



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

Date: January 11, 2024

An initial assessment and a preliminary recommendation were developed by California Department of Fish and Wildlife's (CDFW) Marine Region 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 January 8, 2024, and the final assessment was completed after the Working Group meeting which was held on January 10, 2024. For a map of the RAMP Fishing Zones, see the [Whale Safe Fisheries webpage](#).

I. Recommended Management Actions

Commercial Fishery:

- Fishing Zones 3, 4, 5 and 6: Season Opener with 50% Gear Reduction on January 18, 2024, at 12:01am (gear setting period to begin on Jan. 15, 2024, at 8:00 am)
- All Fishing Zones (1, 2, 3, 4, 5 and 6): Fleet Advisory

Recreational Fishery:

- Fishing Zones 3 and 4: Lift Crab Trap Prohibition on January 12, 2024, at 8:00 a.m.
- All Fishing Zones (1, 2, 3, 4, 5 and 6): Continue Fleet Advisory

Table 1. Fishing Zones and current management status for the California commercial and recreational Dungeness crab fisheries.

Fishing Zone	Commercial Fishery: Current Management Status	Commercial Fishery: Proposed Management Status	Recreational Fishery: Current Management Status	Recreational Fishery: Proposed Management Status
1	Season Open; Fleet Advisory	Fleet Advisory	Fleet Advisory	Fleet Advisory
2	Season Open; Fleet Advisory	Fleet Advisory	Fleet Advisory	Fleet Advisory
3	Season Delay	Season Open with 50% Gear Reduction; Fleet Advisory	Crab Trap Prohibition; Fleet Advisory	Fleet Advisory
4	Season Delay	Season Open with 50% Gear Reduction; Fleet Advisory	Crab Trap Prohibition; Fleet Advisory	Fleet Advisory
5	Season Delay	Season Open with 50% Gear Reduction; Fleet Advisory	Fleet Advisory	Fleet Advisory
6	Season Delay	Season Open with 50% Gear Reduction; Fleet Advisory	Fleet Advisory	Fleet Advisory

II. Management Recommendation Summary Rationale

Entanglements: Two confirmed humpback whale entanglements were reported since the last risk assessment. The first entanglement was reported on December 17, 2023, off Dana Point, CA. The whale was reported to have a line and single buoy wrapped around the right pectoral flipper and peduncle. An unmarked bullet buoy was observed with no other identifying information; this is determined to be an entanglement with Unidentified Fishing Gear. A second humpback whale was reported entangled off Banderas Bay, Mexico on December 20, 2023, and confirmed to be CA commercial Dungeness crab fishing gear. Confirmed humpback whale entanglements in California commercial Dungeness crab fishing gear and Unknown Fishing Gear bring the three-year rolling average Impact Score to 3.39. Additionally, the three-year rolling average Impact Score for leatherback sea turtles is 0.33. For more information, please see the [RAMP Entanglement History](#) document.

Marine Life Concentrations: During the January 5, 2024, CDFW aerial survey in Fishing Zones 3 and 4, staff observed few humpback whales and have likely reached seasonal lows. Monterey Bay Whale Watch data show a decline in humpback whale observations, with a weekly average of 2.4 whales per half-day trip.

Marine Region's final recommendation is for the Director to open the commercial season in Fishing Zones 3, 4, 5 and 6 on January 18, 2024, at 12:01 am (gear setting period to begin on Jan. 15, 2024, at 8:00 am) with a 50% Gear Reduction and under a Fleet Advisory. Trap allotments by Tier under the 50% Gear Reduction are listed below in Table 2. This is the recommended management approach due to the number of entanglements reported during the past three seasons and resulting Impact Scores as well as a potentially significant, but unknown, effort shift from the Northern Management Area (Fishing Zones 1-2) into the Central Management Area (Fishing Zones 3-6). As of January 10, 2024, no landings have been reported in Fishing Zones 1 and 2. The lack of landings in those Fishing Zones and the resulting uncertainty regarding the number of vessels expected to fish during an opener in Fishing Zones 3 and 4 requires a conservative approach to reduce overall risk of entanglement due to trap loss.

Data from bi-weekly reports over the past three seasons indicate an estimated 41,000 traps (Fishing Zones 3 and 4) and 64,000 traps (Fishing Zones 1 and 2) are fished during a season opener. Given the potential of an effort shift as reported by the commercial fleet, a Vertical Line/Gear Reduction must be considered to minimize the number of vertical lines/traps. Reducing the amount of gear in the water will help minimize the potential for lost gear which was a significant contributor to reported entanglements during the 2023 calendar year.

Given the elevated Impact Score and anticipated return of humpback whales from their winter breeding ground in late winter/early spring, Marine Region may consider a further trap gear reduction for the commercial fishery in Fishing Zones 3-6 during the next risk assessment in mid-February. Any future trap gear reduction would likely need to be implemented quickly to minimize entanglement risk and remain in effect through the remainder of the Fishing Season to minimize entanglement risk and provide certainty and stability for fishery operations.

Marine Region also recommends lifting the temporary crab trap prohibition for the recreational fishery in Fishing Zones 3 and 4 on January 12, 2024, at 8:00 a.m. and continuing the Fleet Advisory in all Fishing Zones for both the commercial and recreational fishery. These recommendations are based on confirmed entanglements for humpback whales and a leatherback sea turtle and the resulting Impact Scores and known migration patterns for humpback whales.

During the previous risk assessment, humpback whale aggregations remained in Fishing Zones 3 and 4, primarily in waters off Point Reyes and Half Moon Bay in water depths of 27-38 fathoms (50-70m). Aerial surveys conducted by CDFW on January 5, 2024, recorded a decline in humpback whale numbers, observing four humpback whales in Fishing Zone 3 and no whales in Fishing Zone 4. Monterey Bay Whale Watch in Fishing Zone 4 also indicated a decline in the average number of humpback whales per half-day trip, decreasing from eight humpback whales in mid-December to 2.4 humpback whales as of this risk assessment. A peak of six whales were observed during a half-day trip on December 30, 2023. All previously available data showed a continued decline of humpback whales across all Fishing Zones and based on this trend and historical and seasonal migration patterns, CDFW anticipates risk of entanglement has abated sufficiently to allow the season opener for Fishing Zones 3, 4, 5, and 6 under a 50% Gear Reduction and the lifting of the trap restrictions for the recreational fishery in Fishing Zones 3 and 4.

Table 2. Trap allotment under a 50% Gear Reduction by Tier.

Tier	Maximum Trap Allotment under 50% Gear Reduction
Tier 1	250
Tier 2	225
Tier 3	200
Tier 4	175
Tier 5	150
Tier 6	125
Tier 7	88

For additional details, see the Entanglement and Marine Life Concentration sections of this [Available Data document](#).

III. Alternatives Considered but Rejected

- 70% Gear Reduction in Fishing Zones 3, 4, 5 and 6 - Considered as a recommendation but based on input from the Working Group and in consideration of economic impacts to the commercial fleet, this was not provided as the final recommended management action.

- Season opener with no Gear Reduction in Fishing Zones 3, 4, 5, and 6 – not considered for this assessment as it would not sufficiently address entanglement concerns given the potential for an effort shift into the Central Management Area and increased probability of lost or abandoned gear.
- Fishery Closure in Fishing Zones 3, 4, 5 and 6 – most protective but in consideration of not attaining marine life concentration triggers and economic impacts to the fleet this action was not a recommended management option.
- Depth Restriction by Fishing Zone – not considered for this assessment because it would not reduce overall risk from vertical lines.
- Alternative Gear- can only be authorized after April 1st.