


## Memorandum

Date: March 13, 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 March 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:

- Entanglement: risk is low
- Marine life concentrations: risk is low
- Ocean conditions and forage: risk is low
- Fishing dynamics: risk is low

Based on the above risk assessment, the Working Group finalized a recommendation on March 11, 2020 to inform the Director's March 15, 2020 risk determination. The Working Group recommended that the season remain open state-wide past April 1, 2020, and did not recommend any management action by the CDFW Director at this time. 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. They also requested that the department continue to monitor available data that can inform a change to the risk assessment, including aerial surveys for large whales and seas turtles.

One of the benefits of the RAMP is the ability to evaluate risk informed by historical information in conjunction with real-time data. Available data indicate that current conditions are different than the conditions that were associated with high rates of entanglements in previous years. Assessments of ocean and forage conditions suggest a typical spring upwelling ecosystem, favoring expanded cool habitat and increased concentration of krill abundance. This, as noted by the Working Group experts, indicates an overall lower risk of whale entanglement compared to previous years. In addition, although there have been above-average rates of whale entanglements in previous seasons that experienced abnormal conditions, there have been no entanglements in known Dungeness Crab gear during the current 2019-20 season.

Marine Region staff have independently reviewed all available data and the risk assessment factors. Based on this independent analysis, Marine Region agrees with the Working Group's risk assessment and does not recommend any additional

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management measures at this time. However, given historic whale migration patterns, Marine Region recommends alerting the fleet to expect and prepare for a management change if/when data indicate there is an elevated risk as humpback whales typically begin to return to the Central Coast during the months of April and May. Staff will continue to monitor all available data sources, which includes conducting an aerial survey prior to convening the Working Group for the next risk assessment determination on April 1, 2020.

**Attachments:**

- RAMP Working Group – Management Recommendation – 03/11/2020
- RAMP Available Data – Risk Assessment – 03/05/2020

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