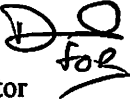


MEMORANDUM

TO: Council and AP Members
FROM: Chris Oliver 
Executive Director
DATE: September 19, 2011
SUBJECT: Pribilof Islands blue king crab Rebuilding Plan

ESTIMATED TIME 12 HOURS (all C-3 items)

ACTION REQUIRED

(d) Final action on Pribilof Islands blue king crab rebuilding plan

BACKGROUND

At this meeting the Council will take final action on the Pribilof Blue King Crab Rebuilding Plan EA/RIR/IRFA. This analysis evaluates proposed alternative rebuilding measures for the Pribilof Islands blue king crab (*Paralithodes platypus*) stock. The Pribilof Islands blue king crab stock remains overfished and the current rebuilding plan has not achieved adequate progress towards rebuilding the stock by 2014. This revised rebuilding plan considers five alternatives:

Alternative 1 retains the current Pribilof Islands Habitat Conservation Zone (PIHCZ) trawl closure around the Pribilof Islands.

Alternative 2 applies the PIHCZ closure additionally to those groundfish fisheries contributing to PIBKC bycatch above a threshold criteria (Option 2a) or to fishing for Pacific cod (*Gadus macrocephalus*) with pot gear (Option 2b).

Alternative 3 proposes to apply the existing State of Alaska crab closure areas to those groundfish fisheries contributing to PIBKC bycatch above a threshold criteria (Option 3a) or to fishing for Pacific cod with pot gear (Option 3b).

Alternative 4 proposes two closure configurations to cover the distribution of the PIBKC stock. These closures are then proposed to apply to either those groundfish fisheries contributing to PIBKC bycatch above a threshold criteria (Option 4a) or to fishing for Pacific cod with pot gear (Option 4b).

Alternative 5 proposes a range of trigger caps on those groundfish fisheries contributing to PIBKC bycatch above a threshold criteria that, if reached, would close that area to fishing (Options 5a-5d). An additional option would allocate the trigger cap amongst gear types for applicable fisheries.

For each of Alternatives 2-5, there is the option of increasing observer coverage, either to all fisheries to which a cap or closure applies (Option 1), or to specific fisheries (Option 2).

The impacts of these alternatives on rebuilding the Pribilof Island blue king crab stock as well as the environmental and social/economic impacts of these measures are considered in this analysis. Analysis of the impacts of these closure configurations on the rebuilding potential for the PIBKC stock shows limited effect on rebuilding between the ranges of alternative closures.

The executive summary of the EA is attached as Item C-3(d)(1). The EA/RIR/IRFA was mailed to you on September 8th. The Council reviewed the analysis in April 2011, and reviewed additional requested data implications in June 2011. The Council's April motion is attached as Item C-3(d)(2). The primary purpose of the June data review was to determine if there were differences in the applicable fisheries to which proposed closures would apply based upon examination of catch over the entire Pribilof District as compared with catch only in area 513 as in the previous analysis. Following review of these data, it was determined that the flathead sole fishery no longer met the criteria for inclusion in the closures. The fisheries which meet the threshold criteria are the trawl fisheries for rock sole, yellowfin sole, and other flatfish, as well as the Pacific cod hook-and-line and pot fisheries. The analysis has been substantially revised since the April draft both to evaluate changes to alternatives from the Council's motion as well as to evaluate impacts on incidental catch of PSC species as well as economic implications due to estimated fleet redistribution outside of the proposed area closures.

At this meeting the Council will take final action and identify a preferred alternative for the rebuilding plan.

Executive Summary

The king and Tanner crab fisheries in the Exclusive Economic Zone (EEZ) (3 to 200 miles offshore) of the Bering Sea and Aleutian Islands (BSAI) off Alaska are managed under the Fishery Management Plan for Bering Sea and Aleutian Islands King and Tanner Crabs (FMP). The FMP establishes a State/Federal cooperative management regime that defers crab fisheries management to the State of Alaska (State) with Federal oversight. State regulations are subject to the provisions of the FMP including its goals and objectives, the Magnuson-Stevens Act, and other applicable Federal laws.

This proposed action is a revised rebuilding plan for the Pribilof Islands blue king crab (PIBKC) stock. The PIBKC stock remains overfished. The purpose of this proposed action is to reduce the risk of overfishing the PIBKC stock by developing an amended rebuilding plan for this stock in compliance with the Magnuson-Stevens Act and the national standard guidelines.

Five alternatives are considered in this analysis. Four of the alternatives consider time and area closures to better protect the PIBKC stock. The fifth alternative considers trigger caps and associated time and area closures in groundfish fisheries which have contributed historically to bycatch of this stock. Alternatives 2-5 retain all of the current protection measures in place for the PIBKC stock and apply additional measures as described in the specific alternatives and options.

Alternative 1 retains the current Pribilof Islands Habitat Conservation Zone (PIHCZ) trawl closure around the Pribilof Islands. Alternative 2 applies the PIHCZ closure additionally to those groundfish fisheries contributing to PIBKC bycatch above a threshold criteria (Option 2a) or to fishing for Pacific cod (*Gadus macrocephalus*) with pot gear (Option 2b). Alternative 3 proposes to apply the existing State of Alaska (State) crab closure areas to those groundfish fisheries contributing to PIBKC bycatch above a threshold criteria (Option 3a) or to fishing for Pacific cod with pot gear (Option 3b). Alternative 4 proposes two closure configurations to cover the distribution of the PIBKC stock. These closures are then proposed to apply to either those groundfish fisheries contributing to PIBKC bycatch above a threshold criteria (Option 4a) or to fishing for Pacific cod with pot gear (Option 4b). Alternative 5 proposes a range of trigger caps on those groundfish fisheries contributing to PIBKC bycatch above a threshold criteria that, if reached, would close that area to fishing (Options 5a-5d). An additional option would allocate the trigger cap amongst gear types for applicable fisheries. For each of Alternatives 2-5, there is the option of increasing observer coverage, either to all fisheries to which a cap or closure applies (Option 1), or to specific fisheries (Option 2).

Analysis of the impacts of these closure configurations on the rebuilding potential for the PIBKC stock shows limited effect on rebuilding between the ranges of alternative closures. Final action is scheduled for October 2011.

Council motion on Pribilof Blue King Crab Rebuilding Plan

April 2, 2011

The Council moves that the analysis to review the Pribilof Islands blue king crab rebuilding plan be expanded as follows:

- 1. Address comments by AP as appropriate**
- 2. Under Alternative 5, Option 5D (Distribution of PIBKC from 1984-2009) Suboptions 3 and 4, analyze allocation of trigger cap to:
 Non-Pelagic Trawl 40%
 Hook and Line 20%
 Pot 40%**

The analysis should explore this gear allocation as part of annual specifications.

- 3. For that part of the analysis, include to the extent practicable, historical bycatch from entire PIBKC district.**
- 4. A discussion of spatial boundaries for catch accounting extrapolation to prevent application of St Matthew blue king crab stock bycatch rates to Pribilof Islands blue king crab catch.**
- 5. Under alternative 5, include a qualitative assessment of other possible tools for achieving triggered closures. This may include other possible tools such as the relative merits of a different approach to establishing a cap based upon range of threshold levels whereby upon reaching the threshold the gear group which contributed the most towards that threshold at that time would be closed out of the designated area.**

PRIBILOF ISLANDS STEWARDSHIP PROGRAM

P.O. Box 938
St. George Island, AK 99591
Phone (907)859-2257

17 September 2011

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

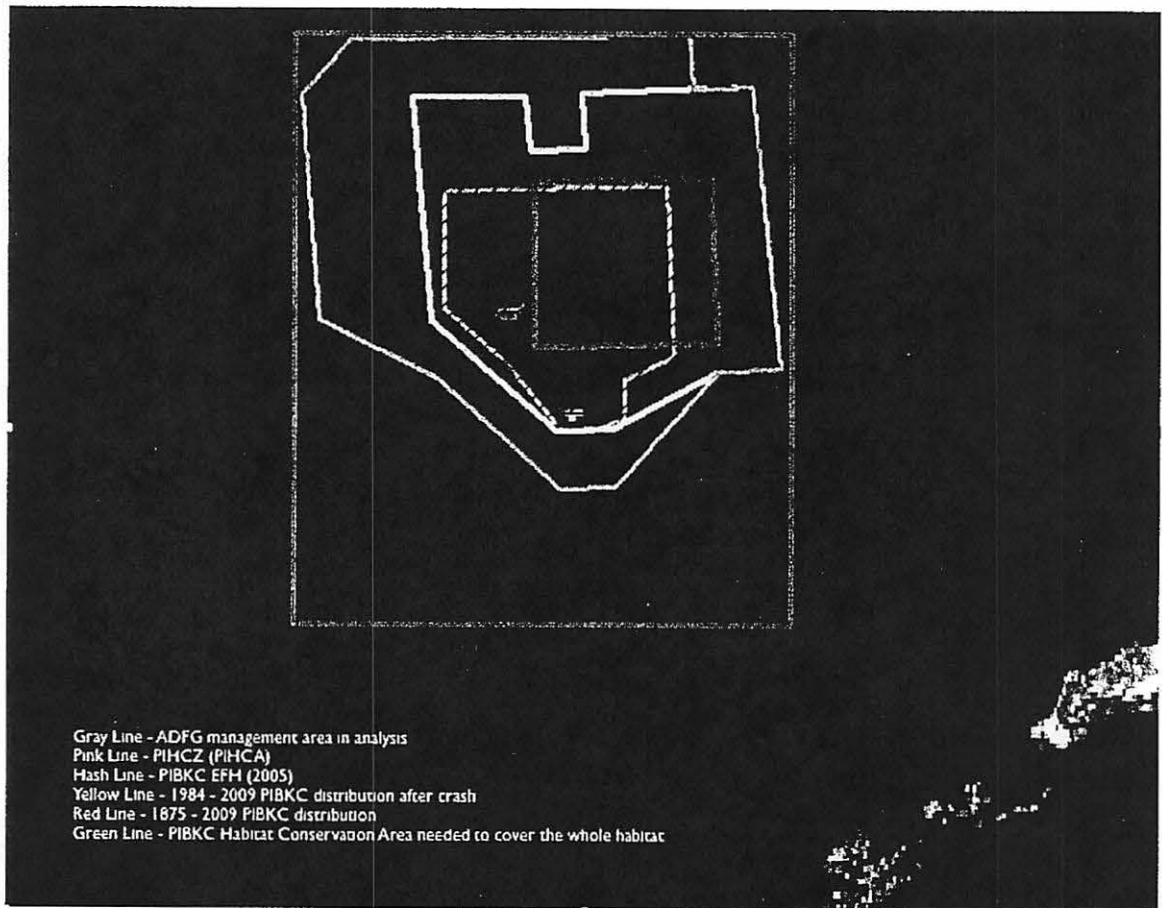
Re: Agenda Item: C-3 (d) Pribilof Island Blue King Crab Rebuilding
Dutch Harbor NPFMC Meeting September 2011

Dear Council Members:

I would first like to reiterate what I stated in my last two letters (29 March 2010 and 12 February 2010) in regards to *“the Pribilof Island Habitat Conservation Area (PIHCA) (being) considered a de facto EFH protection measure. Effectiveness of this measure in meeting the goals for which it was established should be analyzed. If the area and the fishing restrictions within the PIHCA were designed using the best available science to protect king crab and other species, it appears as the “best” science isn’t good enough.*

Could it be that protecting only the shelf without protecting the corridor connecting it to the deep sea that feeds it is in fact contributing to habitat fragmentation without achieving alleged goals of the action? In the case of king crab, for example, there has been no detectable recovery of Pribilof blue king crab and no significant increase in red king crab in the PIHCA since established in 1995.”

It seems like “best” science is finally catching up to realize that you need to protect the whole habitat not just part of it



In the context of your current action under agenda item C-3 (d), the area analyzed under alternative 4 best covers the range of habitats used by Pribilof Island Blue King Crab (PIBKC). But it still miss the deep water area where PIBKC have been found as deep as 2,000 m.

However, ALL trawling needs to be prohibited in the protected area – **that includes research trawling and “mid water trawling.”** A Bering Sea trawl skipper told me “my net bounces off the bottom 80% of the time.” We need to stop playing smoke and mirror games and realize that trawling – regardless of whether legally defined as “pelagic” or “non-pelagic” is having a much bigger impact on species and habitats in the EEZ than they are willing to admit.

When the crab crashed so did our economy in the Pribilof region and this has had a huge impact on our population – economically and socially. People are scraping for paying jobs or moving away ... and at this point our school on St. George Island is struggling to stay open.

Since 2008 our young people have been involved in research to learn whether there are larval and juvenile king crab still in the waters around our island. These are photos taken by the students of St. George Island.

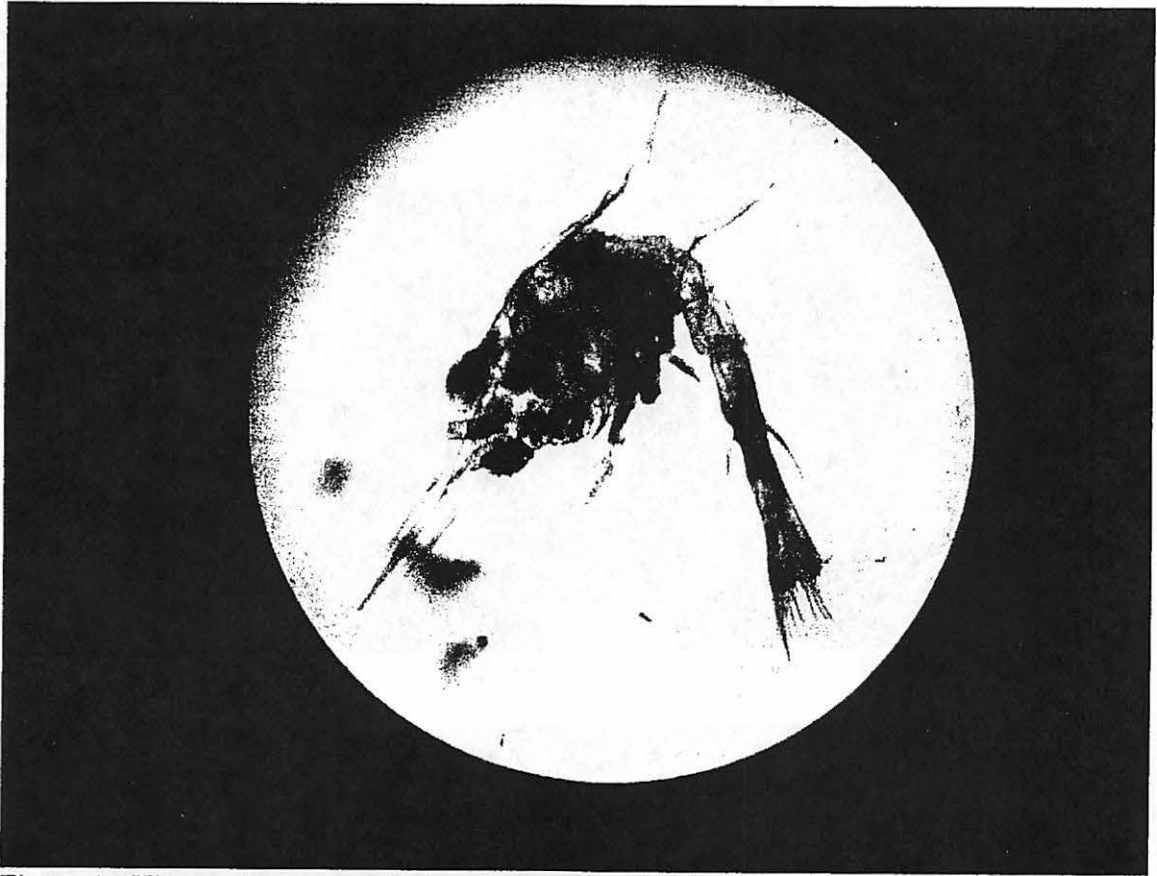


Figure 1. King crab zoea caught by plankton net Pribilof Islands

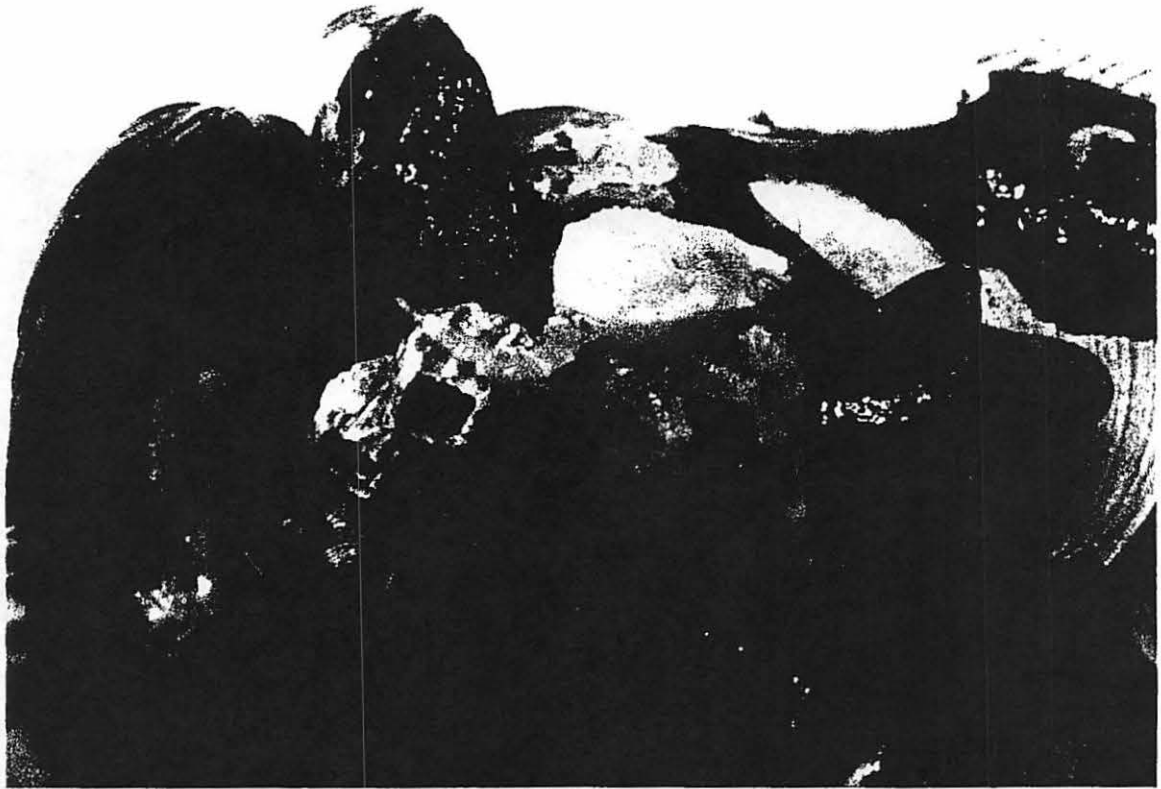


Figure 2. Blue king crab juvenile in shell habitat

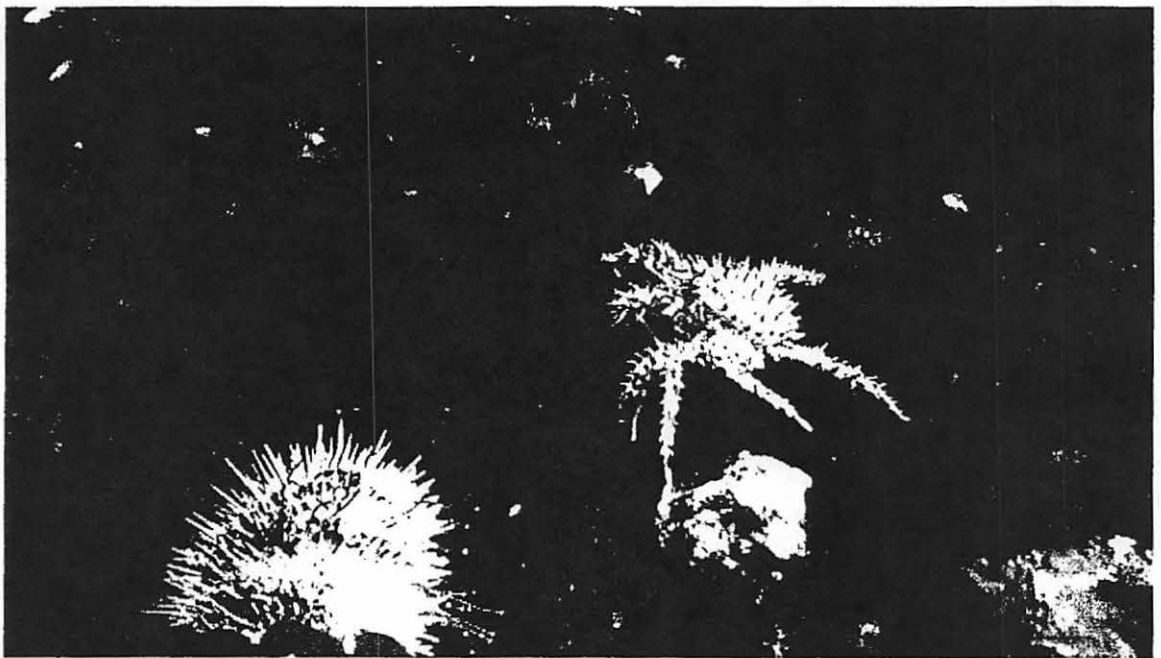


Figure 3. Red king crab juvenile in rocky-algae habitat (1 m deep!) Zapadni Harbor, St. George Island

PRIBILOF ISLANDS STEWARDSHIP PROGRAM

**P.O. Box 938
St. George Island, AK 99591
Phone (907)859-2257**

17 September 2011

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

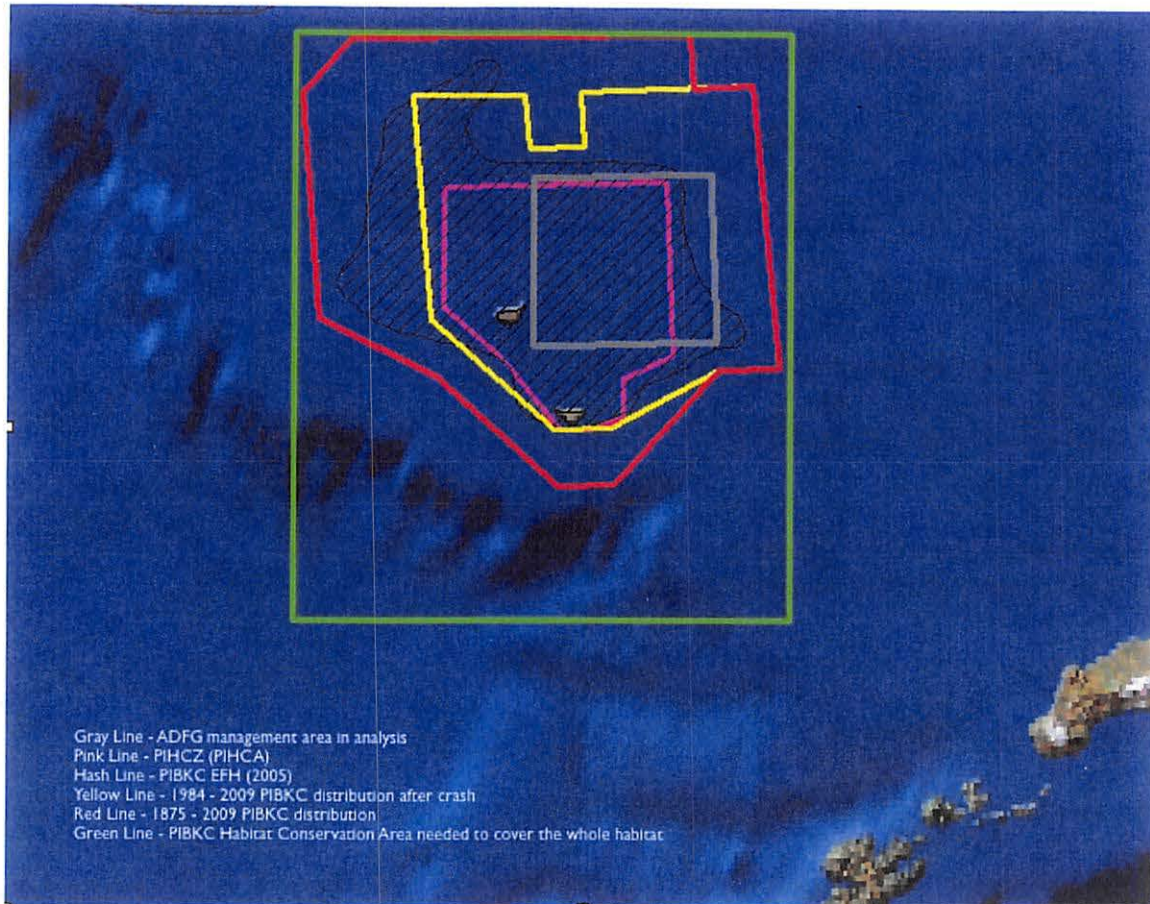
Re: Agenda Item: C-3 (d) Pribilof Island Blue King Crab Rebuilding
Dutch Harbor NPFMC Meeting September 2011

Dear Council Members:

I would first like to reiterate what I stated in my last two letters (29 March 2010 and 12 February 2010) in regards to "*the Pribilof Island Habitat Conservation Area (PIHCA) (being) considered a de facto EFH protection measure. Effectiveness of this measure in meeting the goals for which it was established should be analyzed. If the area and the fishing restrictions within the PIHCA were designed using the best available science to protect king crab and other species, it appears as the "best" science isn't good enough.*

Could it be that protecting only the shelf without protecting the corridor connecting it to the deep sea that feeds it is in fact contributing to habitat fragmentation without achieving alleged goals of the action? In the case of king crab, for example, there has been no detectable recovery of Pribilof blue king crab and no significant increase in red king crab in the PIHCA since established in 1995."

It seems like "best" science is finally catching up to realize that you need to protect the **whole** habitat not just part of it



In the context of your current action under agenda item C-3 (d), the area analyzed under alternative 4 best covers the range of habitats used by Pribilof Island Blue King Crab (PIBKC). But it still miss the deep water area where PIBKC have been found as deep as 2,000 m.

However, ALL trawling needs to be prohibited in the protected area – **that includes research trawling and “mid water trawling.”** A Bering Sea trawl skipper told me “my net bounces off the bottom 80% of the time.” We need to stop playing smoke and mirror games and realize that trawling – regardless of whether legally defined as “pelagic” or “non-pelagic” is having a much bigger impact on species and habitats in the EEZ than they are willing to admit.

When the crab crashed so did our economy in the Pribilof region and this has had a huge impact on our population – economically and socially. People are scraping for paying jobs or moving away ... and at this point our school on St. George Island is struggling to stay open.

Since 2008 our young people have been involved in research to learn whether there are larval and juvenile king crab still in the waters around our island. These are photos taken by the students of St. George Island.

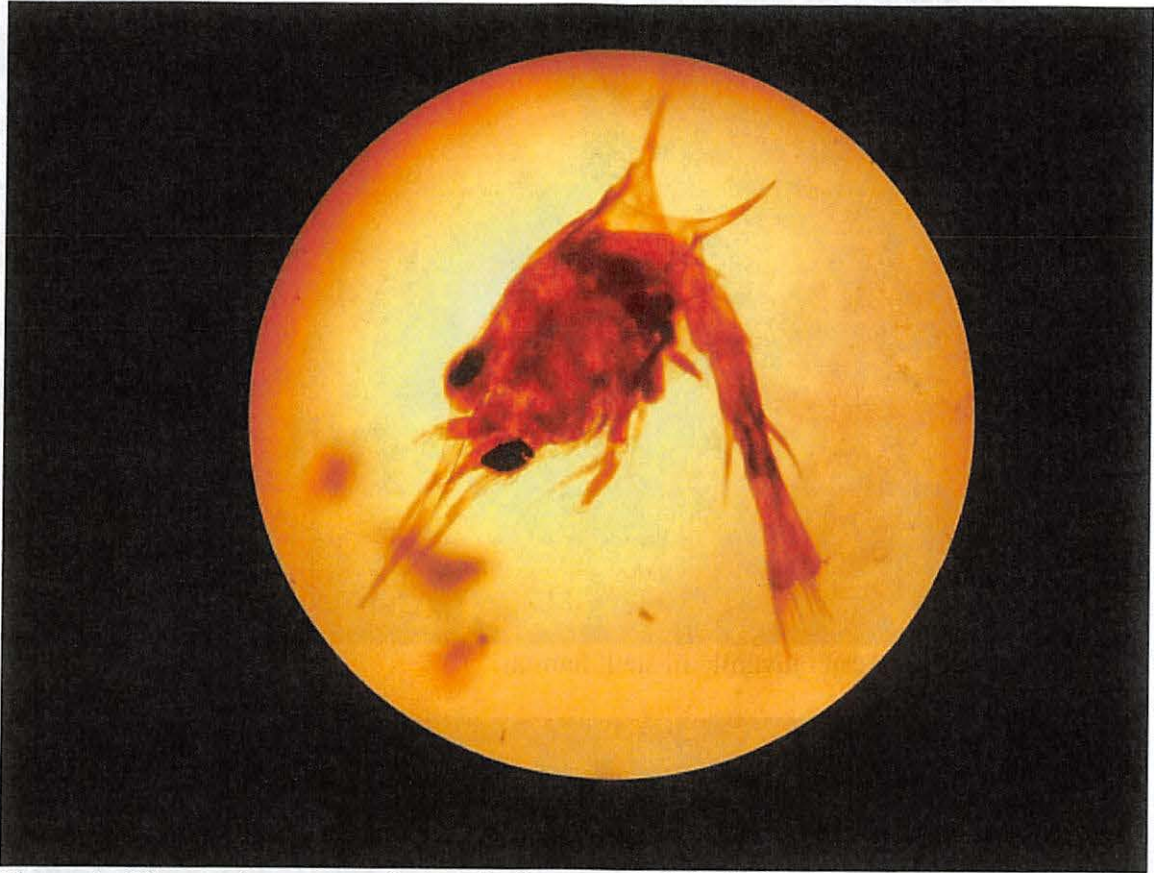


Figure 1. King crab zoea caught by plankton net Pribilof Islands



Figure 2. Blue king crab juvenile in shell habitat



Figure 3. Red king crab juvenile in rocky-algae habitat (1 m deep!) Zapadni Harbor, St. George Island



Figure 4. Juvenile king crab caught in nearshore waters St. George Island

Their results to date proves that there is still some production of king crab species, but that the crab are not maturing to commercial size. It is likely that this entire area is still a viable nursery area for king crab – but our destructive sampling methods (like trawling to count crab) and pot surveys do not adequately sample very small crab. So in my opinion the only viable option for the rebuilding of this stock it to have **NO TRAWLING WHATSOEVER AND TO SEVERELY LIMIT POT FISHING AND TO PROHIBIT POT STORAGE AT SEA.**

Thank you for your time and I hope you will finally do right by this species and therefore also do right for our children's future.

Sincerely,

Karin Holser

Table 11-1 List of fisheries and gear types with recorded bycatch of Pribilof Islands blue king crab in the area shown in Figure 10-15, 2003-2010 by threshold option as described in Section 3.2 (as of 12/15/2010).

The records column indicates the datasource where a record of bycatch since 2003 was used. PSC = NMFS RO estimates (from CAS in area 513 only), OBS = Observer data and FT = Fishtrucker from Alaska Department of Fish and Game Stat areas used to define the Pribilof area.

Target	Gear	Records	Threshold option (a,b)
Pacific cod	Pot	PSC, FT, OBS	a
	Hook and Line	PSC, FT, OBS	a
Rock Sole	Trawl	PSC	a,b
Yellowfin sole	Trawl	PSC, OBS	a
Other Flatfish	Trawl	OBS	a

Revised qualified fisheries and gear type if data from PI District (using CIA database for PSC estimation)

Target	Gear	Records	Threshold option (a,b)
Pacific cod	Pot	PSC, FT, OBS	a,b
	Hook and Line	PSC, FT, OBS	a,b
	Trawl	PSC	a,b
Flathead Sole	Trawl		a,b
Yellowfin sole	Trawl	PSC, OBS	a, b
Other Flatfish	Trawl	OBS	a

What is relative constraint under the new SSC recommended OFL (36% decrease from 2010/11 OFL)?

**What is relative constraint under
the new SSC recommended OFL
(36% decrease from 2010/11 OFL):**

	75% ABC						90% ABC		
	90%	75%	50%	40%-TRW	40%-POT	20%-HAL	40%-TRW	40%-POT	20%-HAL
2003			x	x			x		
2004						x			x
2005		x	x		x			x	
2006	x	x	x	x		x	x		x
2007	x	x	x		x			x	
2008									
2009		x	x	x		x	x		x
2010									

2003-50% ABC threshold was exceeded on 08/16, Yellowfin Sole Trawl was the highest PSC contributor

2003- Trawl fishery exceeded the 40% of 3/4 ABC on 04/05, Yellowfin Sole Trawl was the highest PSC contributor

2003- Trawl fishery exceeded 40% of 90% ABC on 08/16, Yellowfin Sole Trawl was the highest PSC contributor

2004- Hook and Line exceeded the 20% of 3/4 ABC and 20% of 90% ABC threshold on 01/10 (PCOD)

2005- Pot exceeded the 40% of 3/4 ABC threshold on 02/05 (PCOD)

2005- Pot exceeded the 40% of 90% ABC threshold on 02/12 (PCOD)

2005- 50% ABC threshold was exceeded on 2/12, PCOD Pot was the highest PSC Contributor

2005- 75% ABC threshold was exceeded on 12/03, PCOD Pot was the highest PSC Contributor

2006- Hook and Line fishery exceeded the 20% of 3/4 ABC and 20% of 90% ABC threshold on 01/07 (PCOD)

2006- Trawl fishery exceeded all thresholds including OFL on 04/15, Yellowfin Sole Trawl was the highest contributor

2007- Pot fishery exceeded all thresholds including OFL on 09/22 (PCOD)

2009- Hook and Line exceeded the 20% of 3/4 ABC and 20% of 90% ABC threshold on 09/12 (PCOD)

2009- Trawl fishery exceeded the 40% of 3/4 ABC and 40% of 90% ABC on 09/19, Yellowfin Sole Trawl was the highest PSC contributor

2009- 50% ABC threshold exceeded on 09/19, Yellowfin Sole Trawl was the highest PSC contributor

2009- 75% ABC threshold exceeded on 10/17, Pcod Hook And Line was the highest remaining contributor

Mean weights used in calculating total weight of crabs (in lb) from total estimated number of crabs.

From average weight in observed crab across all gear types by year.

Year	Average wt in lb
2003-2004	3.18
2004-2005	3.48
2005-2006	3.70
2006-2007	3.12
2007-2008	1.56
2008-2009	3.39
2009-2010	2.67