



**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 December 11, 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 December 8, 2020. Prior to this risk assessment and management response, I considered the Working Group's December 10, 2020 management recommendation, and other relevant information provided to my staff.

II

NOAA-standardized data from commercial whale-watching trips in Fishing Zone 4 between November 18 and December 4 show weekly running averages of 8.7 and 6.2 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.

III

NOAA-standardized data from commercial whale-watching trips in Fishing Zone 4, 11 and 5 Blue whales were sighted on Dec 2 and 3, respectively. Pursuant to Section 132.8(c)(2)(A)(4)(b), I must implement a Fishing Zone delay or other protective management action.

IV

Section 132.8(b)(4) requires that when new information so indicates, I must lift or modify any fishing restrictions in a manner that promotes fair and orderly fisheries.

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 and Blue 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) 1 – 6 is delayed until December 23, 2020. Take and possession of commercially caught Dungeness crab is prohibited in the delayed Fishing Zones. The pre-soak period in Fishing Zones 1-2 will begin at 8:01 am on December 20; the pre-soak period in Fishing Zones 3-6 will begin at 6:01 am on December 22. The season opening will be subject to a Fishing Advisory as described below.
2. A Fishing Advisory is issued for ocean waters statewide reminding fisherman to use best practices while fishing and avoid setting gear at the edges of Monterey canyon and areas around Point Reyes and the Farallon Islands.

This management action is in effect until the next risk assessment, which is expected to occur on or around January 15, 2021.

The best practices guide is located on the [Working Group Website](#). Updates and material regarding future entanglement risk evaluations in the commercial Dungeness crab fishery will be made available on the [Department's web page](#).



Charlton H. Bonham, Director

12/11/20 5:22 PM
PST
Date/Time

ATTACHMENT TO DIRECTOR DECEMBER 11, 2020 DECLARATION OF SEASON
OPENING AND FISHERY ADVISORY 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 December 10, 2020, and located at the Department's [Whale Safe Fisheries website](#), 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 4:** weekly running average of 6.2 Humpback whale sightings and a single day sighting of 11 and 5 Blue whales based on Monterey Bay Whale Watch data.

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 considered multiple management recommendations, with broad support for a state-wide season delay. This recommendation was also brought forward from several port associations during the Working Group meeting discussions. Other options considered were opening the season statewide under a Fishing Advisory and opening the season statewide with a Fishing Advisory limited to Fishing Zone 4; these options received less support than a statewide season delay.

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 recent survey data and available information, risk of entanglement is low. Information indicates that migration has begun and that remaining whales are offshore with limited overlap within Fishing Grounds. Therefore, a Fleet Advisory provides fishermen with the necessary information to help further reduce the risk of entanglement. However, whale observation does indicate that whales are still present, even if largely located outside traditional Fishing Grounds. 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. Current considerations include the loss of December holiday markets, possible fishing effort shift, poor market conditions (price), crab availability, and general economic impacts due to the ongoing COVID pandemic. While several large port associations indicated a delay would be the preferable management response given the potential economic consequences from an entanglement in both this season and future seasons, overall fleet support for a delay was mixed.

5. Data Availability Within and Across Fishing Zones

Aerial and vessel surveys were conducted across Fishing Zones 1-4. 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 was also reviewed. Paired with the data collected over the course of the previous risk assessments this season, the Department considers this comprehensive data set to adequately cover the full geographic extent of those Fishing Zones to inform the appropriate management response. However, the Department recognizes that less survey data was available for this risk assessment as compared to previous risk assessments this season, including a lack of aerial or vessel-based surveys over certain areas in Fishing Zones 3 and 4. More limited data is expected given the time of year due to weather conditions and further complicated by the COVID pandemic and safety concerns for staff. Aerial surveys did cover areas in which observation data indicated whale presence.

6. Known Historic Marine Life Migration Patterns

Seasonal migration for Humpback whales out of California to Mexico and Central America typically occurs in November and early December. Based on information provided by scientific advisors, when Humpback whales start their migration, they tend to move offshore and head directly south, avoiding Fishing Grounds along the California coast. While Humpback and Blue whale numbers in Fishing Zone 4 remain above average when compared to historical weekly averages from Monterey Bay Whale Watch data, numbers are trending downward and will likely soon fall below the Marine Life Concentration trigger. Trend data from Point Blue Conservation Science indicates more Blue whales are being sighted near the Channel Islands and fewer Humpback whales are being sighted in Fishing Zone 4.

7. Fishing Season Dynamics

No delay is anticipated due to public health hazards. Tri-state quality testing protocols have been met and the existing quality delay in Fishing Zones 1 and 2 will

lift on December 16, 2020. Working Group members requested any delays be until December 31 and occur state-wide to support a fair and orderly fishery.

8. Known Distribution and Abundance of Key Forage

Blue whales were sighted around the edge of the Monterey Canyon foraging on krill based on Point Blue observation data.

9. Ocean Conditions

La Niña conditions are currently forecast for winter/spring 2021. Monthly Habitat Compression Index in November 2020 indicates a medium compression state with increased cool habitat area since October.

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

Aerial survey data and Monterey Bay Whale Watch data indicates fewer whales are present in Fishing Zones 1, 2, 3 and 4. Whale Watch data also shows remaining whales in Fishing Zone 4 on the shelf break and over deep-water canyons. Trend data from Point Blue Conservation Science indicates more Blue whales are being sighted near the Channel Islands and fewer Humpback whales are being sighted in Fishing Zone 4.

Migration reports from Cascadia Research and collaborators have confirmed, two Humpback whales sighted during November surveys in Monterey are now on the breeding grounds off mainland Mexico. An additional eight California Humpback whales have been confirmed to be on the breeding grounds off mainland Mexico as well as 11 of 12 identified migrating humpback whales off central and northern Baja encountered during November 20-25 that were known whales to feed off of California. However, at least 18 different identified Humpback whales have been seen offshore California between December 1-7, confirming that some individuals have not yet started migrations.

Chosen Management Action and Rationale

Based on the management considerations outlined above, the Director is modifying the previous season delay in Fishing Zones 3-6 to allow the opening of the commercial

Dungeness crab Fishery in Fishing Zones 1-6 on December 23, 2020 pursuant to the Fleet Advisory.

Pursuant to Section 132.8(b)(4), previously implemented management actions must be lifted or modified as new information is available if a different management action is more appropriate, and those modifications must be undertaken in a manner that promotes a fair and orderly fishery. Based on the best available science available at this time, the previously implemented season delay is being extended statewide until December 23, and the season will open under a Fishing Advisory.

Fishing Zone 4 reached a marine life concentration trigger, leading to analysis of the management considerations under Section 132.8(d) and appropriate management response under Section 132.8(c). Those sections anticipate a broader analysis of the factors impacting entanglement risk statewide.

In consideration of information collected throughout all risk assessments this season, marine life concentrations are trending downward, and based on migration reports, whales previously observed in California waters are beginning to arrive on the breeding grounds in Mexico. However, both surveys and observational data indicate Humpback whales and Blue whales are still present offshore California, although in fewer numbers than sighted during previous surveys. Although Monterey Bay Whale Watch data indicates whale presence is still higher than average, but the numbers of observations is trending downward and will likely soon fall below the marine life concentration trigger. Additionally, aerial surveys included ocean waters where observational data indicated whale presence, and whales were not sighted during two overflights of that area; these are additional indications that whales are moving out of the Fishing Grounds.

Information and observations are consistent with published migration trends indicating Humpback and Blue whales are leaving California waters. Reports from collaborators in Mexico shows that whales previously observed in California waters are beginning to arrive in the breeding grounds in Mexico. We expect whale numbers to drop rapidly now given all indications that the migration south has begun. According to Working Group experts, large whales tend to move south offshore rather than along the coast during their migration out of California, further reducing the likelihood of overlap with fishing activity. Any whales still migrating out of California waters on December 23 would likely be doing so outside of the Fishing Grounds.

Remaining whales observed during surveys and from observation data were primarily sighted at or near the edge of deep-water canyons, indicating foraging activity appears to have shifted offshore. These areas are unlikely to see high levels of fishing effort due to their location on the outer edge of the Fishing Grounds. However, it is still clear that there are whales in the Fishing Grounds and while risk appears to be low, a more precautionary approach is to delay the season an additional week, at which point even more whales shall have migrated out of the Fishing Grounds.

Fishing Zone 5 has limited commercial take of Dungeness crab due to limited fishing grounds off the Big Sur coast, and there is only limited take of Dungeness crab in Fishing Zone 6, therefore the likely overlap of fishing activity with whales migrating offshore is low.

Opening on December 23 allows for a unified statewide opening of the season, which is not expected to result in fishing effort shift, but instead should more evenly distribute gear throughout the state. Additional delays in parts of the state would be expected to lead to effort shift as fishery participants try to capitalize on the holiday markets, which could lead in turn to high gear concentrations and increase entanglement risks in those areas.

Pursuant to Section 132.8(d)(4) and (7), consideration of total economic impacts to the fleet as well as fleet dynamics were taken into consideration. Following the release of the Department's initial recommendation to open on December 16, a large proportion of the fleet expressed support for an additional delay to ensure the lowest possible risk of entanglement before fishing began. While the Department initially considered a statewide season opener on December 16 with a Fleet Advisory, the Department also supports a more precautionary approach of an additional delay. A statewide opener on December 23rd will allow additional time for remaining whales to migrate out of California waters, further reducing the already low entanglement risk. Additionally, a unified opener is not expected to result in fishing effort shift, but instead should more evenly distribute gear throughout the state, further mitigating against any possible entanglement risk.

Neither a season delay or Fleet Advisory under section 132.8(e) are necessarily limited to a single Fishing Zone, and compliance with best management practices throughout the state will ensure that entanglement risk continues to remain low as any remaining Humpback and Blue whales migrate out of the Fishing Grounds.