



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

Date: December 7, 2023

An initial assessment and 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 December 4, 2023, and finalized at the conclusion of the Working Group meeting which was held on December 6, 2023. For a map of the RAMP Fishing Zones, see the [Whale Safe Fisheries webpage](#).

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

Commercial Fishery:

- Continue Season Delay: Fishing Zones 1, 2, 3, 4, 5 and 6

Recreational Fishery:

- Lift Crab Trap Prohibition: Fishing Zone 1
- Continue Crab Trap Prohibition: Fishing Zones 3 and 4
- Continue Fleet Advisory: Fishing Zones 1-6

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 Delay	Season Delay	Crab Trap Prohibition; Fleet Advisory	Fleet Advisory
2	Season Delay	Season Delay	Fleet Advisory	Fleet Advisory
3	Season Delay	Season Delay	Crab Trap Prohibition; Fleet Advisory	Crab Trap Prohibition; Fleet Advisory
4	Season Delay	Season Delay	Crab Trap Prohibition; Fleet Advisory	Crab Trap Prohibition; Fleet Advisory
5	Season Delay	Season Delay	Fleet Advisory	Fleet Advisory
6	Season Delay	Season Delay	Fleet Advisory	Fleet Advisory

II. Management Recommendation Summary Rationale

Entanglements: The humpback whale entanglement reported on November 11, 2023, was confirmed to be CA commercial Dungeness crab fishing gear (20231111Mn). Humpback whale entanglements in California commercial Dungeness crab fishing gear and Unknown Fishing Gear bring the three-year rolling average Impact Score to 3.64. Additionally, a leatherback sea turtle entanglement mortality was reported on November 24, 2023, near the Farallon Islands and confirmed to be CA commercial Dungeness crab fishing gear, which brings the three-year rolling average Impact Score for leatherback sea turtles to 0.33. Note: impact scores for Actionable Species are calculated separately.

Marine Life Concentrations: Based on Marine Life Concentration surveys for Fishing Zones 1-5 conducted by CDFW, Cascadia Research, and the US Coast Guard between November 20 and December 3, 2023, humpback whale sightings were elevated in Fishing Zone 3 and 4, exceeding the Marine Life trigger as defined by RAMP for the recreational and commercial Dungeness crab fisheries in Fishing Zone 4.

Marine Region's final recommendation is for the Director to delay the commercial season opener for Fishing Zones 1 and 2 and continue the delay in Fishing Zones 3-6. Marine Region also recommends lifting the temporary crab trap prohibition for the recreational fishery in Fishing Zone 1 and continuing the trap prohibition in Fishing Zones 3 and 4. Entanglement risk remains elevated in Zones 3 and 4 due to presence of whales and sea turtles. The recommendation is also to continue the Fleet Advisory for Fishing Zones 1-6 until the next Risk Assessment. These recommendations are based on confirmed entanglements in the commercial Dungeness crab fishing gear,

exceedance of Marine Life Concentration data triggers, and known migration patterns for humpback whales in Fishing Zones 3, 4, 5, and 6. In addition, the current rolling average Impact Score for the commercial fishery for humpback whales is 3.64 and 0.33 for leatherback sea turtles, requiring Management Action.

Vessel surveys observed high concentrations of humpback whales in Fishing Zone 4, where whales were documented to be feeding on anchovy. On November 20, November 27 and December 3, 2023, Cascadia Research Collective surveys observed between 33 and 35 humpback whales. Monterey Bay Whale Watch data in Fishing Zone 4 indicated the average number of humpback whales per half-day trip during the last seven days was 13.5, with a peak of 22 whales observed during a half-day trip on November 25, 2023. The Point Blue Conservation Science data portal also indicated high levels of humpback whale sightings in Fishing Zone 4.

Oceanographic models also indicate that while the marine heatwave has decreased in area and receded from much of the coast, the heatwave could persist through winter and spring 2024. El Niño is expected to persist through March 2024 and has a 55% chance of becoming a “strong” El Niño. Oceanographic models also show high habitat compression as of October 2023, further elevating entanglement risk at this time. For Fishing Zone 6, lack of available data prior to the season opener requires Management Action, pursuant to 132.8(c)(2)(A) and 29.80(c)(7)(A).

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

III. Alternatives Considered but Rejected

Alternatives Considered by Rejected

- Vertical line/gear reduction for Fishing Zones 1-6 – given recent entanglements and current impact score, it will not offer sufficient reduction of entanglement risk.
- Depth Restriction by Fishing Zone- may concentrate crab trap gear thereby increasing entanglement risk.
- Alternative Gear- can only be authorized after April 1st.