

## BSAI Salmon Bycatch

### October 2007 staff discussion paper

The following paper provides a brief overview of the current suite of alternatives under consideration by the Council for the forthcoming salmon bycatch reduction amendment analysis. These alternatives include modifications made by the Council in June following the recommendations of the Salmon Bycatch Workgroup. Further recommendations from the Salmon Bycatch Workgroup following a meeting in August 2007 have not yet been incorporated into this description of alternatives pending Council action on the recommendations in October. Additional issues for clarification and refinement by the Council are included at the end of this paper. The action before the Council at this meeting is to further refine these alternatives.

The goal of this amendment package is to evaluate alternative means of salmon bycatch reduction measures, focusing on time area closures and salmon bycatch limits on the pollock fishery. Alternatives to be considered by the Council will include a range of closure configurations (fixed time/area closures and triggered time/area closures) as well as options for different means of establishing caps, both trigger caps (connected with a time/area closure or closure system) and a hard cap (upon attainment of which all pollock fishing must stop). Alternatives are intended to be formulated such that options for caps and closures may be selected by the Council (in crafting their preferred alternative) in conjunction with each other.

### ***Current Suite of Alternatives***

The following represents the suite of alternatives under consideration by the Council for the Salmon Bycatch amendment analysis. These alternatives were last revised by the Council in June 2007 following recommendations from the Council's Salmon Bycatch Workgroup. Council motions since October 2005 have now been formulated into NEPA alternative structure (alternatives, elements and options) for clarity.

Alternative 1: Status quo

Alternative 2: Establish new regulatory salmon savings systems.

Element 1: Hard cap

Element 2: Fixed closures

Element 3: Triggered closures

Element 4: Modify the PSC accounting period

Note that elements in elements 1-4 can be selected in conjunction with each other or separately. Elements 1, 2 and 3 have several different options which are described below.

### ***Element 1: Hard Cap***

Option A) Timing options

- 1- Annual cap
- 2- A season cap<sup>1</sup>
- 3- B season cap

Option B) Cap formulation based on:

1. Average historical bycatch;
  - a. 3 years
  - b. 5 years

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<sup>1</sup> Applies to Chinook only

- c. 10 years
2. Percentage increase of historical average
  - a. 3 years
  - b. 5 years
  - c. 10 years
3. Percentage increase of highest year
4. Set cap relative to salmon returns:
  - a. short term: link historic bycatch to in-river returns
  - b. long term: Use cumulative acceptable amounts for each river system, pending GSI information (i.e., identify what component of bycatch is from each river and what would be an acceptable amount of bycatch for each river. The cap would be the sum of the acceptable amounts for each of the rivers).
5. Incidental Take Permit amount<sup>2</sup>
6. International treaty considerations

Note that unless footnoted, all options apply to both Chinook and chum cap formulation)

## Discussion of options under Element 1

*Option A) Timing options:* The Council has indicated that separate seasonal caps as well as an annual cap will be considered. An A season hard cap, if reached, would presumably close the directed pollock fishery for the remainder of the A season. Since chum salmon are not caught in any great quantities during the A season, this cap would apply to Chinook salmon only. The fishery would then re-open to directed pollock fishing at the beginning of the B season. If a B season cap were reached, directed pollock fishing would cease for the remainder of the B season. An annual cap would begin to accrue at the start of the A season, and if reached would close fishing for the remainder of the year.

*Option B) Cap formulation options:* In refining alternatives in June 2007, the Council specified the types of formulations to be utilized in considering alternative hard cap numbers. Where methodology is only appropriate to Chinook the option is footnoted accordingly.

Option B-1 refers to a cap formulation based upon the average of historical bycatch numbers by a range of years. These numbers are the extrapolated numbers tabulated by the NMFS catch accounting system. For purposes of initial consideration, the “most recent year” is currently considered to be 2006. Option B-2 incorporates a percentage increase above the average historical bycatch amount for the same range of years as in option B-1. This option would provide for values higher than the average amounts in those years. Option B-3 similarly refers to a percentage increase over a specified value, this time it is a single year amount from the highest bycatch year to date over the time period under consideration by species. The percentage increase over the historical average and the highest year were evaluated for the Salmon Bycatch Workgroup’s consideration as estimated based on an evaluation of relative increase from the mean rate by year (75-100% greater than a given average) and by the relative increase from the highest numbers by year (10-20% higher than the highest year). These estimated ranges bracketed the variability over the time period under consideration. The workgroup recommended the use of different percentages for the relative increase. These recommendations are contained in the Salmon Bycatch Workgroup report.

Option B-4 refers to a cap level linked to the relative magnitude of salmon runs. This type of formulation could be established based on evaluating historical run-strengths, total bycatch mortality, and relative bycatch stock composition (i.e., the stock origins found in the bycatch).

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<sup>2</sup> Applies for Chinook only

The historical data used may be limited (for some runs the period of data availability may be short) and there is inherent variability in ocean survival, proportion of catch ascribed to runs, and salmon run sizes. To arrive at a science-based policy decision two steps should be considered: 1) defining a reference impact rate (i.e., mortality of run attributed to bycatch), and 2) defining “acceptable” probabilities that a cap will exceed the defined impact rate. For example, a cap could be determined based on analysis that showed: “there was a 10% chance that a cap level of  $x$  salmon will exceed an impact rate of 5%.” Analysts are currently investigating methods to formulate this type of cap. Ideally this formulation would result in an equation that could then be frameworked into regulations to allow for the use of annually updated information it becomes available. PSC cap regulations for BSAI species of crab and herring follow prescribed equations. For example, herring and snow crab caps depend on biomass estimates whereas red king crab and Tanner crab caps follow a stair-stepped function depending on discrete biomass levels. A similar approach can be developed for this alternative. Such a prescription requires that the inputs for the function are straightforward so as to avoid values that are discretionary in nature. Additional considerations on frameworking are included in the “Legal and Implementation Issues” section later in this paper.

Option B-5, the “Incidental Take Permit” amount refers to the revised threshold level for triggering a formal consultative process for endangered Chinook salmon species. This take permit amount is the level of Chinook catch in BSAI trawl fisheries below which no apparent harm is considered likely for those endangered species of Chinook salmon from WA/OR river systems. This number was revised following the 2006 consultation and is currently 87,500 fish. This limit option would be considered only for Chinook species. No equivalent threshold exists for chum salmon in the BSAI trawl fisheries.

Option B-6, the “international treaty considerations” is intended to reflect the bycatch levels agreed upon in formulation of the Pacific Salmon Treaty and specifically the Yukon River Salmon Agreement in 2001. While there is no hard number associated with this treaty amount, it could be inferred that bycatch numbers at the time of the signing of the agreement were intended to be reduced. Further clarification by the Council is necessary to define an appropriate means of addressing the intent of this option in the analysis.

## ***Element 2: Fixed Closures***

Option A)      Timing options

1. A season
2. B season

Option B)      Area options  
[TBD]

Option C)      Periodic adjustment for updated bycatch information

Note that options can be selected in conjunction with each other or separately.

## **Discussion of options under Element 2**

*Option A) Timing:* This option refers to two different possibilities for seasonal fixed closure options. The actual duration of the closure is to be determined based upon analysis of hot spot data. The options here only refer to the ability to establish fixed closures in either A season, B season or in both given that options may be selected in conjunction with each other.

*Option B) Area options:* Candidate closure areas have not yet been formulated but will be provided to the Council in conjunction with the process of refining alternatives as preliminary analysis of data to provide these closure options allows. Multiple fixed closure options and timing durations may be provided for consideration by the Council.

*Option C) Periodic adjustment:* This option refers to the original Council language in alternative development indicating the intent to “adjust the regulatory closure areas periodically based on the most current bycatch data available, such as the 2-3 year rolling average of bycatch rates by species and area”. Here the intent is that regulatory closure areas (and duration of closure timing) may be adjusted as information indicates a necessity for this. It is the understanding of staff that some frameworking of area closure may be possible in regulations provided clear criteria are specified for the establishment of an adjustment to the closure areas. This would allow for the modification of actual areas on an annual or multi-year basis. Further guidance on this will be provided by the agency.

### **Element 3: Triggered closures**

- Option A)      Timing options
1. A season
  2. B season
  3. Closure for remainder of season when triggered
- Option B)      Trigger cap formulation based on:
1. Average historical bycatch;
    - a. 3 years
    - b. 5 years
    - c. 10 years
  2. Percentage increase of historical average
    - d. 3 years
    - e. 5 years
    - f. 10 years
  3. Percentage increase of highest year
  4. Set cap relative to salmon returns:
    - g. short term: link historic bycatch to in-river returns
    - h. long term: Use cumulative acceptable amounts for each river system, pending GSI information (i.e., identify what component of bycatch is from each river and what would be an acceptable amount of bycatch for each river. The cap would be the sum of the acceptable amounts for each of the rivers).
  5. Incidental Take Permit amount<sup>3</sup>
  6. International treaty considerations
- Option C)      Area options [actual areas TBD]
1. Adjust area according to the number of salmon caught
  2. Single area closure
  3. Multiple area closures
- Option D)      Periodic adjustment for updated bycatch information

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<sup>3</sup> Applies for Chinook only

### Discussion of options under Element 3

Here a ‘trigger’ refers to a specific catch limit for salmon by species. The attainment of this trigger limit closes a designated area for a specified time period. The current regulatory salmon savings areas for Chinook and chum are triggered closures. The amount of the trigger as well as the duration and geographic extent of the closure are fixed in regulation. Under this element, different closure options are to be examined. Some flexibility in the specification of actual areas may be possible in order to be responsive to inter-annual variability.

*Option A) Timing:* This refers to different timing considerations in defining triggered area closure options. The options here refer to the ability to establish closures in either A season, B season or closures that when triggered may close for the duration of the year. The actual durations of the specific closures to be considered in the A season or the B season are to be determined based upon analysis of hot spot data.

*Option B) Cap formulation:* These options are similar in methodology to those listed in Element 1, option B, for hard cap formulation. The only difference between the two is in the implication of the cap (i.e. that it triggers an area closure not a fleet-wide fishing closure). The methodology for formulating the caps is identical.

*Option C) Area options:* Here there are three options for area closure configurations. The first refers to the intent in June 2007 by the Council motion to include in the alternatives the ability to: “Increase size and/or number of closure areas based on number of salmon caught (i.e., the more salmon are caught the more area closed); Decrease size and/or number of closure areas based on number of salmon caught (i.e., the fewer salmon are caught the more area opened)” (Council motion June 2007). Currently to address this idea, consideration is being given to an expanding area closure that would be stair-stepped to specific PSC limits by salmon species. Another possible means to address this would be to re-open closed areas according to a predetermined schedule of bycatch amounts by month (e.g. stair-step mechanism but with criteria specified such that if bycatch numbers do not exceed by X a certain date then specific areas may re-open for a specified time period). The remaining two options for area closures are to evaluate a large scale closure with a single trigger, or multiple area closures with either an aggregate trigger for all areas or individual triggers by specific areas.

The specific candidate areas for consideration under these options are being evaluated by analysts using a variety of methodological approaches. The SSC at this meeting will be reviewing and commenting on these approaches such that analysts may be able to provide actual candidate areas for each alternative at the December Council meeting in order to finalize the range of alternatives. Multiple triggered closure options and timing durations may be provided for consideration by the Council.

*Option D) Periodic adjustment:* This refers to the original Council language in alternative development indicating the intent to “adjust the regulatory closure areas periodically based on the most current bycatch data available, such as the 2-3 year rolling average of bycatch rates by species and area”. Here the intent is that regulatory closure areas (and duration of closure timing) may be adjusted as information indicates a necessity for this. It is the understanding of staff that some frameworking of area closures may be possible in regulations provided clear criteria are specified for the establishment of an adjustment to the closure areas. This would allow for the modification of actual areas on an annual or multi-year basis.

#### ***Element 4: Modify the PSC accounting period for salmon***

An additional consideration for the cap/closure system will be an option to modify the accounting year for the salmon biological year. This means that the accounting system for salmon species would begin in the B season and continue through the A season, i.e. accounting would begin in June and continue through May. The intention of this option is that it more closely tracks the salmon biological year whereby juvenile salmon (those primarily taken as bycatch) likely enter the Bering Sea in the fall to feed and remain on the grounds throughout the winter. This group then migrates to other locations during the summer months prior to beginning their return to the natal streams (those that are of spawning age) in the summer. Thus, the same cohort of salmon that are being caught in the B season remain on the grounds in the A season and any closure potentially triggered by high B season Chinook catch would protect the same age class of salmon from additional impacts in the A season. This is in contrast to the current accounting system whereby the catch accounting for salmon begins January 1 and tracks through December 31<sup>st</sup>. A closure which is triggered due to high rates of catch following the A season is then actually protecting a different cohort of salmon in the B season from those that triggered the need for protection following the A season.

This element could be applied to all of the cap closures under consideration. The analysis will then need to evaluate the implications of a change in the accounting system as it applies to each seasonal and annual cap. Cap formulation annually and by season would then consider the modification in accounting period (e.g. for those cap formulation options which depend upon average numbers or consideration of the highest year).

#### **Legal and Implementation Issues**

The Council is considering several trigger and area closure methodologies that raise legal and practical management issues associated with rulemaking and implementation. Recently, NMFS and Council staff met with NOAA GC and NMFS Inseason Management branch to discuss implications of these methodologies. This section summarizes those discussions. As the Council refines alternatives for analysis, staff will provide further input.

As described above, Elements 1 through 3 could include options to framework triggers or closures to accommodate recent salmon bycatch information. For example, Element 1 considers a hard cap that would be based on an equation promulgated in regulation, and incorporates information updated over some predetermined interval. In another example, Element 2 considers closure areas that are predetermined, and close when a predetermined trigger is reached. In this case, the closures could vary annually to the extent that salmon bycatch varies geospatially over time.

Analysis will undoubtedly include multiple permutations of these concepts, and NOAA GC is unable to provide specific guidance until alternatives are formulated. However, in general, NMFS may promulgate regulations that incorporate formulas or equations to determine closure triggers or caps, as long as there is no discretion to change the formulas or equations. Also, the data to be used in the formulas or equations must be clearly identified in regulations and readily verifiable. The data that is used in those formulas or equations may change based on new or recent information, but the formulas or equations may not change without further notice and comment rulemaking. Similarly, regulations may be promulgated that established a fixed network of predetermined closure areas and triggers. The areas that close could vary from year to year depending of whether triggers or caps are reached for each of the closure areas. Similar to the example provided above, NMFS does not have discretion to change the triggers or closure areas once they are implemented by regulations, even though the input data may vary over time.

The only method to change these triggers or closure areas would be through notice and comment rulemaking.

Framework equations are currently used to determine opilio tanner crab PSC management caps. For example, regulations at 679.21(e)(1)(iv)(A) state that the PSC limit for opilio crab caught by trawl vessels while engaged in directed fishing for groundfish in the COBLZ will be specified annually in the harvest specifications process using trawl survey information on the total abundance of opilio crab in the following framework equation:

*(A) PSC Limit. The PSC limit will be 0.1133 percent of the total abundance, minus 150,000 C. opilio crabs, unless;*

In this case, the Secretary has no discretion about the input variable of annual biomass, and the PSC limit within the COBLZ is determined annually through the specification process.

From a practical standpoint, however, the ability of inseason managers to provide responsive action to close areas when triggers or caps are reached is constrained. Currently, managers are able to provide notice that triggers for the chum and Chinook salmon savings areas have been reached, and close those areas according to regulation. However, a system of opening and closing fine scale areas based on biomass or rate based triggers is not workable. Fine scale closures such as those implemented under the Voluntary Rolling Hotspot closure system by industry cooperative agreements are not possible. Internal NMFS processes to issue a closure notice can take up to 6 days, and are staff intensive. Pollock cooperatives are much better positioned to quickly prohibit or allow fishing among their members through legal agreements in small areas based on the most current salmon bycatch information.

Additionally, depending on the size of the closure areas, data may not be reported in the scale necessary for NMFS managers to accurately determine bycatch rates or amounts. For example, salmon bycatch numbers for catcher vessels are reported at the trip level. Managers may not be able to determine salmon bycatch for specific fine scale geospatial areas.

In general, implementing triggers, caps, and closures that incorporate framework equations, and where the Secretary has no discretion to change the equations is possible. However, there may be practical constraints for NMFS inseason managers associated with the scale and timeliness of certain closure options. As the Council refines alternatives, NOAA GC and NMFS will continue to provide input.

### **Update on analysis of closure configurations and additional considerations for alternatives**

Analysts are currently investigating several different methodologies for proposed closure configurations. Analysis focuses on rates of salmon bycatch by area in the pollock fishery, absolute numbers of bycatch in the fishery by area in the pollock fishery and a cost-benefit scheme for optimizing closure configurations in conjunction with fishing opportunities. Based upon action by the Council at the June 2007 meeting, the following year combinations are the focus for analysis (both spatially and for catch limits): 2004-2006 (3 years); 2002-2006 (5 years); 1997-2006 (10 years). Consideration will also be given to bycatch numbers and rates reported preliminarily from the 2007 A season. The 2007 B season is currently underway and all bycatch estimates are too preliminary to be included in the analysis at this point.

Draft closure configurations will be provided for discussion purposes at the October Council meeting. At this time, the primary purpose is to examine the appropriate methodology to be employed in defining the closures, not to identify the specific area for consideration. Once a

methodology (or a variety of approaches) is approved, specific areas (as appropriate) will be put forward by analysts as candidates to be included in the alternatives. These closure configurations are intended as a starting point to assist the Council in refining alternatives for analysis. Closure configurations are currently being considered as either large scale closures (based upon a threshold criteria for a cutoff), and smaller scale, more numerous closures (based upon a threshold criteria for a cutoff). A range of closure configurations is intended to be included in the analysis. Closures may have separate triggers by area or an aggregate trigger for all of the closures.

One final consideration for bycatch avoidance measures that previously has been noted in discussions is the potential to evaluate clean fishing time periods and increase the ability of the fleet to fish during this timing. The SSC minutes from March 2007 following the Salmon Bycatch Workshop suggested the following for inclusion in the suite of alternatives for the forthcoming amendment package:

- *Temporal closures or adjustments to the fishing season based on seasonal differences in catch rates (e.g., modifying start or end dates of the A and B season.)*
- *Short “stand-down” periods to avoid high bycatch rates during certain hours of the day (based on diel patterns in catch rates resulting from vertical migrations of salmon). (SSC Minutes, March 2007)*

These ideas have not yet been brought forward into the alternatives under consideration in this analysis, but could provide an alternative to time/area closures which may allow for greater bycatch reduction. This could include adjusting the pollock fishing seasons; however this option likely would require formal consultation with NMFS Protected Resources given that the current pollock seasons and TAC apportionments (see attached table) are largely because of SSL protection measures. An FMP-level Section 7 consultation on the current SSL protection measures in the groundfish fisheries is currently on-going. The consultation and development of a draft Biological Opinion is scheduled for after completion of the draft Revised SSL Recovery Plan. The timing of incorporating these ideas (Change in season start or end dates and/or a stand-down period during the day) as alternatives for consideration could be integrated with the on-going consultation and could be potentially considered within that on-going work. The Council could refer this concept to its Steller Sea Lion Mitigation Committee and have that committee develop the alternative in concert with its current work on possible revisions to SSL protection measures. Alternatively, the season change alternative could remain part of this action and a separate consultation could be done if needed.

### ***Problem Statement***

In conjunction with refining alternatives, the Council may wish to modify its problem statement for the analysis at this time. The problem statement approved by the Council in October 2005 has not been modified. This problem statement was adopted at the time of final action on amendment 84, to exempt vessels participating in the VRHS system from regulatory salmon savings area closures. The current problem statement is as follows:

*The Council and NMFS have initiated action to exempt AFA qualified and CDQ vessels participating in the intercooperative voluntary rolling hotspot system (VRHS) from regulatory Bering Sea salmon bycatch savings areas. Analysis and refinement of the current salmon savings areas may be necessary in the event pollock vessels either surrender or lose their exemption and return to fishing under the regulatory salmon bycatch program.*

*Further, alternatives to the VRHS system and/or the regulatory salmon bycatch program should be developed to assess whether they would be more effective in reducing salmon bycatch. The*



*following amendment packages are not intended to preclude the intercooperative annual review as required under Amendment 84.*

The Council should consider the intent of the forthcoming analysis, specifically the Council goals in reducing bycatch and the benchmarks by which to measure bycatch reduction, and revise the problem statement accordingly to be consistent with this intent.

### ***Issues for clarification***

Given the issues noted in the previous discussion, the following are put forward as clarifications that could be addressed in conjunction with refining alternatives at this meeting. Some of these may be clarified by the Council in October while others may require agency and legal input for clarification.

1. Frameworking issues: closures and caps, some ability to framework but possibly limited by staffing ability (closures) and discretionary information (cap). Need additional clarification on how alternatives may be optimally formulated for frameworking ability.
2. Additional alternatives to consider incorporating: Changing pollock fishing dates, Stand down periods
3. Intended result of exceeding a cap: closure (time and area or to all fishing) for directed pollock fleet only for specified time period. What about mixed fisheries and incidental catch of pollock? Does bycatch from other fisheries accrue towards cap?
4. How will CDQ caps be defined?
5. Enforcement issues: Note that need input from enforcement during development of alternatives
6. Problem statement: refine problem statement in conjunction with alternatives. What is the Council's goal in adopting new measures, is it to reduce the rate of bycatch or the number of bycatch?

TABLE 3.—2007 AND 2008 ALLOCATIONS OF POLLOCK TACS TO THE DIRECTED POLLOCK FISHERIES AND TO THE CDQ  
DIRECTED FISHING ALLOWANCES (DFA)<sup>1</sup>  
[Amounts are in metric tons]

Area and sector	2007 Allocations	2007 A season <sup>1</sup>		2007 B season <sup>1</sup>		2008 Allocations	2008 A season <sup>1</sup>		2008 B season <sup>1</sup>
		A season DFA	SCA harvest limit <sup>2</sup>	B season DFA	B season DFA		A season DFA	SCA harvest limit <sup>2</sup>	B season DFA
Bering Sea subarea .....	1,394,000	n/a	n/a	n/a	n/a	1,318,000	n/a	n/a	n/a
CDQ DFA .....	139,400	55,760	99,092	83,640	131,800	52,720	36,904	79,080	
ICA .....	33,129	n/a	n/a	n/a	33,214	n/a	n/a	n/a	
AFA Inshore .....	609,796	243,894	107,726	366,841	576,493	230,597	161,418	345,896	
AFA Catcher/Processors <sup>3</sup> .....	487,788	195,115	136,581	293,473	461,195	184,478	129,134	276,717	
Catch by C/Ps .....	446,326	178,531	n/a	267,796	421,993	168,797	n/a	253,196	
Catch by CVs <sup>3</sup> .....	41,462	16,585	n/a	24,877	39,202	15,681	n/a	23,521	
Unlisted C/P Limit <sup>4</sup> .....	2,439	976	n/a	1,463	2,306	922	n/a	1,384	
AFA Mothership .....	121,947	48,779	34,145	73,368	115,299	46,119	32,284	69,179	
Excessive Harvesting Limit <sup>5</sup> .....	213,407	n/a	n/a	n/a	201,773	n/a	n/a	n/a	
Excessive Processing Limit <sup>6</sup> .....	365,841	n/a	n/a	n/a	345,896	n/a	n/a	n/a	
Total Bering Sea DFA .....	1,358,871	543,548	390,484	817,322	1,284,787	513,914	359,740	770,872	
Aleutian Islands subarea <sup>1</sup> .....	19,000	n/a	n/a	n/a	19,000	n/a	n/a	n/a	
CDQ DFA .....	1,900	760	n/a	1,140	1,900	760	n/a	1,140	
ICA .....	1,600	800	n/a	800	1,600	800	n/a	800	
Aleut Corporation .....	15,500	15,500	n/a	0	15,500	15,500	n/a	0	
Bogoslof District ICA <sup>7</sup> .....	10	n/a	n/a	n/a	10	n/a	n/a	n/a	

<sup>1</sup> Pursuant to § 679.20(a)(5)(I)(A), the Bering Sea subarea pollock, after subtraction for the CDQ DFA – 10 percent and the ICA – 3.25 percent, is allocated as a DFA as follows: inshore component – 50 percent, catcher/processor component – 40 percent, and mothership component – 10 percent. In the Bering Sea subarea, the A season, January 20–June 10, is allocated 40 percent of the DFA and the B season, June 10–November 1, is allocated 60 percent of the DFA. Pursuant to § 679.20(a)(5)(II)(B)(2)(i) and (ii), the annual AI pollock TAC, after subtracting first for the CDQ directed fishing allowance – 10 percent and second the ICA – 1,800 mt, is allocated to the Aleut Corporation for a directed pollock fishery. In the AI subarea, the A season is allocated 40 percent of the ABC and the B season is allocated the remainder of the directed pollock fishery.

<sup>2</sup> In the Bering Sea subarea, no more than 29 percent of each sector's annual DFA may be taken from the SCA before April 1. The remaining 12 percent of the annual DFA allocated to the A season may be taken outside of SCA before April 1 or inside the SCA after April 1. If 28 percent of the annual DFA is not taken inside the SCA before April 1, the remainder is available to be taken inside the SCA after April 1.

<sup>3</sup> Pursuant to § 679.20(a)(5)(I)(A)(4), not less than 8.5 percent of the DFA allocated to listed catcher/processors shall be available for harvest only by eligible catcher vessels delivering to listed catcher/processors.

<sup>4</sup> Pursuant to § 679.20(a)(5)(I)(A)(4)(ii), the AFA unlisted catcher/processors are limited to harvesting not more than 0.5 percent of the catcher/processors sector's allocation of pollock.

<sup>5</sup> Pursuant to § 679.20(a)(5)(I)(A)(6) NMFS establishes an excessive harvesting share limit equal to 17.5 percent of the sum of the pollock DFAs.

<sup>6</sup> Pursuant to § 679.20(a)(5)(I)(A)(7) NMFS establishes an excessive processing share limit equal to 30.0 percent of the sum of the pollock DFAs.

<sup>7</sup> The Bogoslof District is closed by the final harvest specifications to directed fishing for pollock. The amounts specified are for ICA only, and are not apportioned by season or sector.