

Dear Chair Carlson- Van Dort

Please find our emergency petition to close the Norton Sound Red King Crab commercial fishery for the remainder of 2021. We believe we have a conservation crisis and meet the criteria for an emergency closure of the fishery. Our petition outlines the biological conditions and the regulatory actions that are requirements given the stock status. We are sending two graphs to support our petition.

A second attachment is a letter to the North Pacific Fisheries Management Council from the Seward Peninsula Regional Advisory Council (SPRAC) describing their view of this conservation issue and their request for a commercial fisheries closure action by the NPFMC and Alaska Board of Fish. The SPRAC is a parallel advisory body to the Norton Sound Advisory Committees, charged with advising federal agencies. Their letter illustrates wide-spread public concern and support for our petition.

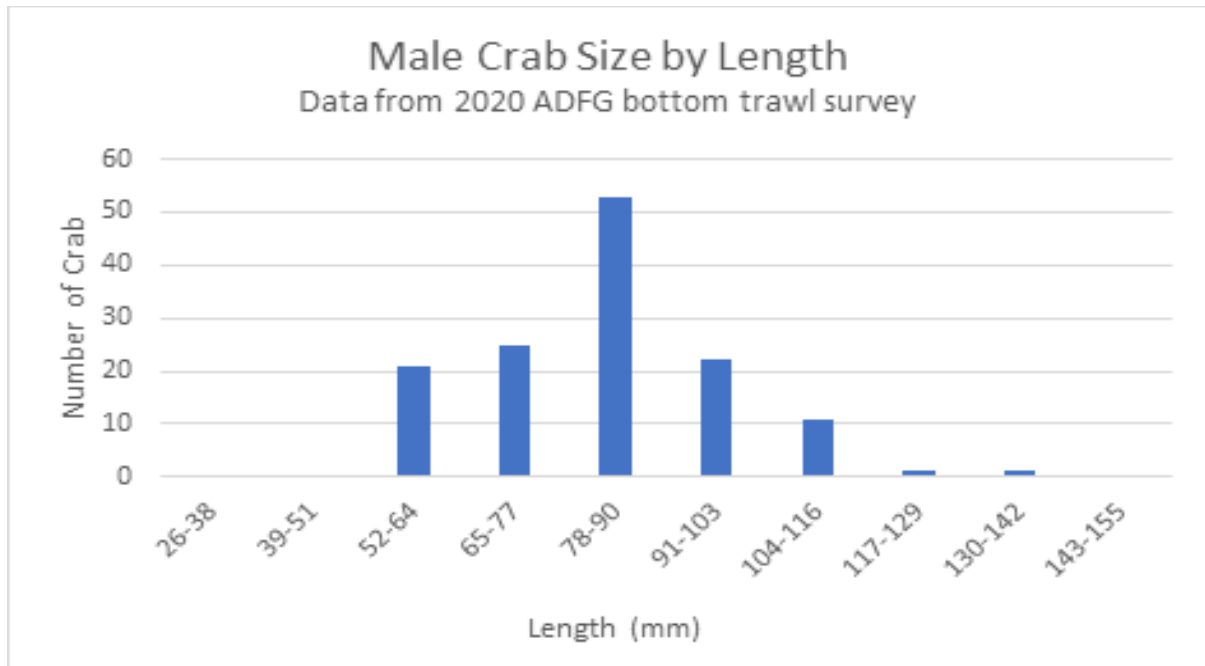
I look forward to hearing when this petition will be taken up. Should the Board of Fisheries wish, we would be available for comment or clarification.

Sincerely,

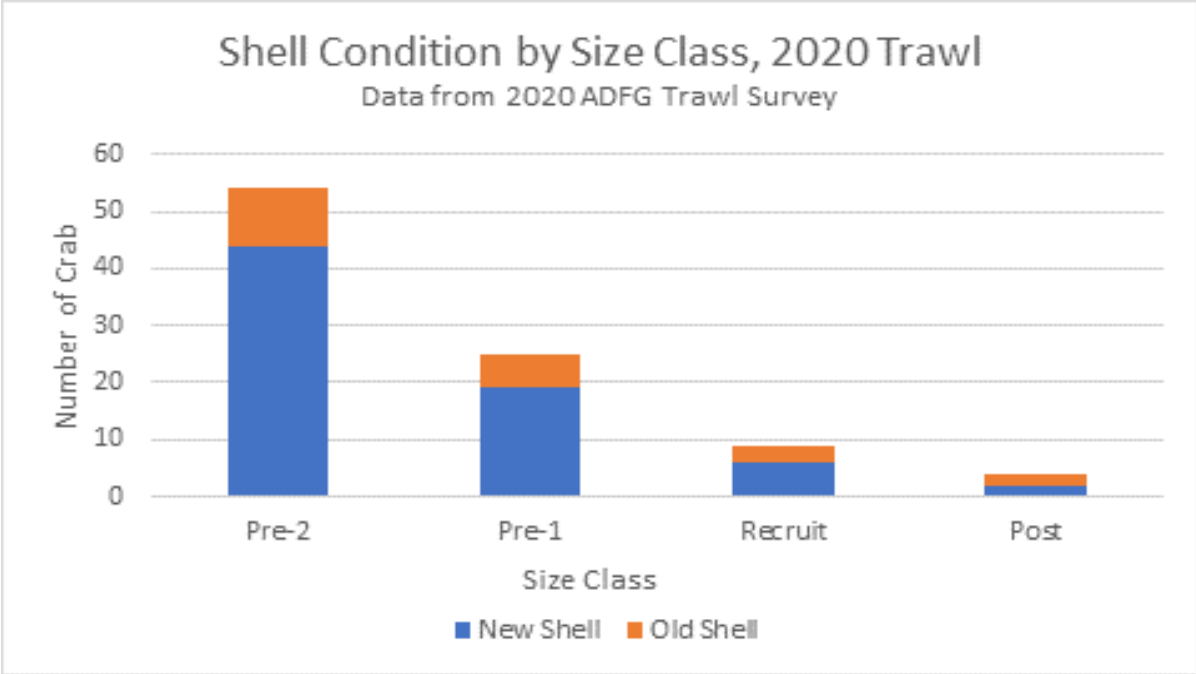
Charlie Lean-Chair, NNSAC

Northern Norton Sound Fish and Game Advisory Comm.

Petition documentation.



The bars on the Male Crab Size by Length graph represent annual cohorts of crab as they approach legal size and grow beyond recruitment. Legal size is measured by 4 ¾ inches carapace width, which is generally accepted to correspond with a carapace length of 104 mm. The commercial market prefers 5-inch carapace width, or approximately 110 mm carapace length. Male crab typically achieve sexual maturity at 78 mm carapace length.



The Shell Condition by Size Class graph shows the proportion of male crab that failed to molt and therefore failed to grow into the next size cohort. A male crab’s ability to grow is affected by their general health and energy reserves. The graph illustrates skip-molt crab are present in unusually high proportions in the sub-legal age classes, indicating that these crab are using energy reserves for mating and therefore failing to molt and grow into subsequent size classes. The current population structure affords smaller males a greater opportunity to mate because post-recruit males, which generally dominate mating activity, are largely absent from the population.

A petition to the Board of Fisheries – 2021

The Northern Norton Sound Fish and Game Advisory Committee (NNSAC) is petitioning the Alaska Board of Fisheries (BOF) to close the Norton Sound commercial red king crab fishery for the 2021 season. The Guideline Harvest Level (GHL) has just been announced at 314,000 pounds, approximately twice the GHL for the 2020 season. The 2020 season closure was based on similar facts and closed the portion of the district where red king crab predominate. The doubling down of the crab management indicates a disregard for the regulation 5AAC 34.080 and the Policy on King and Tanner Crab Resource Management (Policy), upon which the regulation requires crab management to be based. The NNSAC expects fisheries management to conform to the regulations publicly noticed and promulgated by the BOF and the Department of Fish and Game (ADF&G).

On February 10, 2021, the North Pacific Fisheries Management Council (NPFMC) set the allowable biological catch (ABC) and an associated buffer to address the variance of the estimate of legal crab abundance in Norton Sound. The buffer was set at 40%, 10% above the previous year (which itself was 10% above the buffer used in 2019) and at the highest level, indicating a lack of confidence in the population model. The model that is used for this population is unique and lacks the refinements that most other Bering Sea crab population models enjoy. Few biometricians are familiar with the Norton Sound Model, which limits peer review opportunities. The Crab Plan Team (CPT) has pressed for a more transparent model, the GMAX model, for several years. In the last year, the CPT became aware of the high rate of pot loss, the high handling mortality in the winter fishery, and other problems unique to the northernmost commercial crab fishery.

The current estimation of available legal crab is far in excess of the of what one would expect of the 2020 ADF&G trawl survey results. Of the 134 males sampled in the survey, only 10% were of legal size, 16% were estimated to be one year away from legal size, and 40% were two years away from reaching legal size. The model seems to expect crab two years away from legal size to nearly all recruit into legal size. This optimism alongside the recent high skip-molt rate defies logic. The current winter subsistence catches in 2021 are showing low numbers of legal-size crab and virtually no post-recruit crab. Local resource users are frustrated with the poor opportunities for harvesting crab of a size they are accustomed to eating. We find no reason to believe the projections quoted to produce either the ABC or the GHL.

Egg clutch fullness in 2018 and 2019 indicated inadequate fertilization rates by male crab. Data from 2020 indicates that the mature male segment of the population has recovered. However, the legal male population declined in the same interval. This indicates that the bulk of the reproduction by males is being supported by sub-legal crab, some of which are close to recruiting into legal size. The unusually high level of sub-legal skip-molts is likely caused by the elevated energy that mating demands of these crab. This slows the recruitment into legal size and applies genetic selection for small, precocious crab. Again, crab foregoing growth does not support high recruitment.

Kawerak Inc., Norton Sound Economic Development Corporation, NNSAC and the Seward Peninsula Regional Advisory Council all mention how the subsistence fishery, as well as the commercial fishery, have the same desire for normal-sized crab in their comments and letters to the NPFMC. Crab below 5-inch carapace width are roughly half the price of crab larger than 5-inch carapace width.

The Policy requires multiple age classes of legal-sized crab. Developing depth in the legal male population is important for diversity, fertilization of larger females, and the ability to span gaps in recruitment such as those that occurred in 2018 and 2019. The policy states this as a goal of management in order to maintain long-term reproductive viability.

Based on a review of the 2020 trawl survey data and the application of the skip-molt rate, we estimate 80% of male crab are currently sublegal. Approximately 15% are recruit-sized, and 5% are post-recruit sized. The GHL will be primarily dependent on recruit crab. With this size distribution, only one in five crab caught in the Norton Sound fishery will be legal. The market can pay up to double for five-inch carapace crab and often rejects smaller crab. This means that one in ten crab are “keepers”. Handling mortality in the winter commercial fishery will be at record levels if a market develops. We have not had such a low proportion of legal crab in this fishery since 1978. In summation, a recruit-focused fishery, as well as excessive handling mortality, are contrary to regulations.

The constitution of the State of Alaska requires management to provide for “sustained yield management” and “the highest beneficial uses of our fishery resources”. Allowing this crab population to develop mature males of legal size for reproductive purposes and to develop sufficient legal crab larger than the market threshold of five-inch carapace width to fill the GHL are the minimum criteria to declare this stock fully rebuilt.

The Policy on King and Tanner Crab Resource Management approved by this board in March of 1990 provides clear direction on the importance of uninterrupted reproduction, in-season reactions to unanticipated ice movement or other concerns, and the responsibility to provide a sustainable economic opportunity. Alaska code 5AAC 34.080 – “Harvest strategy” makes this a regulation and requires management to conform to the policy. Regulation requires management to monitor the population composition of age and sex to detect irreversible harm to the reproductive potential. Ice movement affecting pot loss rates is specifically mentioned. Caution regarding handling mortality is mentioned. Socio-economic factors like subsistence opportunity and commercial product value are also management’s responsibility.

Nowhere in the Policy is the idea that the GHL be solely a product of the ABC or a population model. Certainly, conducting an orderly fishery is a management responsibility, but even more important is the responsibility to sustain the stock and provide a stable socioeconomic situation for the users of the resource. A recovered stock is in the best interest of subsistence and commercial users alike. The current dependency on a model that clearly has lost the predictive utility to advise management on developing a GHL is irresponsible. We request a closure of the 2021 Norton Sound Red King Crab Season as soon as practical. Biological sustainability and economic viability depend on that action.



Seward Peninsula Subsistence
Regional Advisory Council

Louis Green Jr. Chair

c/o Office of Subsistence Management
1011 E. Tudor Rd. MS121, Anchorage, AK 99503-6199



SP RAC 20024.KD

NOV 10 2020

David Witherell
Executive Director
North Pacific Fishery Management Council
1007 West Third, Suite 400
Anchorage, Alaska 99501

Dear Mr. Witherell,

The Seward Peninsula Subsistence Regional Advisory Council (Council) is writing regarding management of the Red King Crab fishery in Norton Sound. The commercial fishery was closed during the latter part of the 2020 season due to concerns over the lack of mature male crabs and lower than expected harvests. Subsistence users experienced one of the worst Red King Crab harvests on record. The Council is requesting that the North Pacific Fishery Management Council (NPFMC) recommend continued closure of the commercial fishery during the 2021 season for the reasons explained below.

The Council represents subsistence harvesters of fish and wildlife resources on Federal public lands and waters of the Seward Peninsula. The Councils were established by authority in Title VIII of the Alaska National Interest Lands Conservation Act (ANILCA), and chartered under the Federal Advisory Committee Act. Section 805 of ANILCA established the Council's authority to initiate, review, and evaluate proposals for regulations, policies, management plans, and other matters related to subsistence uses of fish and wildlife within the region. The Council also reviews resource management actions occurring outside its region that may affect subsistence resources critical to communities served by the Council. The Council provides a forum for the expression of opinions and recommendations regarding any matter related to the subsistence uses of fish and wildlife within the region.

At its fall meeting held October 27-28, 2020 via teleconference, the Council heard from multiple government and private individuals regarding updated biological data for Red King Crab in Norton Sound. A recent trawl survey conducted by the Alaska Department of Fish and Game (ADF&G) showed that the estimated numbers comprising the female cohort and their average clutch size were larger and closer to normal than those observed in the past few years. ADF&G believes that many male Red King Crab increased in biological size this past year and were able to successfully mate with mature females. Charlie Lean, Chair of the Northern Norton Sound Fish and Game Advisory Committee, however, stated that the survey only observed three-quarters of the legal-sized males compared to the previous year. Mr. Lean also stated there is still concern that approximately one-third of mature males are failing to molt and grow because they are spending physical resources breeding. There continues to be a significant lack of mature males to mate with females. This discrepancy, combined with last season's reduced rate of egg fertilization and the market demand for larger than legal size crabs, will likely result in limited commercial fishing opportunities in the near future. Mr. Lean also shared that while some recruitment will occur this year, the majority of legal size crab readiness will occur in 2022 and thereafter. ADF&G

representatives indicated that although the population of legal size male crabs are currently at a low point, some younger crabs will molt or are molting, and expected to grow to legal size this coming year.

The current Red King Crab commercial fishery closure will sunset in December, 2020. ADF&G indicated that a commercial harvest quota for next season is already in place, beginning through the ice in February and continuing through the summer. The Council was informed that the Crab Planning Team's recommendations to the NPFMC will be an Allowable Biological Catch of close to 400,000 Red King Crabs, up nearly 200,000 from last year. The Guideline Harvest Level (GHL) for legal-sized Red King Crab may go up 100,000 pounds from last year's GHL of 170,000. The Council is deeply concerned with the increased GHL recommendation, particularly given that commercial crabbers were only able to harvest 80,000 pounds of the 170,000 Red King Crab GHL in 2020.

The Council believes that allowing both a winter and summer commercial fishery at these levels could harvest most legal-sized crabs, and result in the mortality of many of the sublegal and below market sized crabs during sorting. Handling mortality during winter months is particularly high since frost injury is likely to occur before undersized crab are returned to the water. Additionally, the market for Norton Sound Red King Crab requires crabs to be 5 inches across the carapace rather than the legal requirement of 4.75, meaning half of legal recruitment could be subject to handling mortality. Both the subsistence and commercial users of this resource are opposed to this marginal fishery because the vast majority of crabs being handled are sublegal or are unmarketable.

ADF&G reported that subsistence harvest of Norton Sound Red King Crabs peaked this past decade. Sizable decreases in harvest began in 2017 and 2018, with only 4,000 Red King Crabs harvested by Norton Sound subsistence users in 2019. In 2020, there was a subsistence take of just 1,200 Red King Crabs in Norton Sound, representing the lowest subsistence harvest in twenty years. Effort was also low, either because some users thought the season was closed to subsistence harvest or users were not interested in small crabs and throwback females. Only 80 permits for subsistence crab fishing were issued by ADF&G in 2020. This is a result of limited harvest opportunity.

Council members and other subsistence users are extremely frustrated with the inability to harvest this important traditional subsistence resource, despite the fact that the subsistence crab fishery is open 365 days a year with no size or catch limit. Users reported either a complete absence of crabs altogether, or that any good size crabs were extremely difficult to locate. One subsistence crabber noted he only caught 20-30 crabs when 200 was the customary harvest needed to feed his family.

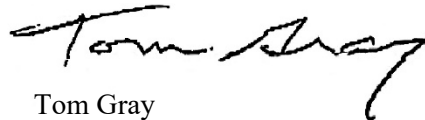
The Council is also very disturbed that ADF&G and others are only "speculating" that the current population of sub-legal crabs will molt this year and become legal during the upcoming fishing season. This was considered by the Council to be a high risk gamble for a currently depleted resource, and should not be the driving factor behind opening up the crab fishery in 2021 to commercial use. The Council highly recommends that managers review available crab survey data collected in 2021, and based upon that review, recommend whether or not to open the commercial fishery in 2022. The Council is convinced that years of overharvest have resulted in the collapse of this fishery, and strong conservation measures are necessary to ensure its viability in the future. If commercial harvest is allowed to continue, it could result in the loss of a robust Norton Sound Red King Crab population for many years to come. Furthermore, last year's observed reduced reproduction will likely contribute to poor recruitment within the next seven or eight years. The Council believes there may also be environmental impacts to the crab population from warming ocean temperatures and contamination. In addition to acquiring reliable 2021

Norton Sound Red King Crab population data, the Council is requesting that research be conducted to further understand how changes to the ocean environment may be adversely affecting the resource.

In conclusion, the Council is strongly opposed to opening the Norton Sound Red King Crab commercial fishery in 2021. The Council requests that the NPFMC work with ADF&G, the Board of Fish (BOF), and others to close the Red King Crab fishery in Norton Sound, while encouraging continued research and monitoring for the recovery of this population before opening to any further commercial uses. The Council believes that commercial fishing for Red King Crab in Norton Sound should only be open when there is scientific evidence that the male legal-sized portions of the crab population have reached sustainable levels. Most importantly, successful subsistence harvest based on historic use and needs should unequivocally be considered as an indicator of when commercial fishing can resume. Otherwise, failure by ADF&G and the BOF to provide adequate subsistence opportunities for Red King Crab is contrary to management for a subsistence priority for this resource in both State and Federal law.

Any questions regarding this letter can be addressed to me through our Council Coordinator, Karen Deatherage at (907) 786-3564 or karen_deatherage@fws.gov.

Respectfully,



Tom Gray
Acting Chair

cc: Federal Subsistence Board

Seward Peninsula Subsistence Regional Advisory Council

Susan Detwiler, Assistant Regional Director, Office of Subsistence Management

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Thomas Kron, Acting Council Coordination Supervisor, Office of Subsistence Management

George Pappas, ADF&G Liaison, Office of Subsistence Management

Karen Deatherage, Subsistence Council Coordinator, Office of Subsistence Management

Mark Burch, Special Projects Coordinator, Alaska Department of Fish and Game

Benjamin Mulligan, Deputy Commissioner, Alaska Department of Fish and Game

Jim Menard, Norton Sound Area Commercial Fisheries Management Biologist,

Alaska Department of Fish and Game

Charlie Lean, Chair, Northern Norton Sound Fish and Game Advisory Committee

Brandon Ahmasuk, Vice-President of Natural Resources, Kawerak, Inc.

Scott Kent, Quota & Acquisitions Analyst, Norton Sound Economic Development Corporation

Interagency Staff Committee

Administrative Record