

Bering Sea Non-Chinook Salmon PSC Management Measures EA: Agenda Item C-2(b)

Errata list for replacement pages. Note that the changes in the revised pages are due to the reorganization of the Alternative 3 options. These were modified to be consistent with the structure of Alternative 2 in the analysis however the revision was omitted in the description of alternatives and executive summary. These pages now contain the correct organization (where option 1a and 2a refer to B-season closures/caps and options 1b and 2b to June/July closures and caps). In addition to those primary changes, one figure which appears in both the Executive Summary and Chapter 5 (Figure ES-13 and Figure 5-101) has been revised from the previous version.

## **Executive Summary**

Pages 19-24; (xix-xxiii)  
39-40; (xi)

## **Chapter 2**

pages 51-54;  
57-58;  
63-64

## **Chapter 5**

Pages 353-354



Vessels participating in the RHS would operate under a different fishery level cap than any vessels not participating in the RHS. NMFS would continue to manage triggered area closures for vessels not participating in the ICA as described in status quo. Vessels participating in the RHS would be exempt from NMFS's area closures, and would instead be subject to the RHS closures.

The process currently used to monitor salmon bycatch and issue salmon savings area closures would continue for these closures. NMFS would have to determine whether a vessel was directed fishing for pollock and then match that vessel with its fishery component (CDQ or non-CDQ) or sector. NMFS currently uses a combination of VMS, industry reported catch information, and observer data to monitor vessel activities in special management areas, such as habitat conservation areas and species-specific savings areas (e.g., salmon savings area). These data sources are used by NMFS on a daily basis to monitor fishery limits. Information from VMS is useful for determining vessel location in relation to closure areas, but it may not conclusively indicate whether a vessel is fishing, transiting through a closed area, or targeting a particular species.

### **Component 2: Trigger closure areas and timing for RHS participants:**

In addition to the RHS, vessels in the RHS system would be subject to:

*Option 1: a trigger closure encompassing 80% of historical non-Chinook salmon PSC estimates.*

Suboption 1a) Trigger closure would apply for the B season (June-October; Figure ES-4)

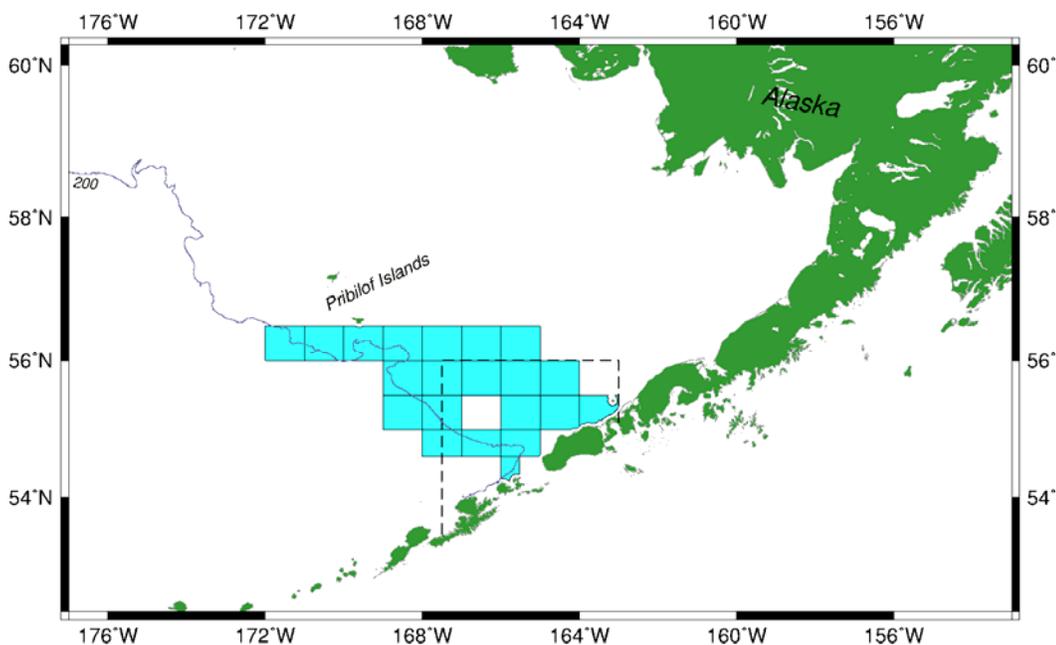


Figure ES-4. Selected area closures covering 80% of B season (Option 1a) 2003-2011 chum bycatch.

Suboption 1b) Trigger closure would only apply in June and July (Figure ES-4).

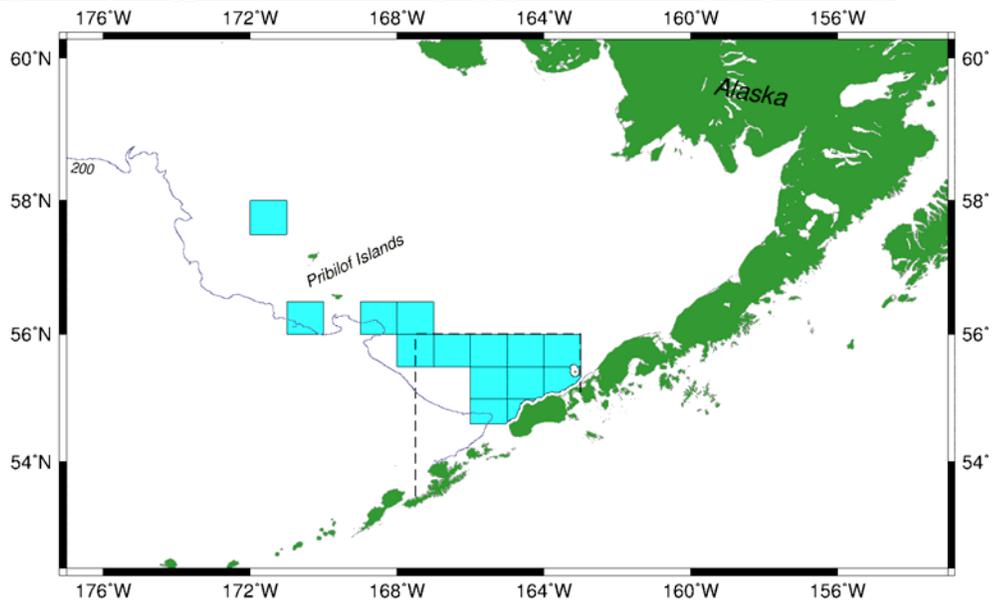


Figure ES-5. Selected area closures covering 80% of June-July (Option 1b) 2003 through 2011 chum bycatch.

*Option 2: a trigger closure encompassing 60% of historical non-Chinook salmon PSC estimates*

Suboption 2a) Trigger closure would apply for the B season (June-October; Figure ES-6).

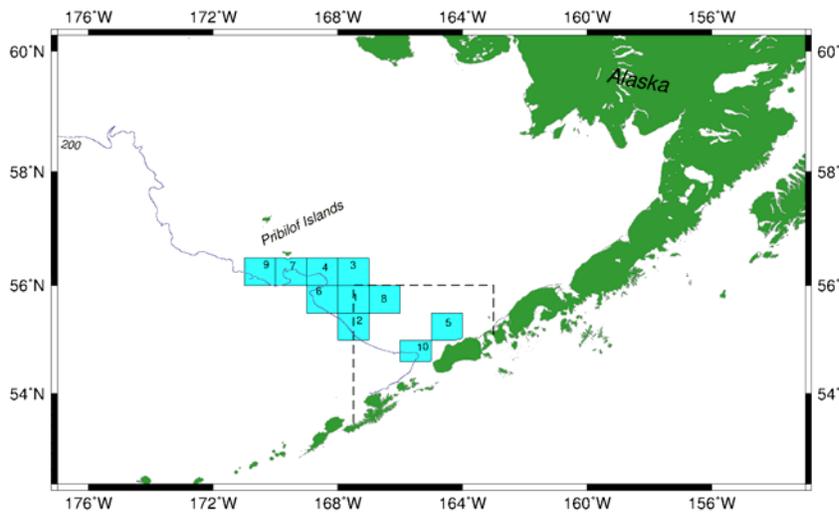


Figure ES-6. Selected area closures covering 60% of B season 2003 through 2011 chum bycatch.

Suboption 2b) Trigger closure would only apply in June and July (Figure ES-7).

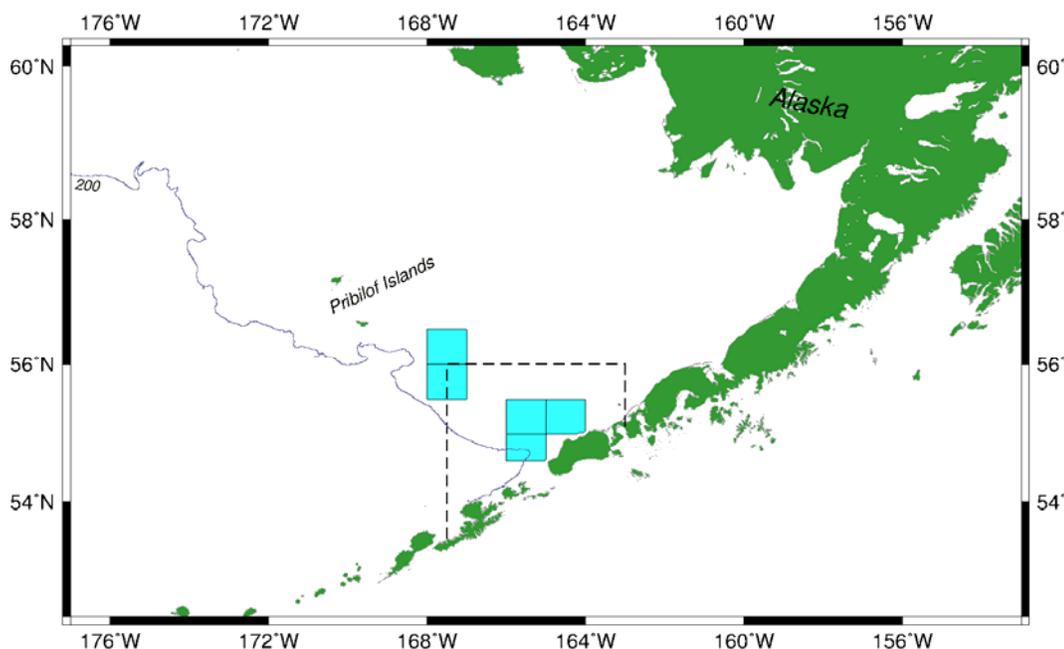


Figure ES-7. Selected area closures covering 60% of June-July 2003 through 2011 chum bycatch.

### Component 3: PSC cap levels for trigger closures for RHS participants

PSC cap level options for a given closure selected under Component 2 are shown below. Note that caps for both Option 1 and Option 2 under Component 2 are shown. If Suboption 1a or 2a is selected, then the June-July cap would reflect the proportion of bycatch in June and July.

Range of suboptions for trigger PSC cap levels for non-Chinook with allocations for CDQ (10.7%) and remainder for non-CDQ fishery for RHS participants.

	Total Annual cap (Option 1a or 2a)			June-July cap (Option 1b or 2b)		
	CDQ	Non-CDQ	Total June/July	CDQ	Non-CDQ	
1)	25,000	2,675	22,325	7,800	835	6,965
2)	50,000	5,350	44,650	15,600	1,669	13,931
3)	75,000	8,025	66,975	23,400	2,504	20,896
4)	125,000	13,375	111,625	39,000	4,173	34,827
5)	200,000	21,400	178,600	62,400	6,677	55,723

### Component 4 and 5 : Sector allocation of trigger cap for RHS participants and cooperative provisions

Sector allocation options and cooperative level provisions under Alternative 3 are the same as those listed under Alternative 2.

A summary of the Alternative 3 Components, option and suboptions for analysis is shown in below (Table ES-6).

Table ES-6. Summary of Alternative 3 components, options and suboptions.

<b>Component 1: Fleet PSC management with non-participant triggered closure</b>	Area	Triggered closure encompassing 80% of historical PSC. Participants in RHS would be exempt from the regulatory closure if triggered.				
	Option 1: cap	Select a cap from a range of numbers: 25,000 –200,000				
<b>Component 2: Trigger Closure area and timing for RHS participants</b>	<b>Option 1:</b> Area 80%	Triggered closure encompassing 80% of historical PSC for all RHS participants				
	Suboption a: timing	Applies to remainder of B season if triggered				
	Suboption b: Timing	Applies in June and July if triggered				
	<b>Option 2:</b> Area 60%	Triggered closure encompassing 60% of historical PSC for all RHS participants				
	Suboption a: timing	Applies to remainder of B season if triggered				
	Suboption b: timing	Applies in June and July if triggered				
<b>Component 3: PSC Cap levels for closure selected under Component 2 for RHS participants</b>	Option 1a: PSC cap established for B season closure	Select cap from range of numbers: 25,000 – 200,000				
	Option 1b: PSC cap established for June/July proportion	Select cap from range of numbers: 7,800 – 62,400				
<b>Component 4: Allocating the trigger cap to sectors</b>	Range of sector allocations*:	CDQ	Inshore CV	Mothership	Offshore CP	
	Option 1	10.0%	45.0%	9.0%	36.0%	
	Option 2ii	6.7%	63.3%	6.5%	23.6%	
	Option 4ii	10.7%	44.77%	8.77%	35.76%	
	Option 6	3.4%	81.5%	4.0%	11.1%	
<b>Component 5: Sector transfers and rollovers</b>	No transfers (Component 5 not selected)					
	Option 1	Caps are transferable among sectors and CDQ groups within a fishing season				
		<u>Suboption:</u> Maximum amount of transfer limited to:			a	50%
					b	70%
			c	90%		
Option 2	NMFS reallocates unused salmon PSC to sectors still fishing in a season, based on proportion of pollock remaining to be harvested.					
<b>Component 6: Inshore Cooperative Allocation and transfers</b>	No allocation	Allocation managed at the inshore CV sector level. (Component 6 not selected)				
	Allocation	Allocate cap to each inshore cooperative based on that cooperative's proportion of pollock allocation.				
	Option: Cooperative Transfers	Option 1	Lease pollock among cooperatives in a season or a year			
		Option 2	Transfer salmon PSC (industry initiated)			
		<u>Suboption</u> Maximum amount of transfer limited to the following percentage of salmon remaining:			a	50%
					b	70%
			c	90%		

## Comparison of Alternatives

The following section provides an overview of the three broad alternatives under consideration and the over-arching management measures that would be imposed under each.

Table ES-7 compares the three alternatives, the relative time frame of the management measures being considered by alternative or multiple options within alternatives where applicable, and the action under consideration. Both Alternatives 2 and 3 have options for a management action enacted in June and July only as compared to a similar action enacted for the entire B season. Note that the alternatives are not mutually exclusive thus measures for one alternative may be combined with those in another to form an additional alternative for consideration. For example, a June-July hard cap under Alternative 2 (Alternative 2, Component 1, Option 1b) could be combined with the B season closure to non-participants in the RHS system under Alternative 3 Component 1 to form a new management system that could be analyzed should the Council decide to mix and match amongst alternative components and options to tailor a specific program and objective for management.

Table ES-7. Comparison of over-arching management measures under the three alternatives considered in this analysis

Alternative	Timing	Management action		
1-Status quo	B season	Exemption to regulatory closure of CSSA (Fig. ES-2.) provided participation in current RHS program		
2-Hard cap	B season (Component 1, Option 1a)	Fishery sectors close for the season when sector-specific cap level is reached		
	June-July (Component 1, Option 1b)	Fishery sectors close until July 31 when sector-specific cap level is reached		
3-Closure area with RHS exemption	B season (Component 1)	<i>Closure area applies to</i> Non-participants of RHS program when <b>fishery level</b> caps <sup>1</sup> reached	<i>Closure Area</i> 80% of chum (Figure ES-3)	<i>Basis period</i> B season
	B season (Component 2, Suboption 1a)	Participants of RHS program when <b>sector-level</b> caps reached	80% of chum (Figure ES-5)	B season
	June-July (Component 2, Suboption 1b)	Participants of RHS program when <b>sector-level</b> caps reached	80% of chum (Figure ES-7)	June-July
	B season (Component 2, Suboption 2a)	Participants of RHS program when <b>sector-level</b> caps reached	60% of chum (Figure ES-7)	B season
	June-July (Component 2, Suboption 2b)	Participants of RHS program when <b>sector-level</b> caps reached	60% of chum (Figure ES-6)	June-July

## Managing and Monitoring the Alternatives

The observer and monitoring requirements currently in place to account for Chinook salmon bycatch under Amendment 91 also enable NMFS to monitor non-Chinook salmon bycatch under a hard cap. Therefore, NMFS does not anticipate changes to observer requirements or additional monitoring provisions under either Alternative 2 or 3.

If the Council allocates hard caps or trigger caps among sectors and cooperatives, NMFS recommends that any entities receiving allocations be the same as those used for Chinook salmon PSC allocations under Amendment 91. Consistent allocation categories for Chinook and non-Chinook salmon would

greatly simplify administrative functions for NMFS and the industry. Existing contracts and application to NMFS establishing these entities could be modified to incorporate the responsibility for receiving and managing non-Chinook salmon PSC allocations.

Area closures could be managed in a number of different ways, depending on the combination of components and options selected. Trigger closures would require a sector to stop pollock fishing in certain closure areas when its allocation of non-Chinook salmon PSC is reached. Depending on the selection of subsequent components in this alternative, salmon may be allocated at the fishery level (CDQ and non-CDQ), to each sector (inshore, mothership, catcher/processor, and CDQ), or among the inshore cooperatives.

Under Alternative 3, participants in the RHS would be exempt from the regulatory closure system. Monitoring and enforcement of this alternative is similar to status quo in which ICA members are managed under the RHS and NMFS closes the trigger area for non-ICA members.

The current census data collection program is highly responsive to management needs and provides timely data, especially considering the logistics of the sectors and variation in operation type. However, even with this highly responsive system, a June and July cap results in a very short time period for NMFS to monitor and insure a timely trigger area closure. NMFS would need to project non-Chinook salmon harvest during the week required to publish a *Federal Register* notice and get census information. These projections may result in a trigger closure being made prior to or after the cap being reached.

If the Council recommends a chum salmon bycatch management program under either Alternative 1 or Alternative 3 that provides exemptions to caps or area closures for participants in an approved ICA, NMFS will continue to require that the federal regulations contain sufficient detail to prevent later substantive revisions to the ICA that would reduce its effectiveness.

In addition, NMFS has determined that federal regulations for the RHS may not include specific requirements for the enforcement provisions or penalties that the ICA would impose on its participants. Therefore, in the future, under either Alternative 1 or Alternative 3, the Council could recommend that federal regulations require the RHS ICA to contain a description of the enforcement provisions and penalties that the ICA participants agree to assess on themselves for violation of the ICA provisions. However, the regulations could not include specific requirements for what these penalties must be.

The fishing industry will continue to incur costs associated with the administration of the RHS ICA. However, NMFS has not identified significant costs to the agency for managing or monitoring these alternatives. NMFS Office of Law Enforcement will provide additional information about the costs of enforcing Amendment 91 and the potential costs of the chum salmon bycatch alternatives prior to Council final action.

## Effects of the Alternatives

Quantitative analysis was completed on the potential impacts of the alternatives on chum salmon, pollock, Chinook salmon, and related economic analyses. Chapter 3 describes the methodology for the quantitative analysis. For the remaining resource categories considered in this analysis - marine mammals, seabirds, other groundfish, essential fish habitat, ecosystem relationships, and environmental justice - impacts of the alternatives were evaluated largely qualitatively based on results and trends from the quantitative analysis.

The estimated impacts of alternative chum salmon bycatch management measures were evaluated by examining when cap options would have resulted in fishery closures and then estimating the numbers of

Table ES-9. Combined chum salmon saved (AEQ) over years 2004-2011 for **Alternative 3**, by region for different cap levels (apportioned by sector and where appropriate in option 1b) and 2b) by June-July) and allocations. The second column lists the summed run-size estimates whereas the 3<sup>rd</sup> column are the summed AEQ mortality as estimated from 2004-2011.

Region	Run Estimate	Estimated AEQ	Cap	Option	Allocation configuration		
					2ii	4ii	6
Coastal WAK	39,233,000	193,649	25000	1a)	52%	51%	50%
				1b)	28%	27%	26%
				2a)	39%	40%	38%
				2b)	26%	25%	23%
			75000	1a)	41%	44%	43%
				1b)	29%	29%	28%
				2a)	28%	30%	32%
				2b)	26%	26%	26%
			200000	1a)	22%	26%	37%
				1b)	24%	26%	28%
				2a)	10%	11%	25%
				2b)	22%	24%	25%
Upper Yukon	8,454,000	106,722	25000	1a)	51%	51%	50%
				1b)	39%	38%	37%
				2a)	39%	40%	38%
				2b)	33%	33%	32%
			75000	1a)	40%	43%	43%
				1b)	37%	37%	37%
				2a)	27%	30%	32%
				2b)	32%	33%	33%
			200000	1a)	19%	23%	36%
				1b)	30%	32%	35%
				2a)	8%	9%	25%
				2b)	26%	28%	31%
Asia	NA	968,497	25000	1a)	50%	50%	50%
				1b)	0%	-2%	-5%
				2a)	40%	40%	40%
				2b)	2%	0%	-2%
			75000	1a)	43%	45%	45%
				1b)	4%	4%	2%
				2a)	34%	35%	36%
				2b)	5%	5%	4%
			200000	1a)	31%	33%	38%
				1b)	4%	4%	5%
				2a)	25%	26%	31%
				2b)	5%	5%	7%

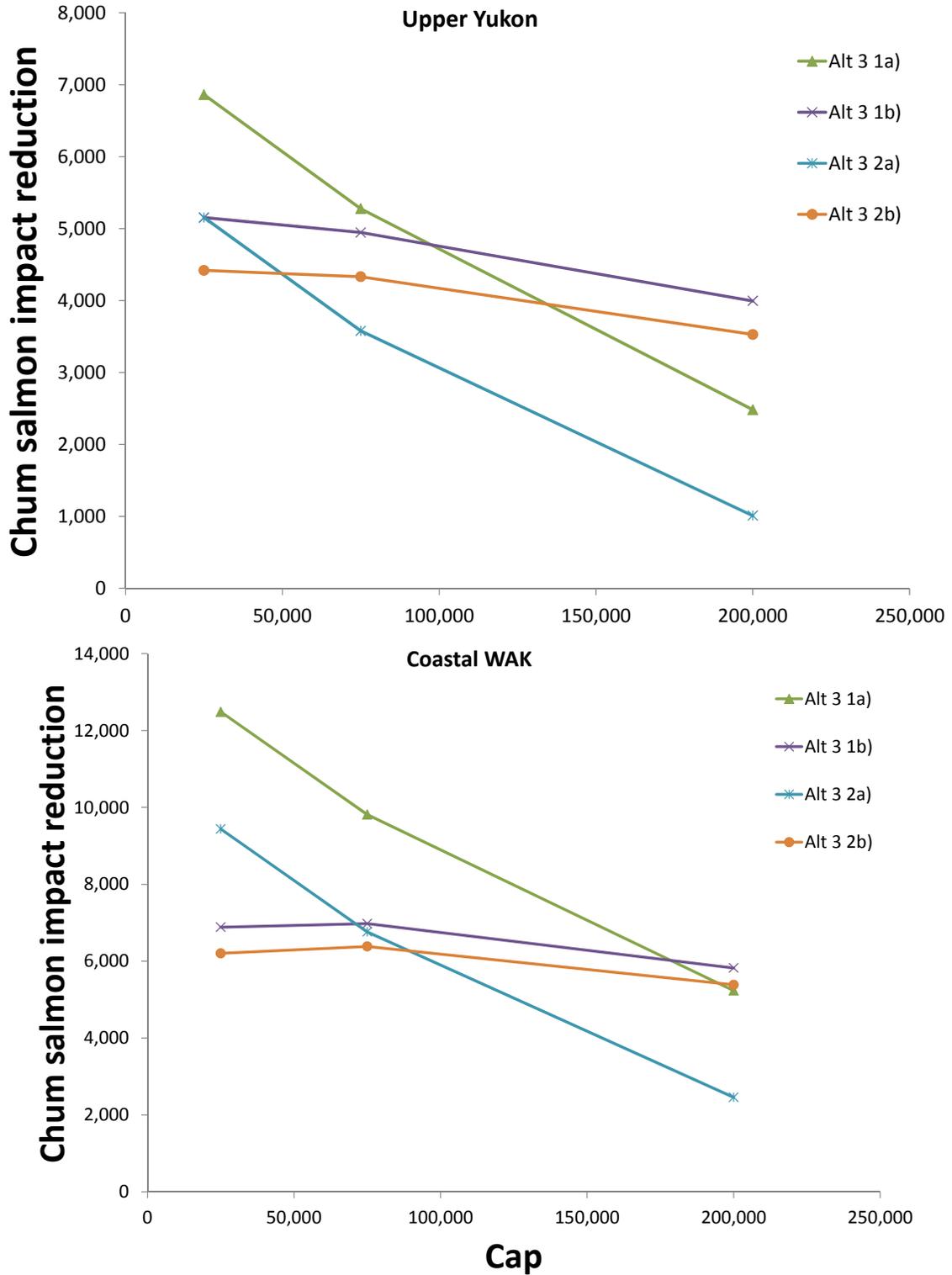


Figure ES-14. Average chum salmon impact reduction (AEQ) by suboption for Alternative 3, sector allocation 2ii, for years 2004-2011 for Upper Yukon (top) and Coastal WAK (bottom).

### 2.3.2 Component 2: Trigger closure areas and timing for RHS participants:

In addition to the RHS, vessels in the RHS system would be subject to:

*Option 1: a trigger closure encompassing 80% of historical non-Chinook salmon PSC estimates.*

Suboption 1a) Trigger closure would apply for the B season (June-October; Figure 2-3)

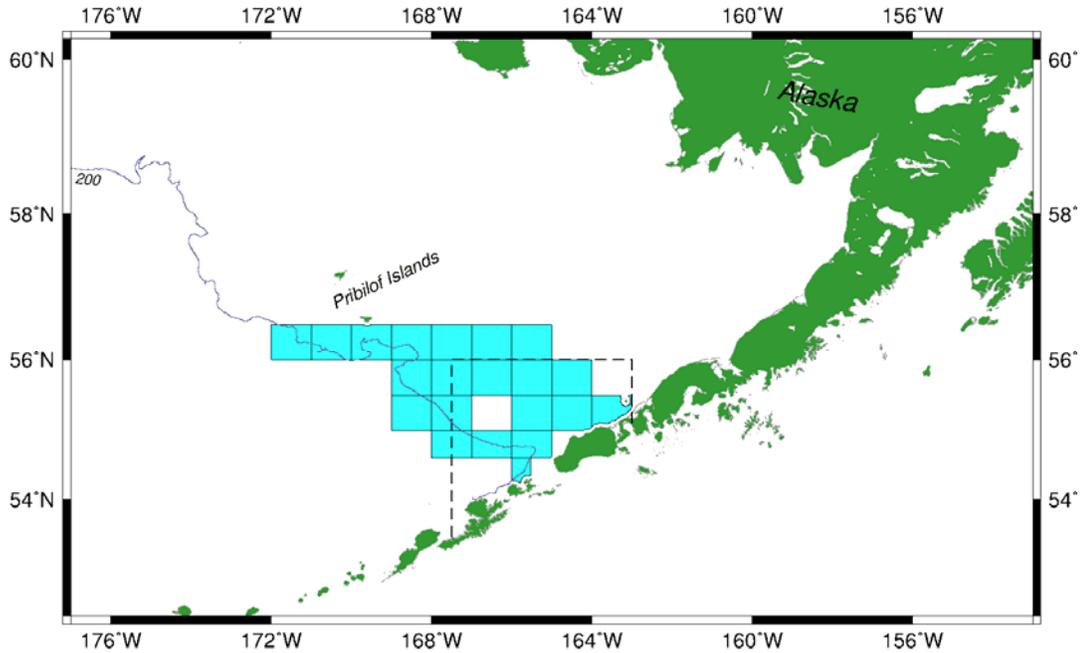


Figure 2-3. Selected area closures covering 80% of B season (option 1a) 2003-2011 chum bycatch.

Suboption 1b) Trigger closure would only apply in June and July (Figure 2-4).

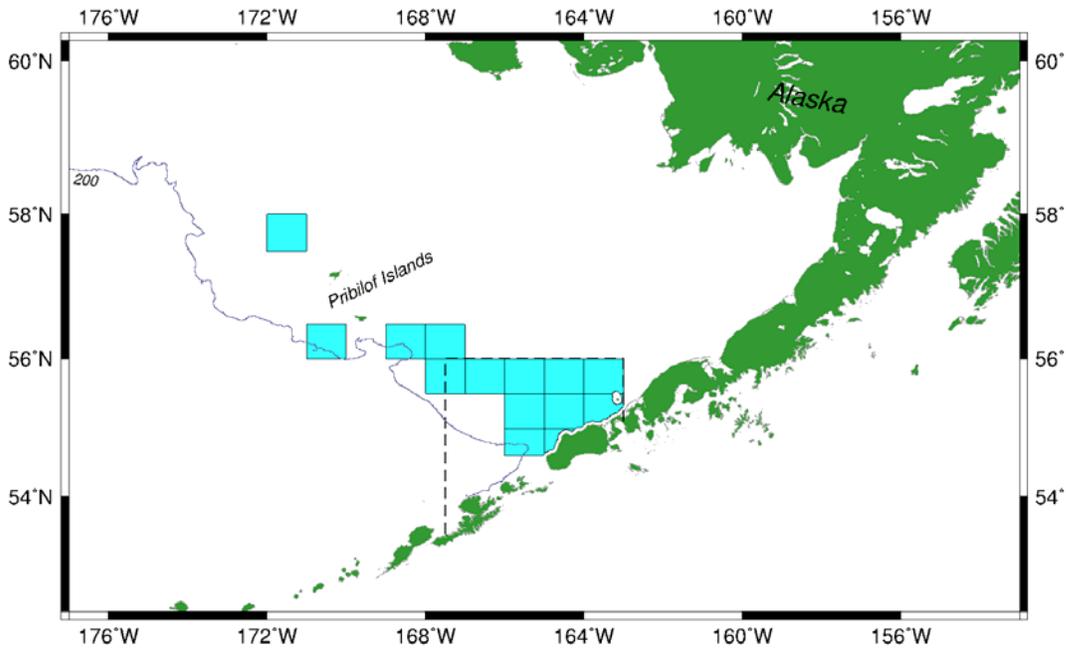


Figure 2-4. Selected area closures covering 80% of June-July 2003 (option 1b) through 2011 chum bycatch.

*Option 2: a trigger closure encompassing 60% of historical non-Chinook salmon PSC estimates*

Suboption 2a) Trigger closure would apply for the B season (June-October) (Figure 2-5).

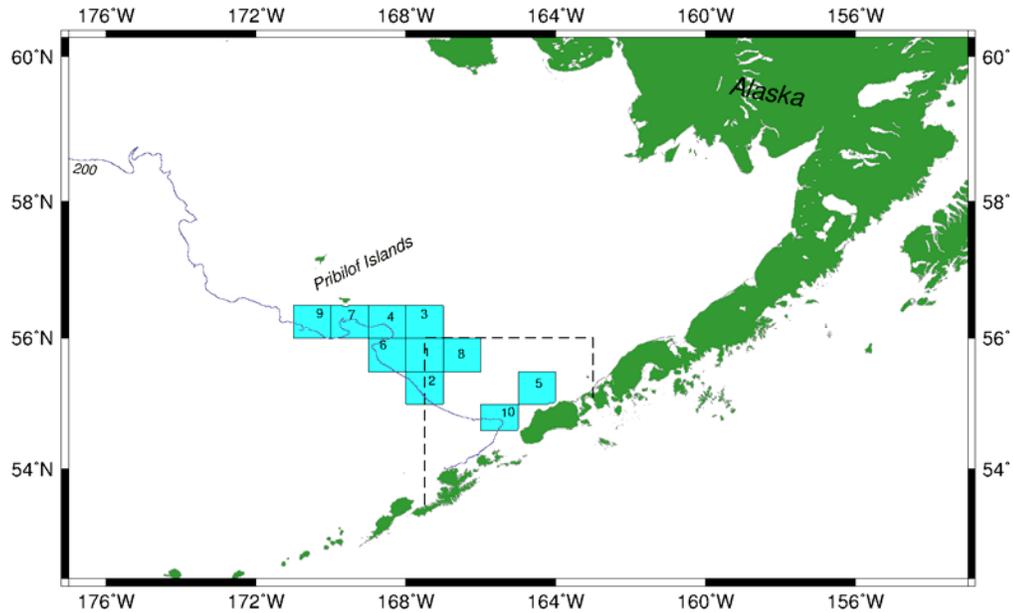


Figure 2-5 Selected area closures covering 60% of B season 2003 through 2011 chum bycatch.

Suboption 2b) Trigger closure would only apply in June and July (Figure 2-6).

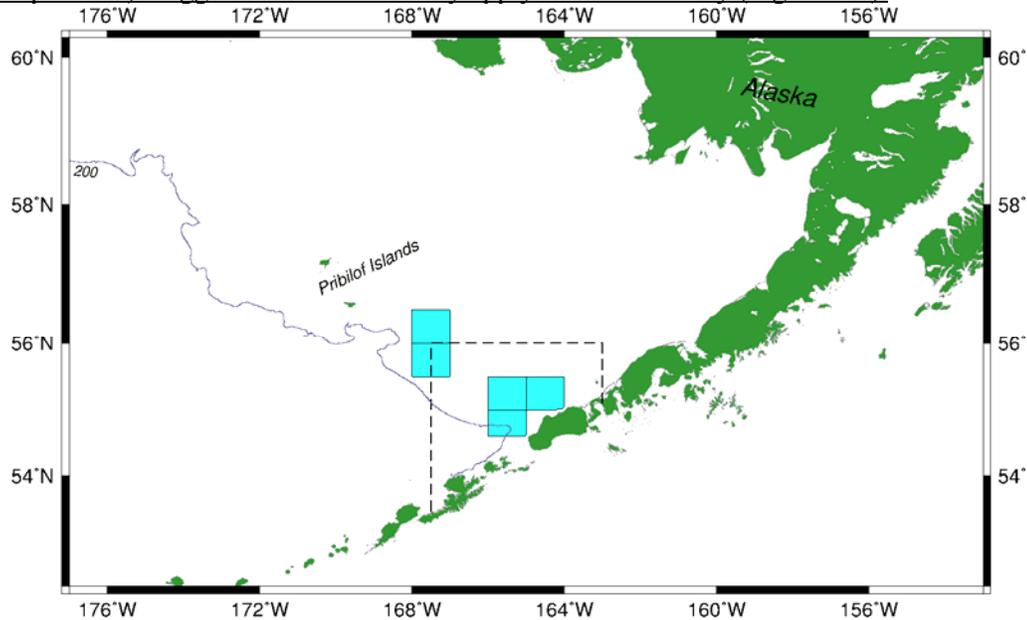


Figure 2-6. Selected area closures covering 60% of June-July 2003 through 2011 chum bycatch.

**2.3.3 Component 3: PSC cap levels for trigger closures for RHS participants**

PSC cap level options for a given closure selected under Component 2 are shown below. Note that caps for both Option 1 and Option 2 under Component 2 are shown. If Suboption 1a or 2a is selected, then the June-July cap would reflect the proportion of bycatch in June and July.

Range of suboptions for trigger PSC cap levels for non-Chinook with allocations for CDQ (10.7%) and remainder for non-CDQ fishery for RHS participants.

	Total Annual cap (Option 1b or 2b)	Total Annual cap		June-July cap (Option 1a or 2a)		
		CDQ	Non-CDQ	Total June/July	CDQ	Non-CDQ
1)	25,000	2,675	22,325	7,800	835	6,965
2)	50,000	5,350	44,650	15,600	1,669	13,931
3)	75,000	8,025	66,975	23,400	2,504	20,896
4)	125,000	13,375	111,625	39,000	4,173	34,827
5)	200,000	21,400	178,600	62,400	6,677	55,723

**2.3.4 Component 4: Sector allocation of trigger cap for RHS participants**

The trigger cap selected along with the applicable trigger closure under Component 2 could be allocated to the sector level. Sector allocations are identical to the options as shown under Alternative 2 Component 2.

If this component is selected, the trigger cap would be apportioned at the sector level. This would result in separate sector level caps for the CDQ sector, the inshore catcher vessel sector (CV) sector, the mothership sector, and the offshore catcher/processor sector (CP) sector. The management of sector allocations would be the same as under Alternative 2. Allocating salmon caps to individual sectors would increase the complexity of NMFS’s salmon bycatch monitoring efforts, as it would increase the number of salmon bycatch caps that NMFS would have to monitor.

The bycatch of non-Chinook salmon would be counted on a sector level basis. If the total salmon bycatch in a non-CDQ sector reaches the cap for that sector, NMFS would close directed fishing for pollock by that sector in the specific areas for the remainder of the season. The remaining sectors may continue to fish outside the closures until they reach their sector cap level. The CDQ allocations would continue to be managed as they are under status quo, with further allocation of the CDQ salmon bycatch cap among the six CDQ groups, transferable allocations within the CDQ groups, and a prohibition against a CDQ group exceeding its salmon bycatch allocation.

When a sector reaches its salmon bycatch cap, NMFS would close the area(s) selected to directed fishing for pollock by that sector for the remainder of the season. The remaining sectors may continue to fish in the area(s) until they reach their sector level salmon bycatch cap. Pollock fishing could continue outside of the closure areas until either the pollock allocation to the sector is reached or the pollock fishery reaches a seasonal or annual closure date.

If sector level caps under Component 4 are selected, but not selected are Option 1 (transfers) or Option 2 (reallocations) under Component 5, the sector level cap would not change during the year and NMFS would close directed fishing for pollock in the specified area once each sector reached its sector level cap. Because the CDQ sector level cap would be allocated to the CDQ groups, the CDQ allocations would continue to be managed as they are under status quo, with further allocation of the salmon bycatch trigger cap among the six CDQ groups, transferable allocations within the CDQ groups, and a prohibition against a CDQ group exceeding its salmon bycatch allocation.

### **2.3.5 Component 5: Sector level rollovers and transferability provisions**

Rollover and transferability options by sector are the same as listed under Alternative 2, Component 3 (see section 2.2.3).

**Option 1)** Allocate salmon bycatch caps to each sector and allow the entity representing each non-CDQ sector and the CDQ groups to transfer salmon bycatch cap among the sectors and CDQ groups.

**Suboption:** Limit transfers to the following: a) 50%, b) 70%, or c) 90% of available salmon bycatch cap.

**Option 2)** NMFS manages the sector level caps for the non-CDQ sectors and would reallocate unused salmon bycatch caps to other sectors still fishing in a fishing season based on the proportion of pollock remaining for harvest.

The two options under this component may be selected only if the trigger cap is apportioned among the sectors under Component 4. Options 1 and 2 are mutually exclusive, which means that either Option 1 to allow sector level transferable allocations or Option 2 to require NMFS to reallocate salmon bycatch from one sector to the other could be selected.

Under Option 1 caps are transferable among sectors and CDQ groups within a fishing season. If transferable sector allocations are selected, NMFS would not actively manage the pollock fisheries by issuing fishery closures once the trigger cap was reached for each sector. Rather, the trigger closures would be managed similar to current management of the trigger closures under the CDQ Program. Each sector would receive a transferable trigger cap allocation, and vessels participating in that sector would be prohibited from fishing inside the area(s) selected after the sector's trigger cap is reached.

Table 2-8 Summary of Alternative 3 components, options and suboptions

<b>Component 1: Fleet management with non-participant triggered closure</b>	Area	Triggered closure encompassing 80% of historical PSC. Participants in RHS would be exempt from the regulatory closure if triggered.				
	Option 1: cap	Select a cap from a range of numbers: 25,000 –200,000				
<b>Component 2: Trigger Closure area and timing for RHS participants</b>	<b>Option 1:</b> Area 80%	Triggered closure encompassing 80% of historical PSC for all RHS participants				
	Suboption a: timing	Applies to remainder of B season if triggered				
	Suboption b: Timing	Applies in June and July if triggered				
	<b>Option 2:</b> Area 60%	Triggered closure encompassing 60% of historical PSC for all RHS participants				
	Suboption a: timing	Applies to remainder of B season if triggered				
	Suboption b: timing	Applies in June and July if triggered				
<b>Component 3: PSC Cap levels for closure selected under Component 2 for RHS participants</b>	Option 1a: PSC cap established for B season closure	Select cap from range of numbers: 25,000 – 200,000				
	Option 1b: PSC cap established for June/July proportion	Select cap from range of numbers: 7,800 – 62,400				
<b>Component 4: Allocating the trigger cap to sectors</b>	Range of sector allocations*:	CDQ	Inshore CV	Mothership	Offshore CP	
	Option 1	10.0%	45.0%	9.0%	36.0%	
	Option 2ii	6.7%	63.3%	6.5%	23.6%	
	Option 4ii	10.7%	44.77%	8.77%	35.76%	
	Option 6	3.4%	81.5%	4.0%	11.1%	
<b>Component 5: Sector transfers and rollovers</b>	No transfers (Component 5 not selected)					
	Option 1	Caps are transferable among sectors and CDQ groups within a fishing season				
		<u>Suboption:</u> Maximum amount of transfer limited to:			a	50%
					b	70%
			c	90%		
Option 2	NMFS reallocates unused salmon PSC to sectors still fishing in a season, based on proportion of pollock remaining to be harvested.					
<b>Component 6: Inshore Cooperative Allocation and transfers</b>	No allocation	Allocation managed at the inshore CV sector level. (Component 6 not selected)				
	Allocation	Allocate cap to each inshore cooperative based on that cooperative’s proportion of pollock allocation.				
	Option: Cooperative Transfers	Option 1	Lease pollock among cooperatives in a season or a year			
		Option 2	Transfer salmon PSC (industry initiated)			
		<u>Suboption</u> Maximum amount of transfer limited to the following percentage of salmon remaining:			a	50%
					b	70%
			c	90%		

### 2.3.7 Management and Monitoring under Alternative 3

Area closures could be managed in a number of different ways, depending on the combination of components and options selected. Trigger closures would require a sector to stop pollock fishing in certain closure areas when its allocation of non-Chinook salmon PSC is reached. Depending on the selection of subsequent components in this alternative, salmon may be allocated at the fishery level (CDQ and non-CDQ), to each sector (inshore, mothership, catcher/processor, and CDQ), or among the inshore cooperatives.

Similar to status quo (rolling hot-spot [RHS] system in regulation), participants in the RHS would be exempt from the regulatory closure system. Monitoring and enforcement of this alternative is similar to status quo in which ICA members are managed under the RHS and NMFS closes the trigger area for non-ICA members. Monitoring and enforcement of the bycatch agreement under this alternative is done by Sea State using the Base Rate as a trigger for savings area closures and determining the tier assignment of the vessel. A description of management and monitoring by Sea State are contained under Alternative 1.

The observer and monitoring requirements currently in place to account for Chinook salmon bycatch under Amendment 91 would be the same methods to account for non-Chinook salmon bycatch. Therefore, NMFS does not anticipate changes to observer requirements or additional monitoring provisions under the closure with the RHS exemption alternative. Catch accounting would rely on the information described for Alternative 1 (status quo) in section 0.

The current census data collection program is highly responsive to management needs and provides timely data, especially considering the logistics of the sectors and variation in operation type. However, even with this highly responsive system, a June and July cap results in a very short time period for NMFS to monitor and insure a timely trigger area closure. NMFS would need to project non-Chinook salmon harvest during the week required to publish a *Federal Register* notice and get census information. These projections may result in a trigger closure being made prior to or after the cap being reached.

The U.S. Coast Guard has identified at-sea enforcement issues related to aerial surveillance for enforcing trawl closures. They note some issues in distinguishing between pelagic and non-pelagic trawl gear. This alternative would restrict only vessels using pelagic trawl gear (if their sector or cooperative level cap was reached) from directed fishing for pollock within the area closures. All directed fishing for pollock in the Bering Sea uses pelagic trawl gear only.

Due to the size of the Alaska region and the number of enforcement assets available, one of the most effective means of surveillance is by aircraft. While an aircraft can be used to identify the type of vessel (e.g., long line, trawl, seine, pot), there is no way for people in an aircraft to readily identify whether a trawl vessel is using pelagic or non-pelagic trawl gear.

Because of these definitions, the only time people in an aircraft would be able to determine whether a vessel was using pelagic or non-pelagic trawl gear would be if they witnessed a haul back and noted chafing gear on the foot rope or roller gear. By definition, this vessel would be using non-pelagic trawl gear. All other definitions used to identify whether a vessel is using pelagic or non-pelagic trawl gear must be conducted by a boarding team on the vessel.

#### 2.3.7.1 Recommended Revisions to the Current ICA Regulations

NMFS provides the following information and recommendations about current or future regulations governing the non-Chinook salmon bycatch reduction ICA. The regulations implementing Amendment 84 contain detailed requirements for the contents of the RHS ICA, including information about the participants (those parties signing the ICA and agreeing to abide by its provisions), specific bycatch

Friday through 6 p.m. A.l.t. the following Tuesday. The Monday notice must be effective from 6 p.m. A.l.t. the following Tuesday through 6 p.m. A.l.t. the following Friday. For any ICA Salmon Savings Area notice, the maximum total area closed must be at least 3,000 square miles for ICA Chum Savings Area closures.

UCB's comment on this requirement was:

This section should be re-written to more accurately describe the original intention of Amendment 84. While the twice weekly notices are required, ICA Chum Salmon Savings Area closures only occur if and when areas with bycatch in excess of the base rate, as described in paragraph (g)(2)(iii)(B), are identified. The sentence, "For any ICA Salmon Savings Area notice, the maximum total area closed must be at least 3,000 square miles for ICA Chum Salmon Area closures" is confusing and does not accurately reflect the original intention of the 3,000 square mile standard. The original intention was to assure that the ICA, not the notice, contain language that allows for the maximum areas available for a Chum Salmon Savings Area closure to be no less than 3,000 square miles. There was never an intention to require 3,000 square miles be closed by each notice as this sentence may be interpreted to mean.

NMFS was unable to address this comment in the final rule on Amendment 91 because it was outside of the scope of the analysis prepared for that action. In the response to comments, NMFS recommended that this issue be addressed during the Council's consideration of chum salmon bycatch management measures.

## 2.4 Comparison of Alternatives

The following section provides an overview of the three broad alternatives under consideration and the over-arching management measures that would be imposed under each. Table 2-9 compares the three alternatives, the relative time frame of the management measures being considered by alternative or multiple options within alternatives where applicable, and the action under consideration. Both Alternatives 2 and 3 have options for a management action enacted in June and July only as compared to a similar action enacted for the entire B season. Note that the alternatives are not mutually exclusive thus measures for one alternative may be combined with those in another to form an additional alternative for consideration. For example, a June-July hard cap under Alternative 2 (Alternative 2, Component 1, Option 1b) could be combined with the B season closure to non-participants in the RHS system under Alternative 3 Component 1 to form a new management system that could be analyzed should the Council decide to mix and match amongst alternative components and options to tailor a specific program and objective for management.

Table 2-9 Comparison of over-arching management measures under the three alternatives considered in this analysis

Alternative	Timing	Management action		
1-Status quo	B season	Exemption to regulatory closure of CSSA (Fig. 2.1) provided participation in current RHS program		
2-Hard cap	B season (Component 1, Option 1a)	Fishery sectors close for the season when sector-specific cap level is reached		
	June-July (Component 1, Option 1b)	Fishery sectors close until July 31 when sector-specific cap level is reached		
3-Closure area with RHS exemption	B season (Component 1)	<i>Closure area applies to</i>	<i>Closure Area</i>	<i>Basis period</i>
		Non-participants of RHS program when <b>fishery level caps</b> <sup>1</sup> reached	80% of chum (Fig. 2.2)	B season
	B season (Component 2, Suboption 1a)	Participants of RHS program when <b>sector-level caps</b> reached	80% of chum (Fig. 2.3)	B season
	June-July (Component 2, Suboption 1b)	Participants of RHS program when <b>sector-level caps</b> reached	80% of chum (Fig. 2.4)	June-July
	B season (Component 2, Suboption 2a)	Participants of RHS program when <b>sector-level caps</b> reached	60% of chum (Fig. 2.5)	B season
June-July (Component 2, Suboption 2b)	Participants of RHS program when <b>sector-level caps</b> reached	60% of chum (Fig. 2.6)	June-July	

## 2.5 Development of Alternatives

The alternatives in this analysis were developed through a public Council and stakeholder process. Many issues were aired and other possible management options, or points within the range of the options, were considered. Through an iterative process, the Council arrived at a draft suite of management options that best suit the problem statement, that represent a reasonable range of alternatives and options, and also represent a reasonable combination of management measures that can be analyzed and used for decision-making. These alternatives may still be modified by the Council in iterative reviews of this analysis. Currently the analysis is scheduled for initial review in April 2012. It is anticipated that some modification of the suite of alternatives may occur at initial review and initial review. The Council may

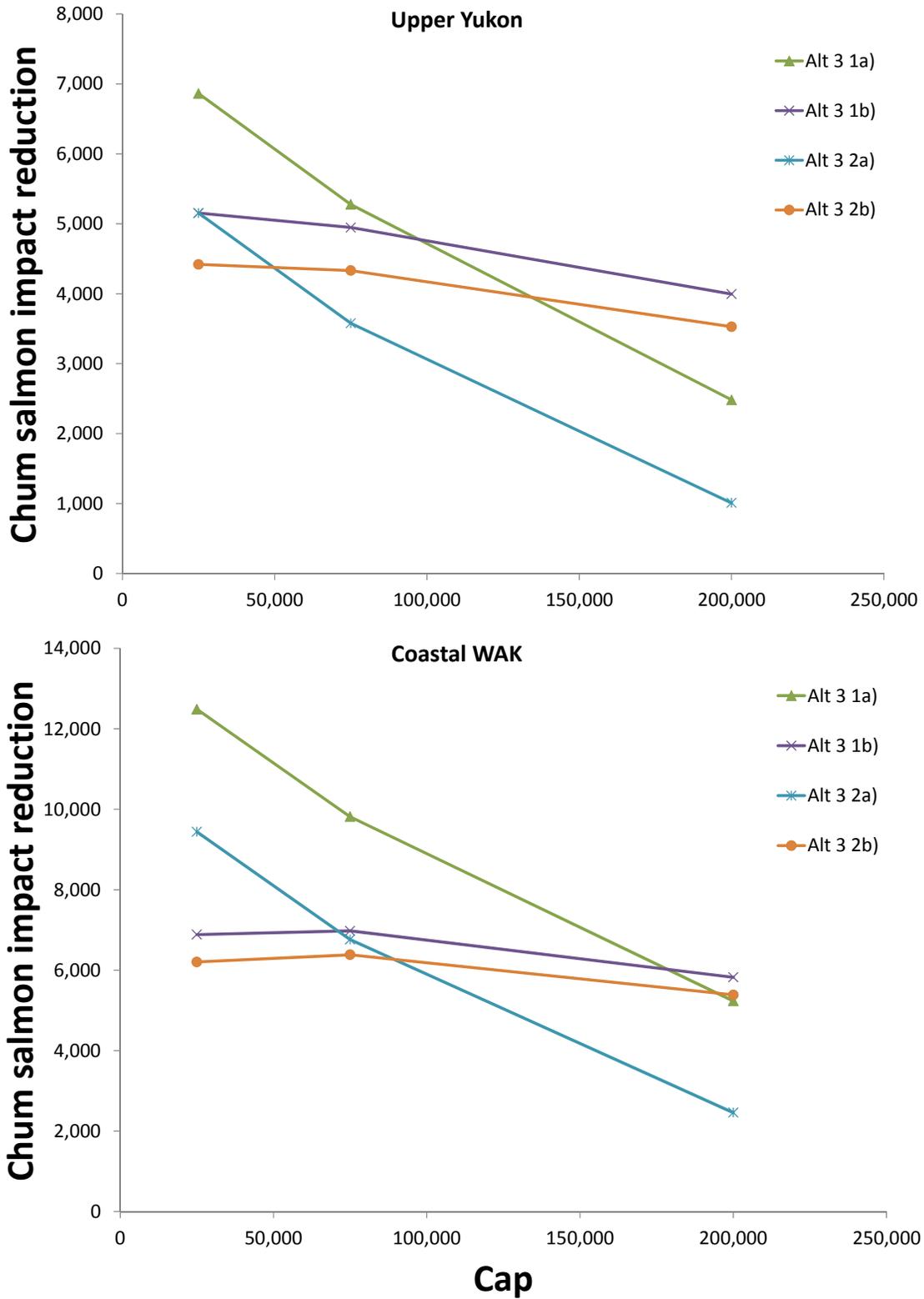


Figure 5-101. Average chum salmon impact reduction (AEQ) by suboption for Alternative 3, sector allocation 2ii, for years 2004-2011 for Upper Yukon (top) and Coastal WAK (bottom).

Table 5-95. Alternative 3 component 2 closure dates by sector and allocation scheme for each of the 4 options (1a, 1b, 2a, and 2b) for the **25,000 cap** level.

Opt	Year	CDQ Allocation			CP Allocation			M Allocation			S Allocation		
		1	2	3	1	2	3	1	2	3	1	2	3
1a)	2003	27-Aug	3-Sep	10-Sep	6-Aug	27-Aug	27-Aug	30-Jul	30-Jul	20-Aug	30-Jul	30-Jul	23-Jul
	2004	22-Jul	19-Aug	26-Aug	17-Jun	17-Jun	17-Jun	8-Jul	15-Jul	22-Jul	29-Jul	29-Jul	29-Jul
	2005				25-Jun	25-Jun	6-Aug	25-Jun	25-Jun	25-Jun	2-Jul	25-Jun	25-Jun
	2006				2-Jul	23-Jul	30-Jul	20-Aug			11-Jun	11-Jun	11-Jun
	2007	20-Aug	20-Aug	27-Aug	13-Aug	20-Aug	20-Aug	23-Jul	13-Aug	13-Aug	20-Aug	13-Aug	6-Aug
	2008												16-Sep
	2009							23-Jul	6-Aug		30-Jul	30-Jul	23-Jul
	2010												
	2011	23-Jul	20-Aug	1-Oct	25-Jun	2-Jul	16-Jul	18-Jun	18-Jun	18-Jun	25-Jun	18-Jun	18-Jun
	2003	16-Jul			2-Jul	30-Jul		23-Jul	23-Jul	23-Jul	16-Jul	9-Jul	9-Jul
	2004	15-Jul	15-Jul	22-Jul	10-Jun	10-Jun	17-Jun	1-Jul	1-Jul	8-Jul	29-Jul	22-Jul	15-Jul
2005				18-Jun	18-Jun	25-Jun	25-Jun	25-Jun	25-Jun	25-Jun	25-Jun	18-Jun	
2006	16-Jul			11-Jun	25-Jun	2-Jul	16-Jul	23-Jul	30-Jul	11-Jun			
2007	9-Jul			2-Jul	16-Jul		2-Jul	2-Jul	16-Jul	23-Jul	9-Jul	2-Jul	
2008											29-Jul	8-Jul	
2009				16-Jul			25-Jun	2-Jul	9-Jul	9-Jul	9-Jul	2-Jul	
2010				23-Jul			16-Jul	16-Jul	30-Jul		30-Jul	23-Jul	
2011	2-Jul	9-Jul	23-Jul	25-Jun	25-Jun	25-Jun	18-Jun	18-Jun	18-Jun	18-Jun	18-Jun	18-Jun	
2a)	2003	27-Aug	3-Sep	10-Sep	6-Aug	27-Aug	27-Aug	30-Jul	30-Jul	20-Aug	30-Jul	30-Jul	23-Jul
	2004	22-Jul	19-Aug	26-Aug	17-Jun	17-Jun	17-Jun	8-Jul	15-Jul	22-Jul	29-Jul	29-Jul	29-Jul
	2005				25-Jun	25-Jun	6-Aug	25-Jun	25-Jun	25-Jun	2-Jul	25-Jun	25-Jun
	2006				2-Jul	23-Jul	30-Jul	20-Aug			11-Jun	11-Jun	11-Jun
	2007	20-Aug	20-Aug	27-Aug	13-Aug	20-Aug	20-Aug	23-Jul	13-Aug	13-Aug	20-Aug	13-Aug	6-Aug
	2008												16-Sep
	2009							23-Jul	6-Aug		30-Jul	30-Jul	23-Jul
	2010												
	2011	23-Jul	20-Aug	1-Oct	25-Jun	2-Jul	16-Jul	18-Jun	18-Jun	18-Jun	25-Jun	18-Jun	18-Jun
	2003	16-Jul			2-Jul	30-Jul		23-Jul	23-Jul	23-Jul	16-Jul	9-Jul	9-Jul
	2004	15-Jul	15-Jul	22-Jul	10-Jun	10-Jun	17-Jun	1-Jul	1-Jul	8-Jul	29-Jul	22-Jul	15-Jul
2005				18-Jun	18-Jun	25-Jun	25-Jun	25-Jun	25-Jun	25-Jun	25-Jun	18-Jun	
2006	16-Jul			11-Jun	25-Jun	2-Jul	16-Jul	23-Jul	30-Jul	11-Jun			
2007	9-Jul			2-Jul	16-Jul		2-Jul	2-Jul	16-Jul	23-Jul	9-Jul	2-Jul	
2008											29-Jul	8-Jul	
2009				16-Jul			25-Jun	2-Jul	9-Jul	9-Jul	9-Jul	2-Jul	
2010				23-Jul			16-Jul	16-Jul	30-Jul		30-Jul	23-Jul	
2011	2-Jul	9-Jul	23-Jul	25-Jun	25-Jun	25-Jun	18-Jun	18-Jun	18-Jun	18-Jun	18-Jun	18-Jun	