

California Dungeness Crab Fishing Gear Working Group (Working Group) Risk Assessment and Mitigation Program (RAMP) 2019-20 Management Recommendations Form

Discussion Date: May 26, 2020; Recommendation Finalized: May 28, 2020

The Working Group requests this recommendation and supporting information be considered by the California Department of Fish and Wildlife (CDFW) Director prior to any upcoming risk determination.

A. Identified risk(s) and severity

Based on the information available during the May 26, 2020 discussion, the Working Group's risk assessment associated with the four RAMP factors is as follows:

- **Ocean and Forage Conditions: Risk remains low**
- **Entanglement**
 - Risk is moderate in Central Management Area (CMA) fishing districts¹ 10 and 17
 - Risk remains low in CMA fishing districts 18 and 19 and the Northern Management Area (NMA; fishing districts 6-9)
- **Fishing Dynamics: Risk remains low**
- **Marine Life Concentrations**
 - Risk remains low for humpback whales, blue whales, and leatherback sea turtles in the NMA
 - Risk is elevated for humpback whales in fishing district 10; the group was unable to reach a determination for the risk of humpback whales in the remainder of the CMA
 - Risk remains low for blue whales and leatherback sea turtles in the CMA

¹ <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=147314&inline>

Rationale supporting this risk assessment is provided in Section B. The Working Group also provided an overall risk assessment across all four RAMP factors as low for humpback whales, blue whales, and leatherback sea turtles in both the CMA and NMA. Rationale for the overall risk assessment, and recommended management measures, is provided in Section C.

B. Available information

The Working Group's discussion was informed by the Data Compilation² provided by CDFW, in partnership with Working Group advisors, on May 22, as well as additional real-time contributions during the May 26 discussion. Rationale and key information which informed the assessment are summarized below for each factor.

Ocean and Forage Conditions – Rationale

- Working Group advisors reported no change in oceanographic and forage indices since those shared during the May 11 risk assessment. Due to COVID-19 restrictions, spring research surveys which would typically allow quantitative validation of predicted conditions have not been conducted.
- The Working Group highlighted that more discussion is needed to fully understand the entanglement risk implications of both high krill production/strong upwelling (considered lower risk) and high anchovy abundance (considered higher risk).
- During the CDFW aerial surveys on May 19 and 21, multiple bait balls (presumed to be anchovies) were seen between Monterey Bay and the Gulf of the Farallones. Whales were observed foraging on the bait balls, and occasional krill patches were also seen. *Mola mola* were observed between Point Reyes and Point Pinos.
- Fishermen reported abundant sardines in Monterey Bay, which are being incidentally caught by squid boats.
- Given the overarching consistency between current ocean and forage conditions and those during the May 11 risk assessment, the Working Group determined risk remains low.

² <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=179099&inline>

Entanglement (Humpback Whales, Blue Whales, Leatherback Sea Turtles) - Rationale

- A humpback whale entanglement reported on May 16 off Moss Landing has been confirmed as being with California commercial Dungeness crab fishing gear.
- Based on reports from the entanglement response team and follow up conversations between CDFW and the two fishermen whose gear was involved, the entanglement appears to have occurred in two stages. The preliminary assessment indicates there was an initial entanglement with a single trap, set in about 40 fathoms, 4-6 weeks ago somewhere between Bodega Bay and Point Reyes. An additional four traps were likely picked up near Moss Landing shortly before the entanglement was reported.
- The entanglement response team was able to remove all 5 traps comprising the entanglement. Based on the condition of the whale at the time the gear was removed, the entanglement response team believes the whale is injured and likely to survive.
- Based on the suspected locations where the entangling gear was set and where additional gear was picked up, risk is elevated in fishing districts 10 and 17. Risk remains low in the NMA and other portions of the CMA.

Fishing Dynamics - Rationale

- Trap gear was observed in both the CMA and NMA during the CDFW aerial surveys on May 19 and 21. While positively identifying commercial Dungeness crab gear during aerial surveys is challenging, combined with reports from CDFW patrol vessels these sightings suggest some amount of lost or abandoned commercial Dungeness crab gear within the CMA.
- The uptick in vessel activity during the week of May 3 (see Figure 2) reflects the spring fishery in the NMA and, for the CMA, vessels making their final landings when bringing in their gear for the season.
- Risk is low in the CMA as there is no fishing activity due to the May 15 closure, and risk is low in the NMA due to low commercial fishing effort.

Marine Life Concentrations (Humpback Whales, Blue Whales, Leatherback Sea Turtles)- Rationale

- Satellite tagging information indicates leatherback sea turtles have not yet returned to Dungeness crab fishing grounds, therefore risk is low for leatherback sea turtles in both the NMA and CMA.
- No blue or humpback whales have been reported in the NMA, therefore risk is low for blue and humpback whales in the NMA.
- Recent sightings of blue whales within the CMA were limited to shelf waters in the Gulf of the Farallones (see Figure 6), which aren't typically used by the Dungeness crab fishery. Therefore, risk based on blue whale concentrations in the CMA was determined to be low.
- Recent vessel and aerial surveys indicate increasing presence of humpback whales within fishing district 10. Risk based on humpback whale concentrations within this district was determined to be elevated rather than specifying either moderate or high as those thresholds are based on information from Monterey Bay Whale Watch, which was not provided for this risk assessment.
- The group was unable to determine risk based on humpback whale concentrations in the remainder of the CMA (fishing districts 17, 18 and 19) because of disagreement on how to apply observations within portions of the CMA to other fishing districts.

C. Management recommendation(s)

The Working Group's overall assessment of risk across all four RAMP factors was low for both management areas. While risk was moderate for humpback whales in district 10, the 2019-20 commercial season is already closed and will not reopen; therefore, overall risk was deemed low in the CMA. In the NMA, risk was assessed as low for each factor, prompting an overall assessment of low risk with some remaining fishing activity. Given the overall assessment of risk as low for both management areas, the Working Group does not recommend any mandatory management measures at this time.

The Working Group recommends the fleet use best practices, as outlined in current Best Practices Guide³, for the remainder of the season in the NMA. This includes avoiding areas with bait balls, krill swarms, or other signs of potential co-occurrence. Fishery participants should pull gear promptly once done fishing for the season, and the Working Group recommends fishery participants take advantage of existing opportunities for retrieval of lost or abandoned gear (Section 132.2, Title 14, CCR). The Working Group also intends to discuss potential modifications to the CDFW Trap Gear Retrieval Program (Section 132.7, Title 14, CCR) to consider in-season gear retrieval opportunities.

In the CMA, the Working Group encourages industry participation in the CDFW Trap Gear Retrieval Program to reduce entanglement risk from lost or abandoned commercial Dungeness crab fishing gear. The Working Group requests commercial and recreational ocean users report locations of lost or abandoned commercial Dungeness crab gear to CDFW to further facilitate retrieval.

The Working Group noted that recreational Dungeness crab fishing effort typically declines in the spring, reducing risk of marine life entanglement as gear is removed. Some members expressed concern that COVID-19 restrictions may impact access to harbor launch ramps, preventing tending and removing of recreational Dungeness crab gear in some areas.

The Working Group also highlighted the ongoing need for enhanced data collection, including aerial surveys, vessel surveys, and solar loggers, particularly for geographic areas where information is limited or not available.

D. Alternatives

The Working Group arrived at the above risk assessment and recommendations by consensus. No minority recommendations were expressed.

³ http://www.opc.ca.gov/webmaster/_media_library/2019/11/2019-20_BPG_Final.pdf