



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

Date: December 21, 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 16, 2022 and finalized at the conclusion of the Working Group meeting on December 21, 2022 based on discussions with the group.

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

Entanglements:

In-season Confirmed Entanglement accounting is not available because the fishery is not currently open. The current Impact Score for calendar year 2022 is 4.53 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 2.14 for humpback whales at the start of 2023 which exceeds the Entanglement Impact Score Calculation under RAMP.

All Fishing Zones

- 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 that could be commercial Dungeness crab gear equal six humpback whales.

Marine Life Concentrations:

Fishing Zone 3

- NMFS Aerial Survey = 29 humpback whales (in addition, 21 unidentified whales were also observed with an unknown proportion that could be humpback whales)
- Cascadia Research Small Vessel Survey = 24 humpback whales

#### Fishing Zone 4

- Surveys did not exceed triggers

#### Fishing Zone 5

- Previous surveys did not exceed triggers

#### Fishing Zone 6

- Data availability triggers no longer applicable

For additional details, see the Available Data document prepared for this Risk Assessment.

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

#### **Recreational Fishery:**

- **Continue the Crab Trap Prohibition for Fishing Zones 3, 4, 5 and 6**

The recreational Dungeness crab fishery is currently open statewide in all Fishing Zones (see CCR Title 14, section 29.80(e)), although use of traps is temporarily restricted in Fishing Zones 3-6. CDFW Marine Region's final recommendation is for the Director to continue the restriction in Fishing Zones 3-6 until it can be evaluated at the next risk assessment.

#### **Commercial Fishery:**

- **Season opener with Gear 50% Gear Reduction (trap reduction) and Fleet Advisory for Fishing Zones 3, 4, 5 and 6**

The commercial Dungeness crab fishery is currently delayed in all Fishing Zones due to crab meat quality or elevated entanglement risk. Fishing Zones 1 and 2 were evaluated during the November 21, 2022 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.

CDFW Marine Region's final recommendation is for the Director to open Fishing Zones 3-6 under a Gear Reduction of 50% of allotted traps by permit tier for each permitted vessel and issue a Fleet Advisory on December 31, 2022. Buoy tags issued pursuant to Fish and Game Code 8276.5 shall be reduced consistent with the Director's declaration and all unused buoy tags shall be onboard the permitted vessel and made available for inspection by the department upon request, pursuant

to Section 132.8 (e)(3) Title 14, CCR. Specific information on recent humpback whale sighting locations will be included in the Fleet Advisory. The 64-hour pre-soak would begin for the commercial fishery at 8:01 am on December 28, 2022.

Management Recommendation Summary Rationale:

Survey data for Fishing Zones 1, 2, 3, 4 and 5 were available prior to this risk assessment. For Fishing Zone 6, RAMP regulations require a season delay until December 31 when data are unavailable. Therefore, the no data scenarios under RAMP are no longer applicable, and Fishing Zones can be evaluated based on the totality of the management considerations and previous survey data. Based on available data, and in consideration of the current entanglement Impact Score additional precaution is warranted when choosing between Management Actions under RAMP.

Aggregations of humpback whales remain in Fishing Zones 3 and 4, particularly in waters west and south of Point Reyes (Gulf of the Farallones). However, aerial and vessel-based surveys have shown a steady decline in humpback whale observations since the first risk assessment in October. NOAA aerial surveys documented a decline from 78 humpback whales to 29 humpback whales over a two-week period in Fishing Zone 3 (early December to mid-December). Cascadia vessel surveys in Fishing Zone 3 documented a decline from 64 humpback whales to 24 humpback whales along the Bodega Bay/Point Reyes transect and 28 humpback whales to zero along the Gulf of the Farallones transect over one-week period based on the latest data contribution (early December to mid-December). Monterey Bay Whale Watch weekly average observations have also declined from 8.9 humpback whales in early December to 4.5 humpback whales as of this risk assessment. All available data show a continued decline and based on this trend, CDFW anticipates risk of entanglement has abated sufficiently to allow the opening of Fishing Zones 3-6 for the commercial trap fishery.

In addition, based on previous data indicating arrivals of humpback whales to the winter breeding grounds, entanglement risk is reduced compared to previous risk assessments, as observations on the winter breeding grounds confirm humpback whales from California continue to arrive. However, to further minimize risk of entanglement, a 50% Gear Reduction and a Fleet Advisory for the commercial fishery in Fishing Zones 3-6 is prudent as whales continue their migration out of California waters. Both the recreational and commercial crab fleets should use precaution when setting trap gear because humpback whales may still be present. Statewide, both the commercial and recreational fishing fleet should remain vigilant and move or avoid setting gear in areas where whales are transiting or foraging to further minimize risk of entanglement. Ocean waters off Point Reyes have shown persistent aggregations of humpbacks during most surveys. Staff's recommendation

is for the 50% Gear Reduction and Fleet Advisory to remain in place until it can be reevaluated at the next risk assessment (expected to occur on or around January 18, 2023) by the CDFW Director.

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

#### Alternative Recommendation

- Fishery Closure – most protective but in consideration of lowered risk, continued migration departures and economic impacts to the fleet it was not the recommended management option.

#### Alternatives Considered but Rejected

- Depth restriction – will not sufficiently provide protections due to distribution of humpback whales across depths and may concentrate trap gear thereby increasing entanglement risk.
- Alternative Gear - can only be authorized after April 1st.

