

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

*Discussion Date: April 9, 2020 Recommendation Finalized: April 14, 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 9, 2020 discussion, the Working Group's risk assessment associated with the four RAMP factors is as follows:

- **Entanglement: 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
  
    - Central Management Area: Risk is low (majority); Risk is moderate (minority); with abstentions
  
- **Ocean and Forage Conditions: Risk is low**
  
- **Fishing Dynamics: Risk is low**

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); with abstentions**

Rationale supporting the consensus portions of the risk assessment, and the majority assessment for humpback whales in the CMA as well as overall risk, are provided in Section B. The majority recommendation regarding suggested management measures is provided in Section C. The minority rationale for humpback whales in the CMA, overall risk, and suggested management measures are provided in Section D. At the request of CDFW staff, the Working Group also discussed a contingency plan should the Director determine a closure of the CMA was warranted, which is provided in Section E.

## **B. Available information**

The Working Group's discussion was informed by the Data Compilation<sup>1</sup> provided by CDFW, in partnership with Working Group advisors, on April 7, as well as additional real-time contributions during the April 9 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 fishing season.
- Available information indicates no changes since the previous Working Group discussion; therefore, risk remains low.

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

- CDFW conducted an aerial survey on April 8, 2020 using a zig-zag pattern between Crescent City and Point Reyes. Due to COVID-19 restrictions, the pilot flew unaccompanied, and qualitative observations were reported to the group as a verbal summary. A group of humpback whales was seen relatively close to shore off Point Reyes, with no humpback whales seen in the NMA.
- On-the-water reports from fishermen based in NMA ports further support the absence of humpback whales in the NMA.
- Due to lower frequency of trips within Monterey Bay (research-only rather than routine whale watching operations due to COVID-19), the Monterey Bay Whale

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<sup>1</sup> <http://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=178216>

Watch (MBWW) running average was compiled over a two-week rather than one-week period, and includes 4 trips between March 21 and April 4, 2020. The data set is smaller than during the previous month, when there were 9-14 trips per week, or 23-28 trips per two-week period. Karin Forney (National Marine Fisheries Service, Southwest Fisheries Science Center) standardized these trips to the same half-day unit used in previous summaries, and advised using the longer time period to increase the utility of this data. The average of 16.12 humpback whales falls within the Working Group's Risk Assessment Framework (RAF) moderate range of 5-20 whales.

- The two earlier MBWW trips found humpback whales in deeper water (> 100 fathoms) west of Point Pinos, and the more recent trips found humpbacks in shallower waters (< 100 fathoms) inside Monterey Bay.
- Data gathered at the Farallon Islands (3/6/2020 - 4/6/2020) show one observation of a single humpback whale, and data gathered in Monterey Bay (3/7/2020 - 4/7/2020) show multiple observations totaling 25 humpback whales in Figures 8 and 9 respectively. Additional vessel-based sightings information from both locations shared on the call indicate whales were located in deeper waters (> 100 fathoms) in late March 2020 and then began moving into shallower waters (< 100 fathoms) in April.
- On-the-water reports from fishermen based in CMA ports (including San Francisco, Half Moon Bay, and Monterey) reported few or no whales during recent fishing and transiting activity, including no whale sightings during the past week around Point Lobos, Morro Bay, and Avila.
- No blue whales have been observed since mid-December 2019, consistent with their southward winter migration (Figure 4); therefore, risk remains low for blue whales.
- Leatherback sea turtles have not yet returned to Dungeness crab fishing grounds; therefore, risk remains low for leatherback sea turtles.

### *Ocean and Forage Conditions*

- Oceanographic indices show an improvement in the amount of cool water compared to the previous four years. These conditions suggest strong krill production along the outer shelf, particularly relative to the very low levels last year, which will provide offshore foraging opportunities for both humpback and blue whales.
- Squid eggs have been observed on some commercial Dungeness crab traps; because squid and krill production are influenced by the same oceanographic conditions, this provides further evidence indicating high krill abundance this year.
- Abundant anchovy towards the southern portion of Dungeness crab fishing grounds will provide additional foraging opportunities for humpback whales and may draw some of them into nearshore waters.

### *Fishing Dynamics*

- Both CDFW landings data and a port survey conducted by the California Coast Crab Association (CCCA) on April 8, 2020 indicate declining fishing effort. Remaining activity is highest in Crescent City and Trinidad.
- Fishery representatives report minimal Dungeness crab fishing activity within Monterey Bay, and that the remaining gear does not overlap with the whale sightings shown in Figure 9.
- Fishery representatives report large portions of the fleet are preparing to switch to the salmon fishery. Individuals who continue to fish for Dungeness crab will likely bring their gear inside of 30 fathoms to avoid gear conflict with salmon trollers; this trend was also indicated by the CCCA survey.

### *Overall Risk*

- Absence of whale sightings, coupled with the location of fishing effort and abundant offshore foraging opportunities, suggests overall risk is low in the NMA.
- Humpback whale presence appears to be increasing in the CMA, however there is not agreement among all data sources. The majority interpreted available data as reflecting a lack of overlap in humpback whale sightings and fishing effort location.

Risk is further mitigated by the relatively low amount of gear in the water and abundant offshore foraging opportunities.

### **C. Management recommendation(s)**

The Working Group does not recommend mandatory management measures at this time because, as described above, a majority of the Working Group concludes the overall risk is low, which is supported by a unanimous determination of low risk across three of the four RAMP factors and a majority recommendation of low risk for one factor. The Working Group continues to encourage commercial and recreational fishery participants to use best practices, as outlined in their current Best Practices Guide<sup>2</sup>, including avoiding fishing in areas with whales or where other conditions suggest potential co-occurrence. The Working Group also encourages active efforts to reduce lost or abandoned gear, while keeping in mind regulatory restrictions on recovery, as well as health and safety considerations.

### **D. Alternatives**

A minority of the Working Group, two members, assessed risk for humpback whales in the CMA as moderate rather than low. Humpback whale presence within Monterey Bay is towards the upper end of the Working Group's RAF moderate range, as well as the historic range for this time period (Figure 2), and has increased substantially from prior periods. Additionally, the CDFW aerial survey documented several humpback whales off Point Reyes. Both vessel-based and aerial surveys have documented humpback whales in relatively nearshore waters, where due to limited information it is unclear if humpback whale distribution overlaps with commercial Dungeness crab gear.

The Working Group's RAF moderate risk criteria for humpback whales in the CMA informed the minority's assessment of overall moderate risk for this management area. Appendix 1 of the Data Compilation shows it is common to have at least one entanglement in California commercial Dungeness crab gear during March-June, with multiple during four out of the last seven years. In the minority's opinion, these historical patterns highlight the need for a precautionary approach, particularly since the CDFW aerial survey covered only a portion of the CMA and there is uncertainty regarding the spatial overlap of humpback whales and Dungeness crab fishing gear.

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<sup>2</sup> [http://www.opc.ca.gov/webmaster/\\_media\\_library/2019/11/2019-20\\_BPG\\_Final.pdf](http://www.opc.ca.gov/webmaster/_media_library/2019/11/2019-20_BPG_Final.pdf)

The minority supported both the voluntary measures in Section C above and the CMA contingency plan outlined in Section E below.

#### E. Contingencies

CDFW staff requested input from the Working Group as to how a closure of the CMA should be communicated and implemented, should the Director determine it is necessary. While the majority of Working Group members are of the strong belief that there is no need for this contingency plan because of, as explained above, their assessment of overall low risk and low risk for each RAMP factor which results in no recommended mandatory management measures at this time. However, should the Director determine a closure is required, the Working Group developed the following plan by consensus.

Should the CDFW Director determine that risk is elevated in the CMA and a closure is required, the Working Group recommends a one-month period for gear removal and that crab may continue to be landed during this time. The two-week period in 2019 was very challenging for fishery participants, particularly for smaller vessels with fewer crew members and limited deck space to stack pots during a given trip. Given the additional challenges posed by COVID-19, some fishermen may not have any crew assistance removing gear this fishing season. Sustained upwelling-driven winds are expected this spring, increasing weather-related vessel safety concerns. Due to both COVID-19 and weather conditions, the Working Group recommends a one-month for gear removal, and that crab can continue to be landed until the last day that gear must be out of the water.

Additionally, the Working Group recommends that CDFW communications clearly articulate how the closure will be enforced, and include reminders regarding the waiver process under Section 132.2, Title 14, CCR allowing vessels to receive assistance retrieving their pots.