



# California Department of Fish and Wildlife Final Assessment of Marine Life Entanglement Risk and Management Recommendation for the Risk Assessment Mitigation Program

Date: June 21, 2023

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 (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 June 16, 2023, and finalized at the conclusion of the Working Group meeting which was held on June 20, 2023.

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

### Entanglements:

As of June 12, 2023, one entanglement involving California commercial Dungeness crab gear and three entanglements in unidentified gear have been reported to CDFW by NOAA for the 2022-23 season. Two unidentified gear entanglements involved gear that is consistent with the type that is used in the commercial Dungeness crab fishery. The third unidentified entanglement involved gear that was not consistent with gear used in the commercial fishery and is not included in Impact Scoring under RAMP. All four entanglements were reported in Monterey Bay. The in-season Confirmed Entanglement Impact Score is 1.51.

The Impact Score for calendar year 2021 is 1.89 for humpback whales. The total Impact Score for the calendar year 2022 is 5.28 for humpback whales. Therefore, the current running 3-year average Impact Score is 2.89 for humpback whales for the years 2021-2023, which exceeds the triggers in Section 132.8(c)(1)(C)(1). Note: Entanglement data are subject to revision based on review and verification by NOAA.

## Marine Life Concentrations:

A small vessel survey conducted by Cascadia Research Collective observed 14 humpback whales in Fishing Zone 1 in depths ranging from 42-54 fathoms, with a majority of animals near the 54-fathom depth contour. A four-vessel survey conducted by the commercial fishing fleet in Fishing Zone 1 observed five humpback whales in depths of 75 fathoms. These surveys are informative as an indicator of humpback whale distribution in Fishing Zone 1. Monterey Bay Whale Watch observed an average of six whales during half-day trips, and 22 whales observed during an all-day trip on 12 June. Based on historical migration patterns, blue and humpback whale migration arrivals will increase over the coming weeks and remain across California waters through at least November or December.

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

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

### Recreational Fishery:

- **Continue Statewide Fleet Advisory for all gear types.**

### Commercial Fishery:

- **Continue Fleet Advisory for Fishing Zones 1 and 2**
- **Continue Depth Constraint of 30 fathoms for Fishing Zones 1 and 2**

### Management Recommendation Summary Rationale:

A humpback whale entanglement with California commercial Dungeness crab gear and two entanglements involving humpback whales with Unknown Fishing Gear bring the total three-year average Impact Score to 2.89, which exceeds the Calendar Year Impact Score trigger as defined in RAMP for the commercial Dungeness crab fishery. All three entanglements were documented in Fishing Zone 4, Monterey Bay. Based on recent Marine Life Concentration surveys for Fishing Zone 1, humpback whale sightings remain relatively low but are expected to increase through the summer months. Recent sightings in Fishing Zone 1 were recorded in deeper water (42-75 fathoms) seaward of the 30-fathom depth constraint currently in place. Therefore, at this time, CDFW Marine staff do not recommend additional management actions for Fishing Zones 1 and 2 for the commercial or recreational fisheries. Importantly, the reported entanglements were all documented in Fishing Zone 4 and because whales are migrating from south to north from their winter breeding grounds, there is no indication that an early closure of Fishing Zones 1 and 2 would have prevented those entanglements or would reduce risk given the low abundance of humpback whales in those Fishing Zones.

The 30-fathom Depth Constraint currently in place for the commercial fishery will minimize overlap with foraging humpback whales and limited recreational trap fishing in Fishing Zones 1 and 2 does not present an elevated risk at this time. Commercial fishery participation continues to decline based on bi-weekly reporting and many vessels have begun to pull remaining trap gear for the season. Observation data indicate most humpback whales are foraging in deep water, (greater than 40-fathoms) likely taking advantage of krill at or near the shelf and canyon edges. This is supported by oceanographic data and krill indices as reported in the Available Data documents this spring. The recommendation is to also continue the Fleet Advisory for both the recreational and commercial fisheries in all Fishing Zones until season closures are in effect statewide.

The above recommendations are informed by survey data, historical migration patterns, recent entanglements, and exceedance of the running three-year average entanglement Impact Score for humpback whales which requires CDFW to implement precautionary management actions to avoid additional entanglements. The actions currently in place will provide sufficient risk reduction while allowing continued fishing opportunities for both fleets until the statutory and regulatory season closures. The commercial Dungeness crab fishery closes on July 15, 2023 and the recreational fishery closes on July 30, 2023 in Fishing Zones 1 and 2. CDFW reminds all fisherman to continue to use best fishing practices to minimize risk of entanglement as whales move into Fishing Zones that remain open to fishing, regardless of fishery or gear type. Both commercial and recreational fleets should, however, be prepared to modify fishing operations to minimize risk of entanglement. Staff will continue to monitor whale presence and entanglement risk until the close of the commercial and recreational fisheries as noted above.

Note: The commercial fishery was closed in Fishing Zones 3-6 (effective April 15, 2023) and recreational traps were prohibited (effective May 15, 2023) in those same Fishing Zones until the season closure on June 30, 2023.

### **Alternatives Considered but Rejected**

- Gear Reduction – based on available data this is not currently the recommended Management Action based on declining fishery participation.
- Fishery Closure – based on available data this is not currently the recommended Management Action.
- Alternative Gear - can be authorized after April 1<sup>st</sup>, but no gear currently is authorized for the commercial Dungeness crab fishery.

