



California Department of Fish and Wildlife Final Assessment of Marine Life Entanglement Risk and Management Recommendation

Date: December 7, 2022

An initial assessment and a preliminary recommendation were developed by California Department of Fish and Wildlife (CDFW) Marine Region staff for consideration by the California Dungeness Crab Fishing Gear Working Group for the Risk Assessment Mitigation Program (RAMP; Section 132.8, Title 14, California Code of Regulations) regarding Management Actions to address marine life entanglement risk in the commercial Dungeness crab fishery as well as Section 29.80, Title 14, California Code of Regulations (Gear Restrictions for Recreational Take of Saltwater Crustaceans). The initial assessment was shared with the Working Group on December 6, 2022 and finalized at the conclusion of the Working Group meeting on December 7, 2022 based on discussions with the group.

A. Confirmed Entanglements and Marine Life Concentrations Triggers for Management Action, RAMP subsection (c)

In-season Confirmed Entanglement accounting is not available because the fishery is not currently open. The current Impact Score for calendar year 2022 is 4.15 for humpback whales. The Impact Score for calendar year 2021 was 1.89 for humpback whales. As a result, CDFW anticipates a running 3-year average Impact Score of at least 2.01 for humpback whales at the start of 2023.

- Confirmed Entanglements in California Commercial Dungeness Crab Gear during the current calendar year equal three humpback whales.
- Confirmed Entanglements in Unknown Fishing Gear reported from California during the current calendar year equal eight humpback whales (three of those entanglements are under review).

Marine Life Concentrations Surveys for Fishing Zones 3 and 4 documented aggregations of humpback whales. Marine Life Concentration triggers for each Fishing Zone based on individual vessel/aerial surveys and Monterey Bay Whale Watch (MBWW) data are as follows:

- Fishing Zone 3 = 49 (Cascadia vessel survey), 64 (Cascadia vessel survey), and 78 (NMFS aerial survey) humpback whales
- Fishing Zone 4 = 33 (MBWW), 59 (Cascadia vessel survey) and 64 (Cascadia vessel survey) humpback whales and weekly average sightings were 8.9 (MBWW) humpback whales

Fishing Zone 5 had fewer than 10 humpback whales observed during each of three individual vessel surveys conducted by Cascadia and California Coastal Crab Association. Fishing Zone 6 had no data available.

Fishing Zones 1 and 2 were evaluated during the last risk assessment under RAMP and CDFW [Marine Region staff's final recommendation](#) for the commercial fishery was to allow the season to open in these Fishing Zones due to reduced entanglement risk. However, the commercial fishery opener in Fishing Zones 1 and 2 was further delayed pursuant to Fish and Game Code Section 8672.2 (due to quality testing results) until at least December 31, 2022.

B. Recommended Management Action from options identified in subsection (e)

Recreational Fishery:

- **Crab Trap Prohibition (continued): Fishing Zones 3, 4, 5 and 6**

Commercial Fishery:

- **Season Delay (continued): Fishing Zones 3, 4, 5 and 6**

Fishing Zones 3, 4, 5, and 6

CDFW Marine Region staff's final recommendation for Fishing Zones 3 through 6 is continuation of the season delay for the commercial fishery and recreational crab trap prohibition until the next risk assessment (expected to occur on or before December 22 to inform a December 31, 2022, opener). This recommendation is based on exceedance of Marine Life Concentration data triggers for humpback whales in Fishing Zones 3 and 4, potential for whale migration across Fishing Zone 5, and current entanglement impact score. No data were available in Fishing Zone 6.

Aerial surveys and vessel surveys indicated large aggregations of humpback whales in Fishing Zones 3 and 4. Monterey Bay Whale Watch data (standardized by NOAA) indicate average sightings in Fishing Zone 4. Foraging activity by humpback whales poses a risk of entanglement with vertical lines and surface gear from recreational and commercial crab traps. In addition, given the current calendar year entanglement Impact Score, a precautionary management approach is warranted to further minimize entanglement risk until a majority of the whales have migrated out of or across these remaining Fishing Zones.

There was broad support for CDFW's staff's preliminary recommendation by the Working Group. No other recommendations were put forward by the Working Group.

C. Alternative Management Actions considered from options identified in subsection (e)

- Fleet Advisory – will not provide any reduction in entanglement risk given the number of whales observed.
- Depth restriction – will not sufficiently provide protections due to distribution of humpback whales across depths.
- Gear Reductions – any trap gear/lines in the water pose a risk to entanglement and given the anticipated high fishing effort for the season opener, it is not possible to identify an adequate reduction of traps for each trap tier to reduce risk.
- Alternative Gear - can only be authorized after April 1st.

