood industry and fishing families to thrive in coastal Alaska. We believe there are alternative ways to support the processing sector in a manner that solves specific problems without limiting the companies to whom an independent fisherman can sell his catch.

Thank you for considering our concerns. We appreciate your help in guiding the State of Alaska through this important decision.

Sincerely,

Mike McCune
The Fish Factory
Homer

Kevin Hogan
The Auction Block
Homer & Seward

Dana F. Besecker
Fish Buyer
Homer & Seward

Jeff Berger
Deep Creek Packing
Ninilchik, Soldotna & Homer

Brad Faulkner
Alaska Custom Seafoods, Inc
Homer

Ken Quinn
Kachemak Fish Packers
Homer

Glen Carroll
Carroll Corp.
Homer

Mike Brooks
Brooks Alaska Seafoods
Homer

John Whiddon
Island Seafoods
Kodiak

Bob Scott
Salamatof Seafood’s
Kenai

Skip Winfree
Tenth and M Seafoods
Anchorage
COMMUNITY RESOLUTIONS
SUPPORTING CONSERVATION AND COMMUNITIES
IN RATIONALIZATION PROGRAMS
AND OPPOSING PROCESSOR QUOTA SHARES

APRIL 2002
RESOLUTION 02-16

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF SELDOVIA, ALASKA, SUPPORTING LOCAL INDEPENDENT FISHING FAMILIES AND COMMUNITIES BY OPPOSING THE ALLOCATION OF ALASKA FISHERY RESOURCES TO PROCESSORS’ "THE TWO PIE SYSTEM" OR OTHER FISHERY RESOURCE ALLOCATION PROGRAMS THAT CREATE A CLOSED CLASS OF PROCESSORS

WHEREAS, the City of Seldovia, hereinafter City, believes that the allocation of fishery resources to processors “the two pie system” will threaten the social and economic balance between independent fisherman and processors; and

WHEREAS, the City believes that any fishery resources allocation program, that requires exemptions to the anti-trust laws is bad for independent fishing family’s, coastal communities, seafood consumers; and

WHEREAS, the City recognizes the National Research Council’s recommendations concerning processor allocations contained in the 1999 report to Congress entitled, "Sharing The Fish: Toward a National Policy On IFQs, p 205 Recommendation: ... Nor did the committee find a compelling reason to establish a separate, complementary processor quota system (the two pie system); and

WHEREAS, the City believes that the allocation of Alaska fishery resources should include eligibility for coastal communities, independent fishermen, hired skippers, operators, and crewmembers that live adjacent to the resource; and

WHEREAS, the City believes that strong conservation goals with measurable reductions in by-catch and fisheries waste be an integral part of any rationalization program; and

WHEREAS, the City supports the inclusion of an independent review process of new rationalization program’s and a viable mechanism to adjust the system if the intent and/or goals of an implemented program are not being achieved; and

WHEREAS, the City believes that all Alaska coastal communities have the right to participate in the public process concerning all Alaska fishery resources issues;

NOW THEREFORE, BE IT RESOLVED that the City Council of the City of Seldovia, strongly urges the North Pacific Fishery Management Council, State of Alaska, and the United States Congress to support the conservation principles contained within this resolution and support local, independent fishing family’s, and coastal communities by opposing the allocation of Alaska fishery resources to processors “two pie system” or any other fishery resources allocation program that creates a closed class of processors.

PASSED AND APPROVED by a duly constituted quorum of the City Council of the City of Seldovia, Alaska, on this 23 day of January, 2002.

APPROVED: 
Susan H. Hecks, Mayor

ATTEST:

Sara M. Nichols, Clerk

02-16fishprocessors.npfinc.doc

14
CHIGNIK SEINERS ASSOCIATION

RESOLUTION 0303

A RESOLUTION OF THE CHIGNIK SEINERS ASSOCIATION SUPPORTING LOCAL INDEPENDENT FISHING FAMILIES AND COMMUNITIES BY OPPOSING THE ALLOCATION OF ALASKA FISHERY RESOURCES TO PROCESSORS "THE TWO PIE SYSTEM" OR OTHER FISHERY RESOURCE ALLOCATION PROGRAMS THAT CREATE A CLOSED CLASS OF PROCESSORS

WHEREAS The Chignik Seiners Association believes that the allocation of fishery resources to processors "the two pie system" will threaten the social and economic balance between independent fishermen and processors and,

WHEREAS The Chignik Seiners Association believes that any fishery resources allocation program that requires exemptions to the anti trust laws is bad for independent fishing family's, coastal community's, seafood consumers and,

WHEREAS The Chignik Seiners Association recognizes the National Research Councils recommendations concerning processor allocations contained in the 1999 report to congress entitled "Sharing The Fish: Toward a National Policy On IFQs" p 205 Recommendation: ...
Nor did the committee find a compelling reason to establish a separate, complimentary processor quota system (the "two-pie" system) and,

WHEREAS; The Chignik Seiners Association believes that the allocation of Alaska fishery resources should include eligibility for coastal communities, independent fisherman, hired skippers, operators, and crewmembers that live adjacent to the resource and,

WHEREAS The Chignik Seiners Association believes that strong conservation goals with measurable reductions in by-catch and fisheries waste be integral part of any rationalization program and,

WHEREAS The Chignik Seiners Association supports the inclusion of a independent review process of new rationalization program's and a viable mechanism to adjust the system if the intent and or goals of a implemented program are not being achieved and,

WHEREAS The Chignik Seiners Association believes that all Alaska coastal comminutes have the right to participate in the public process concerning all Alaska fishery resources issues.

NOW THEREFORE BE IT RESOLVED THAT The Chignik Seiners Association strongly urges the North Pacific Fishery Management Council, State of Alaska and the United States Congress to support the conservation principles contained within this resolution and support local independent fishing family's, and coastal comminutes by opposing the allocation of Alaska fishery resources to processors "the two pie system" or any other fishery resources allocation program that creates a closed class of processor

Passed by the Board of Directors of Chignik Seiners Association this day of March 14, 2002

Charles McCallum, Executive Director of Chignik Seiners Association
A RESOLUTION OF THE NORTH PACIFIC FISHERIES ASSOCIATION (NPFA) OF HOMER, ALASKA, URGING THE NORTH PACIFIC FISHERY MANAGEMENT COUNCIL, THE UNITED STATES CONGRESS AND THE STATE OF ALASKA TO REQUIRE STRONG STANDARDS FOR CONVERSATION AND COMMUNITY HEALTH BEFORE ANY NEW INDIVIDUAL QUOTA OR OTHER LIMITED ACCESS PROGRAMS ARE ADOPTED IN OUR FISHERIES RESOURCES IN ALASKA.

1. WHEREAS: The North Pacific Fisheries Assn. believes that strong conservation goals should be integrated into any new rationalization program and,

2. WHEREAS: The North Pacific Fisheries Assn. believes that a mechanism must be incorporated in a rationalization program so if the conservation goals are not met there is a means to change the program to meet the goals and,

3. WHEREAS: The North Pacific Fisheries Assn. believes that an independent review process needs to be incorporated into any new rationalization program and,

4. WHEREAS: The North Pacific Fisheries Assn. believes that any privatization program should include rewards to fisherman who convert to gear types that have low bycatch rates and minimal impact to the sea floor habitat and,

5. WHEREAS: The North Pacific Fisheries Assn. believes that any rationalization plan include measurable reductions in by-catch and fisheries waste and;

6. WHEREAS: The North Pacific Fisheries Assn. believes that good stewardship of the public's marine resources is a condition for continued participation in IFQ programs or other limited access programs and,

7. WHEREAS: The North Pacific Fisheries Assn. believes that any rationalization plan include viable entry-level opportunities to coastal community residents be incorporated and;

8. WHEREAS: The North Pacific Fisheries Assn. believes that the allocation of fishery resources be to independent fisherman, including hired skippers, operators, and crewmembers based on historic participation and.
9. WHEREAS: The North Pacific Fisheries Assn. believes that any new rationalization program should promote healthy community fishing economics and maintain diverse independent fishing fleets and.

10. WHEREAS: The North Pacific Fisheries Assn. recognizes the National Research Councils recommendations concerning processor allocations contained in the 1990 report to Congress entitled "Sharing The Fish: Toward a National Policy on TFO’s" p.205 Recommendation: ..."Nor did the committees find a compelling reason to establish a separate, complimentary processor quota system (the "two-pie system") and.

11. WHEREAS: The North Pacific Fisheries Assn. believes that the allocation of fishery resources to processors will threaten the competitive balance between independent fishermen and processors and,

12. WHEREAS: The North Pacific Fisheries Assn. believes that any privatization programs created should not require an exemption to federal anti-trust laws and.

13. WHEREAS: The North Pacific Fisheries Assn. believes that any rationalization plan include eligibility for coastal communities and.

14. WHEREAS: The North Pacific Fisheries Assn. believes any rationalization plan maintain a high level of participation in fisheries by active fisherman and.

15. WHEREAS: The North Pacific Fisheries Assn. believes that any rationalization plan include mechanisms to promote and maintain a high level of professionalism and.

16. WHEREAS: The North Pacific Fisheries Assn. supports a funding mechanism to adequately support management and enforcement requirements of these fisheries.

NOW THEREFORE BE IT RESOLVED: that the North Pacific Fisheries Association of Homer, Alaska strongly urges the North Pacific Fishery Management Council, State of Alaska, and the United States Congress to develop the above elements into standards for any rationalization plan to ensure that conservation and community stability are met when establishing new individual quota or other limited access programs for our fishery resources in Alaska.

Signed This Day November 29, 2001

[Signature]

Donald R. Lane, president
North Pacific Fisheries Assn.
Homer, Alaska
A RESOLUTION OF
THE ALASKA LONGLINE FISHERMEN'S ASSN.
URGING THE NORTH PACIFIC FISHERY MANAGEMENT COUNCIL, THE STATE OF
ALASKA AND THE UNITED STATES CONGRESS,

TO REQUIRE STRONG STANDARDS FOR CONSERVATION AND COMMUNITY HEALTH
BEFORE ANY NEW INDIVIDUAL QUOTA PROGRAM OR OTHER LIMITED-ACCESS
PROGRAMS ARE ADOPTED FOR OUR FISHERIES RESOURCES IN ALASKA.

WHEREAS: The Alaska Longline Fishermen's Assn. believes that strong conservation goals
should be integrated into any new rationalization program and,

WHEREAS: The Alaska Longline Fishermen's Assn. believes that a mechanism must be
incorporated so if the conservation goals are not met there is a means to change the program to
meet the goals and,

WHEREAS: The Alaska Longline Fishermen's Assn. believes that an independent review
process needs to be incorporated into any new rationalization program and,

WHEREAS: The Alaska Longline Fishermen's Assn. believes that any privatization program
should include opportunities for fisherman to convert to gear types which have low by-catch
rates and minimal impact on the sea floor habitat and;

WHEREAS: The Alaska Longline Fishermen's Assn. believes that any rationalization plan
should include measurable reductions in by-catch and fisheries waste and;

WHEREAS: The Alaska Longline Fishermen's Assn. believes that good stewardship of the
public's marine resources should be a condition for continuing participation in IFQ's programs or
other limiting access programs and,

WHEREAS: The Alaska Longline Fishermen's Assn. believes valid entry level opportunities for
future generations of independent fisherman must be included in any rationalization program
and,

WHEREAS: The Alaska Longline Fishermen's Assn. believes that the allocation of fishery
resources must include independent fisherman such as hired skippers, operators, and
crew members based on historic participation and,

WHEREAS: The Alaska Longline Fishermen's Assn. believes that any new rationalization
program must promote healthy community fishing economics and maintain diverse independent
fishing fleets.

WHEREAS: The Alaska Longline Fishermen's Assn. recognizes the National Research
Councils recommendations concerning processor allocations contained in the 1999 report to
congress entitled "Sharing The Fish: Toward a National Policy On IFQs" p 205
Recommendation: ..., "Nor did the committee find a compelling reason to establish a separate,
complementary processor quota system (the "two-pie" system)", and,

WHEREAS: The Alaska Longline Fishermen's Assn. believes that the allocation of fishery
resources to processors will threaten the competitive balance between independent fishermen
and processors and,
WHEREAS: The Alaska Longline Fishermen's Assn. believes that any privatization programs created should not create an exemption to federal anti-trust laws and,

WHEREAS: The Alaska Longline Fishermen's Assn. believes that any rationalization plan include eligibility for coastal communities and;

WHEREAS: The Alaska Longline Fishermen's Assn. believes any rationalization plan maintain a high level of participation in fisheries by active fishermen and;

WHEREAS: The Alaska Longline Fishermen's Assn. believes that any rationalization plan include mechanisms to promote and maintain a high level of professionalism and,

WHEREAS: The Alaska Longline Fishermen's Assn. supports a funding mechanism to adequately support management and enforcement requirements of these fisheries.

NOW THERE FOR BE IT RESOLVED: that the Alaska Longline Fishermen's Assn. strongly urges the North Pacific Fishery Management Council, State of Alaska and the United States Congress to developed the above elements into standards for any rationalization plan, to ensure that conservation and community stability are met when establishing any new individual quota, CO-OP or other limited access programs in our fisheries resources in Alaska.

Signed This Day November 30, 2001

______________________________
Steve Fish, Board Member
A RESOLUTION OF THE UNALASKA NATIVE FISHERMAN'S ASSN.
URGING THE NORTH PACIFIC FISHERY MANAGEMENT COUNCIL, THE STATE OF
ALASKA AND THE UNITED STATES CONGRESS, TO REQUIRE STRONG STANDARDS FOR
CONSERVATION AND COMMUNITY HEALTH BEFORE ANY NEW
INDIVIDUAL QUOTA PROGRAM OR OTHER LIMITED ACCESS PROGRAMS ARE
ADOPTED IN OUR FISHERIES RESOURCES IN ALASKA.

WHEREAS, The Unalaska Native Fisherman's Assn. believes that strong
conservation goals should be integrated into any new rationalization program; and

WHEREAS, The Unalaska Native Fisherman's Assn. believes that a mechanism
must be incorporated so if the conservation goals are not met there is a means to
change the program to meet the goals; and

WHEREAS, The Unalaska Native Fisherman's Assn. believes that an independent
review process needs to be incorporated into any new rationalization program; and

WHEREAS, The Unalaska Native Fisherman's Assn. believes that any privatization
program should include rewards to fisherman who convert to gear types that have low
by-catch rates and minimal impact to the sea floor habitat; and

WHEREAS, The Unalaska Native Fisherman's Assn. believes that any rationalization
plan should include measurable reductions in by-catch and fisheries waste; and

WHEREAS, The Unalaska Native Fisherman's Assn. believes that good stewardship of
the public's marine resources as a condition for continuing participation in IFQ's
programs or other limiting access programs; and

WHEREAS, The Unalaska Native Fisherman's Assn. believes valid entry-level
opportunities for future generations of independent fisherman be included in any
rationalization program; and

WHEREAS, The Unalaska Native Fisherman's Assn. believes that the allocation of
Alaska fishery resources should include independent fisherman including hired skippers,
operators, and crewmembers based on historic participation; and

WHEREAS, The Unalaska Native Fisherman's Assn. believes that any new
rationalization program should promote healthy community fishing economics and
maintain diverse independent fishing fleets; and

WHEREAS, The Unalaska Native Fisherman's Assn. recognizes the National Research
Council recommendations concerning processor allocations contained in the 1999
report to congress entitled "Sharing The Fish: Toward a National Policy On IFQs" p
105 Recommendation: ... "Nor did the committee find a compelling reason to
establish a separate, complementary processor quota system (the "two-piece" system)";
and

WHEREAS, The Unalaska Native Fisherman's Assn. believes that the allocation of
fishery resources to processors will threaten the competitive balance between
independent fishermen and processors; and
WHEREAS; The Unalaska Native Fisherman's Assn. believes that any privatization programs created should not require an exemption to federal anti-trust laws and, 

WHEREAS; The Unalaska Native Fisherman's Assn. believes that any rationalization plan include eligibility for coastal communities; and 

WHEREAS; The Unalaska Native Fisherman's Assn. believes any rationalization plan maintain a high level of participation in fisheries by active fisherman; and 

WHEREAS; The Unalaska Native Fisherman's Assn. believes that any rationalization plan include mechanisms to promote and maintain a high level of professionalism; and 

WHEREAS; The Unalaska Native Fisherman's Assn. supports a funding mechanism to adequately support management and enforcement requirements of these fisheries.

NOW THEREFORE BE IT RESOLVED, that The Unalaska Native Fisherman's Assn. strongly urges the North Pacific Fishery management Council, State of Alaska and the United States Congress to developed the above elements into standards for any rationalization plan, to ensure that conservation and community stability are met when establishing any new individual quota or other limited access programs in our fisheries resources in Alaska.

PASSED AND ADOPTED by the Unalaska Native Fisherman's Assn. this 27th day of January, 2002.

Unalaska Native Fisherman's Assn.

[Signatures]

Emil Berikoff, President

Bobby Storr, Vice President
RESOLUTION 02-1/25

A RESOLUTION OF THE VILLAGE COUNCIL OF CHIGNIK LAGOON ALASKA
SUPPORTING LOCAL INDEPENDENT FISHING FAMILIES AND COMMUNITIES BY
OPPOSING THE ALLOCATION OF ALASKA FISHERY RESOURCES TO PROCESSORS "THE TWO PIE SYSTEM" OR OTHER FISHERY RESOURCE ALLOCATION PROGRAMS
THAT CREATE A CLOSED CLASS OF PROCESSORS

WHEREAS The Chignik Lagoon Village Council believes that the allocation of fishery
resources to processors "the two pie system" will threaten the social and economic balance
between independent fishermen and processors and,

WHEREAS The Chignik Lagoon Village Council believes that any fishery resources allocation
program that requires exemptions to the anti trust laws is bad for independent fishing family’s,
coastal community’s, seafood consumers and,

WHEREAS The Chignik Lagoon Village Council recognizes the National Research Councils
recommendations concerning processor allocations contained in the 1999 report to congress
entitled "Sharing The Fish: Toward a National Policy On IFQs" p 205 Recommendation: "..." Nor did the committee find a compelling reason to establish a separate, complementary
processor quota system (the "two-pie" system) "and,

WHEREAS: The Chignik Lagoon Village Council believes that the allocation of Alaska fishery
resources should include eligibility for coastal communes, independent fisherman, hired
skippers, operators, and crew members that live adjacent to the resource and,

WHEREAS The Chignik Lagoon Village Council believes that strong conservation goals with
measurable reductions in by-catch and fisheries waste be integral part of any rationalization
program and.

WHEREAS The Chignik Lagoon Village Council supports the inclusion of an independent review
process of new rationalization program’s and a viable mechanism to adjust the system if the
intent and or goals of a implemented program are not being achieved and,

WHEREAS The Chignik Lagoon Village Council believes that all Alaska coastal communes
have the right to participate in the public process concerning all Alaska fishery resources issues.

NOW THERE FOR BE IT RESOLVED THAT The Chignik Lagoon Village Council strongly
urges the North Pacific Fishery Management Council, State of Alaska and the United States
Congress to support the conservation principles contained within this resolution and support
local independent fishing family’s, and coastal communes by opposing the allocation of Alaska
fishery resources to processors "the two pie system" or any other fishery resources allocation
program that creates a closed class of processor
RESOLUTION 02-06(S)

A RESOLUTION OF THE CITY COUNCIL OF HOMER, ALASKA SUPPORTING LOCAL INDEPENDENT FISHING FAMILIES AND COMMUNITIES BY OPPOSING THE ALLOCATION OF ALASKA FISHERY RESOURCES TO PROCESSORS "THE TWO PIE SYSTEM" OR OTHER FISHERY RESOURCE ALLOCATION PROGRAMS THAT CREATE A CLOSED CLASS OF PROCESSORS.

WHEREAS, Decisions made by State and Federal Elected Officials and Resource Management regarding this issue will have some of the largest effects on this region’s economy for many years to come; and

WHEREAS, Commercial Fishing has been a major basis of the Homer area economy for the last 80 years; and

WHEREAS, This area’s commercial fishing economy has survived major setbacks including fish stock changes and the fire loss and closing of the area’s major processor, but the area has still managed to be the Nation’s highest port in halibut landings, the last three years, as well as a significant port for other species; and

WHEREAS, This vitality is attributed to the resourcefulness and energy of area’s independent commercial fisherman and the City of Homer’s port structure that enhances these independent commercial fishing entities; and

WHEREAS, Any decisions made in these fisheries resources that allocates to processors is contrary to 80 successful years of an area and would have monumental effects on the area’s economy; and

WHEREAS, This area’s commercial fishing economy is similar to many other cities and areas of Alaska; and

WHEREAS, It is imperative to make decisions that don’t contribute to the current threat of recession; and

WHEREAS, The City of Homer believes that the allocation of fishery resources to processors “the two pie system” will threaten the social and economic balance between independent fishermen and processors; and

WHEREAS, The City of Homer believes that any fishery resources allocation program that requires exemptions to the anti trust laws is bad for independent fishing families, coastal communities, and seafood consumers; and

WHEREAS, The City of Homer recognizes the National Research Council’s recommendations concerning processor allocations contained in the 1999 report to congress entitled, “Sharing the Fish: Toward a National Policy On IFQs”, p 205 “Recommendation:…” Nor did the committee find a compelling reason to establish a separate, complementary processor quote system (the “two-pie” system); and
WHEREAS, The City of Homer believes that the allocation of Alaska fishery resources should include eligibility for coastal communities, independent fishermen, hired skippers, operators and crew members that live adjacent to the resource; and

WHEREAS, The City of Homer believes that strong conservation goals and measurable reductions in by-catch and fisheries waste be an integral part of any rationalization program; and

WHEREAS, The City of Homer supports the inclusion of an independent review process of new rationalization programs and a viable mechanism to adjust the system if the intent and/or goals of an implementation program are not being achieved; and

WHEREAS, The City of Homer believes that all Alaskan coastal communities have the right to participate in the public process concerning all Alaskan fishery resources issues.

NOW, THEREFORE, BE IT RESOLVED, that the City Council of Homer strongly urges the North Pacific Fishery Management Council, State of Alaska and the United States Congress to support the conservation principles contained within this Resolution and support local independent fishing families and coastal communities by opposing the allocation of Alaskan fishery resources to processors "the two-pie system" or any other fishery resources allocation program that creates a closed class of processor.

PASSED AND ADOPTED by the Homer City Council this 28th day of January, 2002.

CITY OF HOMER

ATTEST:

[Signature]
MARY L. CALHOUN, CMC. CITY CLERK.

Fiscal Note: NA
A RESOLUTION OF THE UNGA TRIBAL COUNCIL (NATIVE VILLAGE OF UNGA) SUPPORTING LOCAL INDEPENDENT FISHING FAMILIES AND COMMUNITIES BY OPPOSING THE ALLOCATION OF ALASKA FISHERY RESOURCES TO PROCESSORS "THE TWO PIE SYSTEM" OR OTHER FISHERY RESOURCE ALLOCATION PROGRAMS THAT CREATE A CLOSED CLASS OF PROCESSORS

WHEREAS, the Unga Tribal Council believes that the allocation of fishery resources to processors "the two pie system" will threaten the social and economic balance between independent fishermen and processors; and,

WHEREAS, the Unga Tribal Council believes that any fishery resources allocation program that requires exemptions to the anti trust laws is bad for independent fishing family's coastal community's seafood consumers; and,

WHEREAS, the Unga Tribal Council recognizes the National Research Councils recommendations concerning processor allocations contained in the 1999 report to congress entitled "Sharing The Fish: Toward a National Policy On IFQs" p. 205 Recommendation: "Nor did the committee find a compelling reason to establish a separate, complementary processor quota system (the "two-pie" system)"; and,

WHEREAS, the Unga Tribal Council believes that the allocation of Alaska fishery resources should include eligibility for coastal communities, independent fisherman, hired skippers, operators, and crewmembers that live adjacent to the resource; and,

WHEREAS, the Unga Tribal Council believes that strong conservation goals with measurable reductions in by catch and fisheries waste be integral part of any rationalization program; and,

WHEREAS, the Unga Tribal Council supports the inclusion of an independent review process of new rationalization program's and a viable mechanism to adjust the system if the intent and or goals of an implemented program are not being achieved; and,

WHEREAS, the Unga Tribal Council believes that all Alaska coastal communities have the right to participate in the public process concerning all Alaska fishery resources issues:
NOW THEREFORE BE IT RESOLVED THAT the Unga Tribal Council strongly urges the North Pacific Fishery Management Council, State of Alaska and the United States Congress to support the conservation principles contained within this resolution and support local independent fishing family's, and coastal communities by opposing the allocation of Alaska fishery resources to processors "the two pie system" or any other fishery resources allocation program that creates a closed class of processor.

Passed this 5th day of February 2002.

[Signature]
President

ATTEST:

[Signature]
Secretary
RESOLUTION 02-05

A RESOLUTION SUPPORTING LOCAL INDEPENDENT FISHING FAMILIES AND COMMUNITIES BY OPPOSING THE ALLOCATION OF ALASKA FISHERY RESOURCES TO PROCESSORS "THE TWO PIE SYSTEM" OR OTHER FISHERY RESOURCE ALLOCATION PROGRAMS THAT CREATE A CLOSED CLASS OF PROCESSORS

Whereas, The City of Chignik believes that the allocation of fishery resources to processors "the two pie system" will threaten the social and economic balance between independent fishermen and processors and,

Whereas, We believe that and any fishery resources allocations program that requires exemptions to the land trust laws is bad for independent fishing family's coastal community's seafood consumers and,

Whereas, We recognize the National Research Council recommendations concerning processor allocations contained in the 1999 report to congress entitled "Sharing The Fish: Toward a National Policy On IFQs" p.211 Recommendations. Nor did the committee find a compelling reason to establish a separate, complementary processor quota systems (the "two pie" System) and,

Whereas, We believe that the allocation of Alaska fishery resources should include eligibility for coastal communities, independent fishermen, hired skippers, operators, and crew members that live adjacent to the resource and,

Whereas, We believe that strong conservation goals with measurable reductions in by-catch and fisheries waste be integral part of any rationalization program and,

Whereas, We support the inclusion of a independent review process of new rationalization programs and a viable mechanism to adjust the system if the intent and or goals of implemented program are not being achieved and,

Whereas, We believe that all Alaska coastal communities have the right to participate in the public process concerning all Alaska fishery resources issues.
NOW, THEREFORE, BE IT RESOLVED, that the council of The City of Chignik strongly urges the North Pacific Fishery Management Council, State of Alaska and the United States Congress to support the conservation principles contained within this resolution and support local independent fishing family's and coastal communities by opposing the allocations of Alaska Fishery resources to processors' the two pie system' or any other fishery resources allocation program that create a closed class of processor.

Passed and approved by a quorum of the Council of the City of Chignik this 29th day of January, 2002.

Mayor.

ATTEST:

Richard J. Sharpe
City Clerk
Dear Chairman and Council Members:

Please consider the following proposals in your deliberations regarding the Bering Sea Crab Rationalization proposal. I would preface the following by clearly stating the Kodiak Island Borough Mayor and Assembly take no position for or against rationalization, as clarified by our previously submitted resolution, but present these items in the event a rationalization plan is approved. Our intent is to support our fishing based economy with a goal of common prosperity and a healthy community.

Coming from Kodiak, which is homeport to the biggest portion of the Alaskan Bering Sea crab fleet, and the 2nd largest processing sector in the state, we support other Alaskan communities who are just beginning to find their place in the fishing industry and are struggling to provide needed improvements.

However, we are faced with tremendous challenges locally. Our historic $125,000 salmon permits are going begging at $15,000, and nearly half our Salmon Seine fleet didn’t fish last year. We are down to 1 salmon cannery from 4 just a few years ago and have lost 1 multi-specie processors in the last year and another is in the process of shutting down.

Stellar Sea Lion closures have moved the bottom fish fleet into dangerous and unproductive waters that is now threatened with restrictions from Essential Fish Habitat proposals. Both the fleet and processing facilities are aging and struggling just to be maintained, let alone upgraded. Layoffs are increasing and economic productivity is down sharply, so it is imperative that we hang on to as much of our market share as we can to support the over 1 billion dollars invested in our community.

We recognize that Bering Sea Crab is an overcapitalized fishery and the pain of decapitalization will take place with or without further actions. Hopefully through your good counsel and guidance, we can look forward to a softer landing than the total collapse of crab that Kodiak suffered through in the early 80’s.

In light of these comments, please consider the following:

Section 2.3 Option 2. Initial allocation of processing quota shares

Should you utilize the 2-pie option we wish to emphasize the need to ensure recency in the form of calendar year 2000 for the processor sector, as to do otherwise would unfairly penalize Kodiak. A review of the history of landings for Kodiak will demonstrate that the proposed time frames for processor quota are the absolute worst for
Kodiak and in the interest of fairness, our long history with crab and the Federal Rule for recency and history, we would request you approval of the best 4 years from 1996-2000.

Section 3.2 Regional categorization
In order to be consistent, we would request the most recent years in Options 1 & 2 be changed from 1999 to 2000. We believe the sub option 3 of no designation to a region when the percentage is 0-8% should clarify that this is based on all species and we believe a low threshold on the order of 3% is necessary due to distortions from other factors.

Section 3.4 Option 1. Alternative Regionalization/Community Protection
We strongly support Community Protection mechanisms as a key component of the plan and would like to further clarify the definition of “eligible communities” to read:

“Eligible communities” shall be defined as any community that is a fishery based economy where 10% or more of the work force is directly employed in the harvesting and processing sector and the average of the ex-vessel crab landings during 1996-2000 exceeded 3% of the total ex-vessel landings.

In order to minimize conflicts and to address the concerns over the negotiations for processor quota leaving a community presented in the Council Review Draft of 1/22/2002, we would also propose for consideration that in the event of impasse, the parties will submit to binding arbitration in the same form and process as provided for in the program for harvesters under Section 2.8.3. This option should be incorporated into the tasks for the working group proposed by the AP.

Section 3.4 Option 2. Alternative Regionalization/Community Protection
We are opposed to Section 3.4 Option 2 for a variety of reasons, especially the ability to move within a region without a cooperative exit plan with the community. This proposal fails to adequately protect the huge investment communities have in providing infrastructure and support for processors.