

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

Discussion Date: April 27, 2020 Recommendation Finalized: April 29, 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 April 27, 2020 discussion, the Working Group's risk assessment associated with the four RAMP factors is as follows:

- **Entanglement: Risk is low**
- **Ocean and Forage Conditions: Risk is low**
- **Fishing Dynamics: Risk is low**
- **Marine Life Concentrations**
 - Blue whales: Risk is low
 - Leatherback sea turtles: Risk is low
 - Humpback whales
 - Northern Management Area: Risk is low (consensus)
 - Central Management Area: Risk is low (majority); Risk is moderate (minority); with abstentions

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

- **In the NMA, overall risk is low (consensus)**
- **In the CMA, overall risk is low (majority); overall risk is moderate (minority)**

Rationale supporting the consensus portions of the risk assessment, and the majority assessments for humpback whales in the CMA and overall risk, are provided in Section B. The majority recommendation regarding suggested management measures is provided in Section C. The minority rationale for their assessments of humpback whales in the CMA and overall risk, and the recommendation regarding suggested management measures, is provided in Section D.

B. Available information

The Working Group's discussion was informed by the Data Compilation¹ provided by CDFW, in partnership with Working Group advisors, on April 23, as well as additional real-time contributions during the April 27 discussion. Rationale and key information which informed the assessment are summarized below for each factor.

Entanglement (Humpback whales, Blue whales, Leatherback sea turtles)

- There have been no confirmed entanglements in California commercial Dungeness crab gear during the current season; therefore, risk is low.
- Three confirmed entanglements have occurred since the Working Group's April 9 discussion. Two (included in the Data Compilation) were humpback whales (one in spot prawn gear; one in unidentified gear, likely gillnet). An additional entanglement on April 24 involved a gray whale in Washington commercial Dungeness crab gear.

Ocean and Forage Conditions

- Based on guidance from their advisors, the Working Group considered information shared in the April 7 Data Compilation² as well as on-the-water reports from some fishery representatives.
- Due to COVID-19, traditional spring surveys by National Marine Fisheries Service have been postponed. While additional samples cannot be collected, risk can still be assessed by relying on well-established correlations between oceanographic factors and krill/anchovy abundance observed and analyzed during previous years.

¹ <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=178585&inline>

² <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=178216&inline>

- Abundant cool water habitat and high krill production along the outer shelf provide broadly distributed offshore foraging opportunities for humpback and blue whales and suggest risk is low.
- Some risk may exist due to nearshore aggregations of anchovy both to the south of Point Reyes and nearshore. However, on-the-water reports from fishermen suggest anchovies are located in deeper waters (~ 240 feet) in Monterey Bay while all gear in that area has been moved to shallower waters.

Fishing Dynamics

- Both CDFW landings data and a port survey conducted by the California Coast Crab Association on April 23, 2020 indicate declining fishing effort.
- On-the-water reports from Trinidad, Bodega Bay, San Francisco, Half Moon Bay, Moss Landing and Morro Bay/Port San Luis indicate many fishermen are stacking out their gear, and that remaining effort is primarily in shallow waters (5-40 fathoms, depending on the area).
- Being able to offer a variety of products, including Dungeness crab, is important for fishermen who are offering direct sales to consumers. Despite a recent uptick in demand for Dungeness crab as restaurant markets pivot towards take-out options, uncertainty surrounding COVID-19 (in addition to transition to other spring fisheries) had prompted many fishermen to conclude participation for this season.

Marine Life Concentrations (Humpback whales, Blue whales, Leatherback sea turtles)

- Leatherback sea turtles have not yet returned to Dungeness crab fishing grounds; therefore risk remains low.
- No blue whales have been observed since mid-December 2019, consistent with their southward winter migration; therefore risk remains low.
- CDFW aerial surveys on April 24 (Oregon border to Point Reyes) and April 25 (Point Reyes to Carmel Bay) documented humpback whales off Point Reyes (both days) and Santa Cruz (April 25). Due to very challenging weather conditions resulting in limited visibility, these are qualitative reports (quantitative counts are not available).

- While limited, available information indicates low presence of humpback whales north of Point Reyes; therefore, risk is low in the NMA.
- Due to the potential for counting the same individual whale during vessel surveys on different days, Working Group advisors suggested the Working Group use the half-day Monterey Bay Whale Watch (MBWW) counts in Figure 1 to assess how many humpback whales were observed in Monterey Bay and the maps in Figures 5 and 6 to assess the spatial distribution of observations.
- Over the 7-day period ending on April 21 (Figure 6), humpback whales were broadly distributed among Monterey Bay habitats, including over the canyon and in nearshore waters. This suggests they are investigating available foraging opportunities within the bay, and may later congregate in high-value foraging areas.
- The majority expressed that available information has not changed since the April 9 risk assessment. In particular, there is still not agreement among all data sources related to the relative abundance of humpback whales in the CMA. Therefore, the majority concludes there is no change in risk, and risk remains low.

C. Management recommendation(s)

The Working Group does not recommend mandatory management measures at this time. As described above, a majority of Working Group members concluded overall risk is low. In particular, any potential risk from humpback whale presence in the CMA is mitigated by the low risk from changes in fishing activity (continued removal of fishing gear, remaining fishing activity occurring in shallow waters) and broadly distributed foraging opportunities. Given the pending CMA closure and current weather conditions, imposing additional management measures between May 1 and May 15 (e.g. trap reductions) would be unduly burdensome. Based on the above assessment of risk, the majority believes that there is no substantive basis that the overall risk is anything except low and therefore an early closure of the CMA is not warranted.

Two individuals who supported the minority assessment of moderate risk for humpback whale concentrations in the CMA (see Section D) supported the majority assessment of overall low risk in the CMA due to the continued removal of fishing gear, and joined the majority's recommendations for management measures.

The Working Group made a consensus recommendation for fishery participants in both management areas to use best practices, as outlined in their current Best Practices Guide³, including 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. The Working Group recommends that CDFW implement the Trap Gear Retrieval Program (Section 132.7, Title 14, California Code of Regulations) in the CMA as soon as possible, including announcing the program start date. The Working Group also encourages industry participation in the Trap Gear Retrieval Program to reduce entanglement risk from lost or abandoned commercial Dungeness crab fishing gear.

D. Alternatives

A minority of the Working Group, four members, assessed risk for humpback whales in the CMA as moderate rather than low. A substantially greater number of trips were conducted to inform the MBWW values for this assessment compared to those for the April 9 risk assessment. The recent MBWW data show humpback whale presence within Monterey Bay continues to be within the Working Group's Risk Assessment Framework moderate range for a running average over a one-week period of 5-20 whales. Overall, humpback whale presence is higher than during the April 9 risk assessment, and at least four of the half-day trip observation counts in the last two weeks have exceeded 20 whales per trip.

Two of the four individuals who supported the moderate risk assessment of humpback whales in the CMA joined the majority assessment of overall risk in the CMA as low. The other two individuals supported a minority assessment of overall risk in the CMA as moderate. Historical patterns (see Appendix 1 of the April 7 Data Compilation) show it is common to have at least one entanglement in California commercial Dungeness crab gear during March - June. Furthermore, any entanglements which may occur are less likely to be detected due to COVID-19 restrictions on ocean users. This highlights the need for a precautionary approach. Therefore, this minority recommends the CDFW Director uphold the May 15 closure of the CMA.

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