



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 24, 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 20, 2020. Prior to this risk assessment and management response, I considered the Working Group's November 23, 2020 management recommendation, and other relevant information provided to my staff.

II

Based on testing indicating poor crab quality, on November 20, 2020, I delayed the opening date in Fishing Zones 1 and 2 (Districts 6, 7, 8, and 9) until December 16, 2020, pursuant to Fish and Game Code Section 8276.3(b).

III

On November 16, 2020, staff from the Department's Marine Region conducted aerial surveys of Fishing Zones 2 and 3 and observed 29 Humpback whales in Fishing Zone 3. Additionally, an agency-approved vessel survey in Fishing Zone 4 made 45 sightings of an estimated 74 Humpback whales, and in a separate survey of Fishing Zones 3 made 31 sightings of an estimated 138 Humpback whales. Pursuant to Section 132.8(c)(2)(A)(4)(a), I must implement a Fishing Zone delay or other protective management action.

IV

NOAA-standardized data from commercial whale-watching trips in Fishing Zone 4 between November 1 and November 14 show weekly running averages of 14.6 and 9.7 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.

V

An agency-approved vessel survey in Fishing Zone 4 made 11 sightings of an estimated 23 Blue whales. Pursuant to Section 132.8(c)(2)(A)(4)(b), I must implement a Fishing Zone delay or other protective management action.

VI

There are no marine life concentration data to inform risk assessment in Fishing Zones 5 and 6. Pursuant to Section 132.8(c)(2)(A)(2), the Fishing Season will be delayed in Fishing Zones 5 and 6 until December 15.

VII

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

VIII

**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 15, 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](http://www.wildlife.ca.gov/Conservation/Marine/Whale-Safe-Fisheries)



Charlton H. Bonham, Director

11/24/20 3:20 pm

Date/Time

ATTACHMENT TO DIRECTOR NOVEMBER 24, 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 24, 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: 15 sightings of 29 Humpback whales were observed during Department aerial surveys
- Fishing Zone 4: 45 sightings of 74 Humpback whales and 11 sightings of 23 Blue whales on a Cascadia Research vessel-based surveys, and a weekly running average of 9.7 Humpback whales based on Monterey Bay Whale Watch data
- Fishing Zones 5 and 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 provided recommendations for Fishing Zones 1-2 and for Fishing Zones 3-6. Although Fishing Zones 1-2 are delayed for quality through December 16, in the absence of a quality delay the Working Group would have recommended a December 1 season opener under a Fleet Advisory. For Fishing Zones 3-6, the Working Group recommended the season opener be delayed until December 16. 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)-(b) in response to concentration triggers being reached for Humpback whales and Blue 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. The Working Group noted the importance of the Christmas market in requesting the season open on December 16 in Fishing Zones 3-6.
5. Data Availability Within and Across Fishing Zones  
Aerial and vessel surveys were conducted across Fishing Zones 1-4, with additional observation data from Point Blue Conservation Science, Monterey Bay National Marine Sanctuary, Channel Islands National Marine Sanctuary and habitat modeling from Whale

Watch 2.0 for Fishing Zones 1-6. 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, although trend data from Point Blue Conservation Science indicates fewer whales are being observed in the Gulf of the Farallones.

7. Fishing Season Dynamics

No delay is anticipated due to public health hazards. Quality testing has delayed the season opener in Fishing Zones 1 and 2 until at least December 16. 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. Working Group members requested any delays be until December 16 to align the opening of the season coastwide and support a fair and orderly 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 north of the Russian River and west of Point Reyes (Fishing Zone 3). Additionally, according to NOAA fisheries and its partners high anchovy abundance is expected to drive high density aggregation of Humpback whales during the fall and early winter of 2020 while krill abundance is expected to increase to above average over the winter months.

9. Ocean Conditions

La Nina conditions are currently forecast. The habitat compression index in October 2020 indicates high compression (i.e. cool habitat restricted nearshore) is anticipated through December 2020.

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 74 Humpback whales and 23 Blue whales distributed across Fishing Zone 4, as well as the Department aerial surveys in Zone 3 estimating at least 29 Humpback whales, and the Cascadia Research vessel-based survey in Zone 1 estimating 85 Humpback whales. 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. The Working Group noted that fishing

industry-led pilot surveys on November 11, 2020 also confirmed presence of Humpback and Blue whales in Fishing Zone 1.

**Chosen Management Action and Rationale**

Based on the management considerations outlined above, the Director will implement a delay of the opening of the commercial Dungeness crab season in Fishing Zones 3-6. Fishing Zones 1 and 2 are subject to a crab meat quality delay until at least December 16 and therefore are not addressed in this risk assessment.

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 given season delays, 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.

Per 132.8(c)(2)(A)(2), lack of available data in Fishing Zones 5 and 6 automatically delays the opening of the Fishing Season in that Fishing Zone until December 15.

Given the meat quality delay in Fishing Zones 1 and 2 and the desire expressed by the fleet for an orderly opening of the season statewide, the Department is targeting a unified opener on December 16<sup>th</sup> and will make all effort to perform the necessary surveys to collect data to inform the next risk assessment in order to provide timely information to the fleet as to the season opening date.