

## Memorandum

Date: April 14, 2020

To: Charlton H. Bonham  
Director  
Department of Fish and Wildlife

From: Craig Shuman, D. Env  
Marine Regional Manager 

Subject: **Commercial Dungeness Crab Entanglement Risk Assessment**

On April 9, 2020 the California Dungeness Crab Fishing Gear Working Group (Working Group) met to review available data and provide a recommendation to the Director based on the Risk Assessment and Mitigation Program (RAMP) framework. Based on this review and with additional support from RAMP factor experts, the four RAMP factors were evaluated by the Working Group as follows:

The Working Group provided an overall risk assessment across all four RAMP factors:

- In the Northern Management Area (NMA), overall risk is low (consensus)
- In the Central Management Area (CMA), overall risk is low (majority); overall risk is moderate (minority); with abstentions

Based on analysis of individual risk factors, the Working Group determined the following:

- Entanglement: Risk is low
- Marine Life Concentrations:
  - Blue Whales: Risk is low
  - Pacific Leatherback Sea Turtles: Risk is low
  - Humpback Whales
    - NMA: Risk is low
    - CMA: Risk is low (majority); Risk is moderate (minority); with abstentions
- Ocean and Forage Conditions: Risk is low
- Fishing Dynamics: Risk is low

Based on the above risk assessment, the Working Group finalized a recommendation on April 13, 2020 to inform the Director's April 15, 2020 risk determination. A majority of the Working Group did not recommend any additional mandatory management measures at this time for either the CMA or NMA. A minority recommended a precautionary management approach in the CMA. The Working Group continues to encourage commercial and recreational Dungeness crab fishery participants to use best practices, as outlined in their current Best Practices Guide. The Working Group also encourages active efforts to reduce lost or abandoned gear, while keeping in mind health and safety considerations.

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Marine Region staff have independently reviewed all available data and the risk assessment factors. Based on independent analysis of those factors, Marine Region has assessed that the risk of entanglement is elevated and increasing based on the marine life concentration factor and historical migration patterns. As a result, Marine Region recommends that commercial Dungeness crab fishing be closed earlier than the statutorily defined closing date of June 30 in the CMA to help minimize risk. This recommendation is further supported by the frequent occurrence of spring whale entanglements. Since 2013 there have been a total of 21 Humpback Whale entanglements observed during the spring months (March-June). All years except 2013 and 2019 recorded confirmed entanglements with commercial Dungeness crab gear during this period, noting that the season closed early on April 15<sup>th</sup> in 2019.

During the risk assessment, Marine Region staff requested that the Working Group provide a recommendation for how a fishing closure might be implemented if, or when, the Director determines risk is elevated in the CMA. The industry representatives on the Working Group indicated that four weeks will be needed to remove all gear due to two primary factors. The first involves current restrictions due to COVID-19 physical spacing and shelter at home orders affecting boat and needed infrastructure operations. The second is the oceanographic forecast for strong coastal winds which may limit safe vessel operating conditions. Gear retrieval during available weather windows is anticipated to occur less efficiently than normal due to the COVID-19 impacts on vessel operations, and therefore safe gear retrieval is anticipated to take longer than during normal conditions. COVID-19 combined with weather factors are important human health and safety considerations in determining the amount of time the fleet requires to safely remove gear from the water.

Given the increasing risk and four-week removal timeframe due to COVID-19, Marine Region recommends that the CMA (Districts 10, 17 and south) be closed on May 15, 2020 at 11:59 pm. This will give the fleet approximately four weeks to remove all gear and land Dungeness crab while reducing the risk of entanglements. The next risk assessment is scheduled to occur on May 1st. If no action is taken now, the earliest the season could close with a four-week closure period would be early June. Given the circumstances surrounding COVID-19 and the request to allow at least four weeks to remove gear, any additional delays beyond the May 15th date will result in an unacceptable risk of entanglement. Implementing a closure for May 15th allows for a safe and orderly removal of gear and takes a balanced approach to reducing entanglement risk and health and human safety.

**Attachments:**

- RAMP Working Group – Management Recommendation – 04/13/2020
- RAMP Available Data – Risk Assessment – 04/7/2020

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