

ADVISORY PANEL
Motions and Rationale
April 5-8, 2022 - Anchorage, AK

D1 BBRKC Info Paper

D1 BBRKC MOTION:

The AP recommends both short- and longer-term actions to help BBRKC rebuild from a level of serious conservation concern by creating more dynamic adaptive management strategies to protect broodstock and the centers of population abundance, by reducing bycatch and fishing impacts on crab and crab habitat, and by providing habitat and life stage protection measures to enhance recruitment.

***SHORT-TERM**

For the short-term to provide more immediate benefits to the stock, the AP recommends initiating a review of a proposed action to be available in October 2022 to close the RKCSA/RKCSS to additional gears to reduce bycatch and fishing impacts on crab and crab habitat. A proposed purpose and need statement and alternatives are provided below.

Proposed action

The proposed action is to apply additional gear-based closure measures to the RKCSA/RKCSS, an area that continues to be important to BBRKC, to reduce bycatch and fishing impacts on crab and crab habitat.

Purpose and Need

The purpose of this proposed action is to reduce fishing impacts on crab and crab habitat in an area known to be important to BBRKC. This action is needed because the BBRKC stock has declined to a level of serious conservation concern, and the number of female BBRKC has been declining for over a decade to the point where abundance levels forced the closure of the directed fishery. The intent is to restore and sustain the BBRKC stock by reducing impacts on molting and mating crab needed to improve reproduction, by providing protections to improve recruitment, and by building in resilience to changing environmental conditions, predation and fishing pressure. In considering this action, potential fishing impacts to the stock and habitat will be examined to understand the effects of these impacts and to assess proposed closure measures.

Alternatives

Alternative 1 – Status Quo/No Action

Alternative 2 – Close the RKCSA/RKCSS to additional gears to reduce bycatch and fishing impacts on crab and crab habitat.

Option A – Prohibit all gear, except pot gear during directed crab fisheries, from the RKCSA.

Option B - Prohibit pelagic trawl gear from the RKCSA at any time. In years when the directed fishery is closed, prohibit pelagic trawl gear from the RKCSS. This option is consistent with existing requirements for non-pelagic trawl gear.

Option C – In years when the directed crab fishery is closed, prohibit all gears except longline gear from the RKCSA/RKCSS.

In addition,^{end-off} we recommend the creation of a workgroup that includes crab managers and scientists, along with crab habitat experts, and industry stakeholders from all affected sectors to explore topics, including but not limited to, a primary objective to provide input to Council staff over the summer 2022 to better define the concept of dynamic closed areas to protect crab broodstock and centers of abundance for female and male red king crab during times of low abundance. As a secondary objective, the workgroup would propose strategies to protect important areas for recruitment, such as north of Unimak, around Amak, Black Hills, and potentially others as identified by the workgroup. As a third objective, the workgroup would document the new and existing voluntary measures being taken by each sector to reduce impacts on BBRKC. This is not an all-inclusive list

LONGER-TERM

For the longer-term, the AP recommends further work to investigate:

- a) Creating dynamic closed areas, such as seasonal or annual shifting closed areas in ADFG Registration Area T, as needed, to protect BBRKC broodstock or centers of female or male BBRKC at times of low abundance.
- b) Protecting habitat or life stages to enhance BBRKC recruitment.
- c) Creating more consistency in stock management for the fishery, stock assessment, and bycatch measures by aligning the BBRKC PSC limit boundary with the crab stock management area and stock assessment boundary.
- d) Researching crab movement at different times of year for both females and males, unobserved fishing mortality by all gears, and important crab habitat by life stage.
- e) **³Initiate a robust study of the impact of predation on all crab stocks by analyzing the stomach contents of pacific cod and other Groundfish harvested throughout the Bering Sea / Bristol Bay.**

Amendment¹ (to strike all language between "Short Term" through "In addition") failed 8-9

Amendment³ passed 17-0

²The AP recommends analysis of the following:

- 1. For the directed red king crab fishery, consider:**
 - 1. All red king crab catch be counted towards the quota**
 - 2. Increasing observer coverage (EM or human) – examine range of current rate to 100%**
 - 3. Set a hard cap for the number of female crabs that may be discarded, when the cap is reached, directed fishing ceases**
- 2. For the pot cod directed fishery consider:**
 - 1. prohibiting fishing in Area 512**

2. **Increasing observer coverage (EM or human) – examine range of current rate to 100%**
3. **A PSC hard cap for BBRKC for the pot cod fishery (under and over 60 feet) where fishing ceases if the cap is reached**
3. **For both sectors – consider a maximum limit on soak time**
4. **Analyze and report on all sources of BBRKC mortality across all state and federal fisheries.**

Amendment² passed 10-7

Main Motion as amended passed 16-0

Rationale in Favor of the main motion as Amended:

- *The Bristol Bay red king crab stock is at a level of serious conservation concern, so much so that the directed fishery is currently closed. While helping females should be top priority given their continued downward trend, males and habitat protections are also of concern to make sure we have a healthy population and opportunity for recruitment. This motion is responsive to the priorities of protecting females, optimizing mating opportunities, and protecting critical spawning habitat. This motion seeks a comprehensive approach and a willingness by all stakeholders to seek solutions for a stock that is in crisis. This motion has both short and long-term components, along with both voluntary, non-regulatory actions and regulatory actions as a backstop given the state of the stock. All sectors have an obligation to help avoid a collapse of RKC like we have seen in the past around Kodiak, Chignik, Adak, Pribilofs, and St. Matthew. We must take action now and encourage continued voluntary actions to help rebuild BBRKC, protect females, encourage recruitment opportunities, and protect important habitat.*
- *The crab sector appreciates that several other sectors have taken voluntary actions since the directed fishery closed to reduce their impacts on BBRKC. For example, the large majority of the pot cod fleet stayed out of the RKCSA this season. Amendment 80 also implemented additional protocols for crab. These actions are important, appreciated, and more responsive and faster than regulatory actions.*
- *Trawl fisheries are occurring during molting and mating, and midwater gear is on the bottom more than previously thought. The RKCSA was created in the late 1990s to protect RKC and RKC habitat from fishing impacts by bottom gear. Evidence like the recent tagging work and summer surveys show the RKCSA continues to be an important area for BBRKC, including females. It is necessary to blend this new information with the purpose of the RKCSA to make it effective, especially given Figure 4-4 which shows increased pelagic trawl gear effort in the RKCSA since 2014; the same time period that the stock has trended downward.*
- *This motion provides a range of alternatives to close the RKCSA/RKCSS, an area that continues to be important to BBRKC, to additional gears to reduce bycatch and fishing impacts on crab and crab habitat. The alternatives would most affect pelagic trawl gear and pot cod but would still allow these fisheries to catch their allocations outside of this discreet box. The alternatives go from most restrictive (Option A) to most liberal (Option C).*
- *In the short-term, the motion calls for creation of a workgroup with crab and crab habitat experts and representatives from all affected sectors with the objectives in the motion as a*

starting point. The topics are complex and would benefit from getting many sectors working together. The workgroup would explore dynamic closed areas and measures to enhance recruitment opportunities, along with documenting current and new voluntary actions by various sectors. The list of topics for the workgroup is a starting point and not all inclusive, but the workgroup should get started ASAP and come to the October Council meeting with some initial ideas.

- *Longer term items will hopefully result in some voluntary measures by multiple fleets, and may be able to incorporate emerging scientifically based analyses that look at rotational or time area closures. RKCSA borders were drawn over 25 years ago. We have some indication that this may still be a good area for recent red king crab, but recent survey data clearly shows this isn't a static area that restricts the movement of crab – they move around northward, eastward, all over, possibly even south into state waters.*
- *There are concerns about the recent history and future of the Bristol Bay red king crab biomass that need to be explored. More analysis and research into the abundance and distribution of, and gear interactions with, red king crab is needed to inform the Council, particularly before implementing spatially dynamic rotating closures. Such closures will require data sharing, and increased observer information or seasonal winter surveys, and considerations of the cost to implement them.*

Rationale in Opposition to Amendment 1:

- *Given that the BBRKC fishery is currently closed, management action must be taken to preserve this future sustainability of this fishery. Although many questions and uncertainties exist, unobserved mortality has been identified as a possible significant contributor in the decline of the BBRKC stock thereby warranting a precautionary approach in the RKCSA for differing gear types. As such, initiating an analysis is worthwhile and appropriate.*
- *The purpose of the RKCSA/RKCSS was to restrict gear that interacts with BBRKC, therefore it is necessary to include gear types beyond non-pelagic trawl. The burden should be on gear types to prove that they are not having negative impacts on BBRKC, a closure can help preserve the stock and help recovery while research occurs.*

Rationale in Favor of Amendment 1:

- *In response to an Emergency Rule request in the fall of 2021, an analysis was produced that focused on the costs/benefits of an action focused on specific modifications to the RKCSA. Given the similarities and overlap of the ER request and the analytical request contained in this motion, it is unlikely that any new information and/or conclusions would be brought forward from the analysis being sought in this motion upon which the Council could base management decisions focused on the closure of the RKCSA.*
- *The current information paper, with its limited scope per Council direction, does not bring forward any new information that has not been previously available to the Council. Given the data presented in the information paper, the bycatch of crab in the pelagic trawl – pollock directed fishery is the lowest of all gear types, and below the PSC limit. Specific to the amount of bottom contact by trawl gear, this information has been available back to at least 2005 with the publication of the 2005 Essential Fish Habitat EIS. Council, and its associated Advisory bodies, review of EFH is an ongoing process with the most recent review and updates*

beginning in 2022. Per previous EFH reviews, it has been concluded that the amount of bottom contact from pelagic pollock gear is both minimal and temporary.

- *Specific to unobserved mortality, the information paper states “the SSC noted that including any future estimation of unobserved crab mortality (from both groundfish and directed crab fishing) in a stock assessment would require extensive evaluation to understand how the assessment’s parameters for factors like catchability, natural mortality and reference points would be affected and “unobserved mortality is a source of both assessed and unassessed uncertainty throughout the history of the assessments (e.g., currently attributed to natural mortality), and that the ABC/TAC buffers in place are an appropriate process to account for sources of uncertainty that cannot be explicitly described in the assessment.” To this point, concerns related to accounting for unobserved crab mortality, especially as it relates to molting/mating females, in the pollock fishery will require focused applied research by industry and NMFS in order to be accounted for more precisely and explicitly within the stock assessment and harvest specifications process. There are multiple dynamic factors that affect the net behavior at any given time in the water. These factors contribute to the uncertainty in actual contact of the pelagic trawl footrope. The uncertainty of actual contact leads to greater uncertainty of the unobserved mortality from a pelagic trawl in contact with the seafloor. Even as technology improves many of these factors affect the immediate ability to determine the interaction and impact PTR has on RKC.*
- *An unobserved mortality rate for BBRKC in pelagic trawling has not yet been identified for pelagic trawl gear. Some studies have addressed this yet have been hindered by the dynamic complexities of observing and quantifying unobserved mortality from PTR behavior and interactions. Seafloor contact alone is not an adequate proxy for unobserved mortality. Determination of the impact pelagic gear contacting the seafloor has on BBRKC requires a connection to be made between gear-on-bottom and both the benthic habitat of RKC and bycatch (observed and unobserved). The best available information can accurately capture where PTR has occurred since 2003 but the ability to draw a conclusion about stock impacts would require the knowledge of where RKC were during the trawl season and the shell condition of those crab as it relates to the molt/mate cycle.*
- *Given both the similarity to a previous request and resulting analysis as well as the fact that the information paper does not bring forward new data, it is difficult to see how the proposed Purpose and Need Statement and Alternatives/Options flow logically from the information paper as is typical in the Council process. The requested analysis of the proposed Alternatives is not going to illuminate anything new, nor is the narrow focus going to create a clear and significant benefit to the BBRKC stock in the future.*
- *Additionally, as noted in public testimony, the pollock fishery is currently restricted by multiple bycatch considerations, particularly those related to chinook salmon which has a regulated hard cap, and avoidance of chinook is a major driver of pollock fishing behavior. Static closure boxes, such as a potentially permanent restriction from fishing in the Red King Crab Savings Area, remove some flexibility that the pollock fishery has to select fishing grounds when considering how to balance pollock CPUE, fish quality, roe rates, and chinook encounter rates.*
- *Many industry sectors recognize the importance of the BBRKC fishery and sympathize with the very challenging situation facing participants and communities, and support research efforts to better understand unobserved mortality in the pelagic trawl fishery. However, initiating*

analysis to potentially implement static closures is not timely or supported by current fishery data.

Rationale in Favor of Amendment 2:

- *Consideration of the directed crab fishery and the pot cod sector, both the impacts from and potential management measures for, should be included in any analysis going forward. Given the current state of the BBRKC stock, it is imperative to take a holistic view of all sources of BBRKC mortality and data shows that these two sectors are the biggest sources of BBRKC mortality. Everyone agrees that a healthy Bering Sea red king crab population is the goal. Expanding the original motion to include analysis of specific activities (and potential management measures) related to the two sectors whose removals have the biggest impact on stock population is critical for a comprehensive analytical document that looks at all sources of red king crab mortality and considers steps that could make a real difference in the BBRKC population. Many of the concepts put forward in this amendment many need refinement, including consideration of the overlap between Federal and State jurisdictions, but the intent to encompass all sources of mortality from all fisheries and to include potential management measures beyond closure of the RKCSA.*
- *The directed crab fishery has discarded 15.6 million red king crab in the last ten years, 2.5 million more crab than they retained during that same period. Of those discarded animals, 3.5 million were females with 800,000 of them discarded in the last three years. That's 300,000 more than what the fishery needed to open in 2021. In written public comment last October, a letter from a directed crab fishery participant stated, "I had 15 miles of solid females last year in my pots, 500 in every pot. I watched an Amendment 80 vessel tow right through them". From this letter it is gleaned that while fishing for king crab in 2020, he had pots full of female crab. To know he had 500 plus females in each pot he would have needed to pick the pots at least once, and then set them back in the same area. At a 20% discard mortality rate, this results in the mortality of 100 females per pot lift. For every 100 pots that is 10,000 dead females. Despite being a rationalized fishery, this sector has not required and/or implemented voluntary fleet-wide changes to address this issue, but they are doing research and encouraging improved handling protocols.*
- *In the pot cod fishery over the last 10 years, 333,129 red king crab were taken as bycatch, which resulted in 176,558 dead red king crab. In the last three years the bycatch was 284,578 crab, which equates to 150,826 dead red king crab. BBRKC bycatch in the pot cod fishery is orders of magnitude higher than that from trawl gear: 4,780 tons of pot cod was landed at the expense of 217,836 crab resulting in a bycatch rate of 231 crab per ton of groundfish. This data does not include the Area O P. cod fishery. By comparison, the trawl pollock CV sector bycatch of red king crab is very minimal, with 164 individual crabs caught between 2008 and today. Looking at the whole pollock fishery, CVs, CP's, and CDQ, the total between 2008 through today is 307 total red king crab have been taken.*

Rationale in Opposition of Amendment 2:

- *Requiring full retention or setting a hard cap on female crabs in the directed fishery is not practicable and would most likely lead to boats being shut down. Additionally, soak times are one of the tools that the crab fishery has to try and decrease mortality.*
- *The State of Alaska manages observer coverage in the crab fisheries so it may not be within the purview of the Council to increase observer coverage.*
- *The pot cod fishery is not currently rationalized so increasing coverage rates would be difficult. A hard cap on the pot cod fishery could also lead to unintended consequences.*
- *Many of the specific recommendations contained within this amendment could be included for discussions within the proposed work group.*

Rationale in Favor of Amendment 3:

- *The degree to which juvenile crab are vulnerable to predation needs to be part of the comprehensive look of those factors potentially impacting mortality and population declines. It is important to include an analysis that addresses predation that groundfish have on all crab at any life stage. This is an ecosystem driver that is important to understanding the recent declines in crab populations, BBRKC and others.*