



**CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE
DECLARATION OF FISHERY SEASON DELAY
IN THE COMMERCIAL DUNGENESS CRAB FISHERY
DUE TO RISK OF MARINE LIFE ENTANGLEMENT**

Pursuant to Fish and Game Code Section 8276.1(b) and California Code of Regulations, Title 14, Section 132.8 ("Section 132.8"), I find and declare that:

I

On November 4, 2020, I evaluated entanglement risk for the commercial Dungeness crab fishery pursuant to Section 132.8(b). I provided the California Dungeness Crab Fishing Gear Working Group (Working Group) and the Whale Safe Fisheries email listserv with notice of the risk assessment and all non-confidential data under consideration on November 2, 2020. Prior to this risk assessment and management response, I considered the Working Group's November 3, 2020 management recommendation, and other relevant information provided to my staff.

II

On October 28 and 29, 2020, staff from the Department's Marine Region conducted aerial surveys of Fishing Zones 1 through 5 and observed 48 Humpback whales in Fishing Zone 3. Additionally, an agency-approved vessel survey in Fishing Zones 3 and 4 made 118 sightings of an estimated 345 Humpback whales. Pursuant to Section 132.8(c)(2)(A)(4)(a), I must implement a Fishing Zone delay or other protective management action.

III

NOAA-standardized data from commercial whale-watching trips in Fishing Zone 4 throughout the summer and fall show a weekly running average of 11.2 Humpback whales in Monterey Bay. Pursuant to Section 132.8(c)(2)(A)(4)(a), I must implement a Fishing Zone delay or other protective management action.

IV

There are no marine life concentration data to inform risk assessment in Fishing Zone 6. Pursuant to Section 132.8(c)(2)(A)(1), the Fishing Season will be delayed in Fishing Zone 6 until December 1.

V

Upon evaluation of the management considerations pursuant to Section 132.8(d), I have determined that the management action listed below protects Humpback whales based on the best available science. Additional information on the relevant management considerations is provided in the attachment to this declaration

VI

THEREFORE, under the authority granted by Fish and Game Code Section 8276.1(b) and Section 132.8 of Title 14 of the California Code of Regulations, I am implementing the following management action:

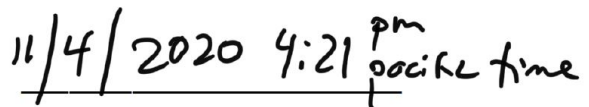
1. The opening of the commercial Dungeness crab fishery in Fishing Zone(s) 3 – 6 is delayed. Take and possession of commercially caught Dungeness crab is prohibited in the delayed Fishing Zone.

This management action is in effect until the next risk assessment, which is expected to occur before December 1, 2020.

Updates and material regarding future entanglement risk evaluations in the commercial Dungeness crab fishery will be made available on the Department's web page:
www.wildlife.ca.gov/Conservation/Marine/Whale-Safe-Fisheries



Charlton H. Bonham, Director



Date/Time

ATTACHMENT TO DIRECTOR NOVEMBER 4, 2020 DECLARATION OF FISHERY
SEASON DELAY IN THE COMMERCIAL DUNGENESS CRAB FISHERY DUE TO RISK
OF MARINE LIFE ENTANGLEMENT

Information referenced in this Attachment is further described in the Data Summary Compilation dated November 3, 2020, and located at the Department's Whale Safe Fisheries website (<https://wildlife.ca.gov/Conservation/Marine/Whale-Safe-Fisheries>), which to the Department's knowledge represents the best available science informing the management considerations in Section 132.8(d).

Information Supporting Trigger for Management Action Under Section 132.8(c)

Marine Life Concentrations:

- **Fishing Zone 3:** 48 Humpback whales were observed during CDFW aerial surveys, 118 sightings of an estimated 345 Humpback whales were observed during Cascadia Research vessel-based surveys
- **Fishing Zone 4:** weekly running average of 11.2 Humpback whales based on Monterey Bay Whale Watch data
- **Fishing Zone 6:** no data available

Relevant Management Considerations Under Section 132.8(d)

1. Working Group Management Action Recommendation and Best Available Science Made Available to the Department

The Working Group recommended a season delay in Fishing Zones 3-5 (Fishing Zone 6 was not discussed). The recommendation memo is available here. Additional information from the Working Group Recommendation Memo is provided as relevant in the categories below. No other information was made available to the Department.

2. Information from NOAA

No additional information was made available for this risk assessment.

3. Effectiveness of Management Measures to Minimize Entanglement Risk

Based on the available information, a season delay is likely to be the most effective management action. A season delay would prevent commercial Dungeness crab traps from entering the water, which removes any entanglement risk from the commercial fishery. Additionally, a season delay is the anticipated management action in Section 132.8(c)(2)(1)(4)(a) in response to concentration triggers being reached for Humpback whales.

4. Total Economic Impact to the Fleet and Fishing Communities

Total economic costs are considered when deciding between management measures that equivalently reduce entanglement risk. A season delay can have variable economic cost depending on the circumstances. Current considerations include the loss of the Thanksgiving market, possible fishing effort shift, and general economic impacts due to the ongoing COVID pandemic.

5. Data Availability Within and Across Fishing Zones

Aerial and vessel surveys were conducted across Fishing Zones 1-5, with additional observation data for those Fishing Zones from US Coast Guard, Point Blue Conservation Science, and Monterey Bay National Marine Sanctuary. The Department considers this comprehensive data set to adequately cover the full geographic extent of those Fishing Zones to inform the appropriate management response.

6. Known Historic Marine Life Migration Patterns

Seasonal migration for Humpback whales out of California waters typically occurs in November and early December. Humpback whales are anticipated to migrate from central and northern areas (where high numbers of Humpback whales were observed) south to Mexico and Central America; this will likely take migrating whales through Fishing Zones 3-6. Based on Monterey Bay Whale Watch data, observed Humpback whale numbers are above average when compared to historical averages, which may indicate that the bulk of the migration has yet to begin.

7. Fishing Season Dynamics

No delay is anticipated due to public health hazards. Quality testing is not applicable to Fishing Zones impacted by the November 15 season opener. It is unclear how fishing effort may shift given any season delays, but any season opener is expected to result in relatively high gear concentrations. Additionally, Working Group members noted that opening only Fishing Zone 5 would inhibit an orderly start to the fishery.

8. Known Distribution and Abundance of Key Forage

Distribution of anchovy, a key forage item for Humpback whales was evident during aerial surveys and vessel-based surveys. Humpbacks were observed lunge feeding near the surface off Half Moon Bay, Point Reyes and Eureka, which includes Fishing Zones 4, 3 and 1, respectively.

9. Ocean Conditions

La Nina conditions are currently forecast.

10. Current Impact Score Calculations

- a. Fishing Season – n/a
- b. Calendar Year – calendar year impact score calculations will begin January 1, 2021

11. Marine Life Concentrations and Distribution During the Current Fishing Season

The large numbers of humpback whales distributed across several Fishing Grounds is an indication that migration out of Fishing Grounds has yet to occur. This is supported by above average whale concentrations based on historical averages from the Monterey Bay Whale Watch data set and the Cascadia Research vessel-based survey estimating at least 345 humpback whales distributed across Fishing Zones 3 and 4. The Working Group Recommendation Memo noted that data contributors survey estimates may underestimate total whale presence. Whale sighting data from trained observers working for the Marine Sanctuaries and the National Park Service in Fishing Zones 3, 4, and 6 further supports continued whale presence in those areas.

Chosen Management Action and Rationale

Based on the management considerations outlined above, the Director will implement a delay of the November 15, 2020 opening of the commercial Dungeness crab season in Fishing Zones 3-6.

Large aggregations of foraging Humpback whales and surface feeding activity pose a risk of entanglement with surface gear. The wide distribution of Humpback whales across Fishing Zone depths indicates that a depth restriction on fishing activity would be ineffective in reducing the entanglement risk. Given the high volume of gear anticipated to be set during a season opener, in addition to possible fishing effort shift to any open areas, it has been determined that a gear reduction would not sufficiently reduce entanglement risk. A season delay is the most viable management action given the existing whale presence.

Given historical migration patterns, Humpback whales may at any time begin migrating south through Fishing Zones 3-5. Even Fishing Zones with fewer observed whales (such as Fishing Zone 5) may experience an increase in whale presence before the next risk assessment. Observed whales from Department aerial surveys and Cascadia Research vessel-based surveys in the area paired with the potential for fishing effort shift into the Fishing Zone could lead to increased entanglement risk.

Per 132.8(c)(2)(A)(1), lack of available data in Fishing Zone 6 automatically delays the opening of the Fishing Season in that Fishing Zone until December 1.