



**CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE (DEPARTMENT)
DECLARATION OF CONTINUED FISHING SEASON DELAY AND DEPTH CONSTRAINT
FOR THE COMMERCIAL DUNGENESS CRAB FISHERY, TEMPORARY CRAB TRAP
PROHIBITION FOR THE RECREATIONAL CRAB FISHERY, AND FLEET ADVISORY
DUE TO RISK OF MARINE LIFE ENTANGLEMENT**

Pursuant to Fish and Game Code Section 8276.1(b) and California Code of Regulations, Title 14, Sections 132.8 (“Section 132.8”) and Section 29.80(c)(7) (“Section 29.80(c)(7)”), I find and declare that:

I

On December 9, 2021, I evaluated entanglement risk for the commercial Dungeness crab fishery pursuant to Section 132.8(b) and the recreational fishery pursuant to Section 2980(c). 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 6, 2021. Prior to this risk assessment and management response, I considered the Working Group’s December 8, 2021, management recommendation, and other relevant information provided to my staff.

II

Vessel surveys undertaken by Cascadia Research on December 2, 2021, observed 60 Humpback whales in Zone 3. Pursuant to 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 show a running weekly average of 6.3 Humpback whales in Monterey Bay. Pursuant to 132.8(c)(2)(A)(4)(a), 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 commercial fishing restrictions in a manner that promotes fair and orderly fisheries. Similarly, Section 28.80(c)(7)(B)(2) requires that I lift or modify the recreational Dungeness crab season delay as appropriate.

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 Sections 132.8 and 28.80(c) of Title 14 of the California Code of Regulations, I am implementing the following management action:

1. Continuation of the delay of the opening of the commercial Dungeness crab fishery in Fishing Zone 3. Take and possession of commercially caught Dungeness crab is prohibited in the delayed Fishing Zone.
2. Continuation of the temporary recreational crab trap prohibition in Fishing Zone 3. The deployment and use of crab traps in any recreational fishery is temporarily prohibited in that Zone.
3. Continuation of the temporary recreational trap prohibition in Fishing Zone 4 until December 10, 2021 at 9:00am. Beginning at that time, recreational crab traps will no longer be prohibited in Fishing Zone 4.
4. Continuation of the delay of the opening of the commercial Dungeness crab fishery in Fishing Zone 4 until December 16, 2021 at 12:01am. Take and possession of commercially caught Dungeness crab is prohibited in Fishing Zone 4 until that time. The pre-soak period in Fishing Zone 4 will begin at 8:01am on December 13, 2021. The season opening will be subject to a Depth Constraint as described below.
5. Depth constraint for Fishing Zone 4 limiting fishing activity to less than 40 fathoms. Commercial crab traps shall not be used or placed in Zone 4 waters seaward of the 40-fathom contour line as defined by connecting the appropriate set of waypoints adopted in Federal regulations and published in Title 50, Code of Federal Regulations Part 660. While engaged in fishing activity, all vessels must carry onboard an electronic monitoring system capable of recording the vessel's location using GPS coordinates at a frequency of no less than once per minute during fishing operations. Electronic monitoring data must be made available to the Department upon request for the duration of the fishing period and 60 days thereafter.
6. Fleet Advisory for both commercial and recreational fisheries in Fishing Zones 1, 2, 4, 5, and 6. Both the commercial and recreational fishing fleet should remain vigilant and move or avoid setting trap gear in areas where whales are transiting or foraging to further minimize risk of entanglement, particularly in deep water areas of Zone 4 (canyon edges and the shelf break).

Dungeness Crab Declaration of Continued Commercial Fishery Season Delay, Depth Constraint,
Temporary Recreational Trap Prohibition, Fleet Advisory
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This management action is in effect until the next risk assessment, which is expected to occur on or around December 15, 2021.

Updates and material regarding future entanglement risk evaluations in the commercial Dungeness crab fishery will be made available on the [Department's Whale Safe Fisheries web page.](#)



Charlton H. Bonham, Director

12/9/21 12:15 pm PT
Date/Time

ATTACHMENT TO DIRECTOR'S DECEMBER 9, 2021, DECLARATION CONTINUED FISHING SEASON DELAY AND DEPTH CONSTRAINT FOR THE COMMERCIAL DUNGENESS CRAB FISHERY, TEMPORARY CRAB TRAP PROHIBITION FOR THE RECREATIONAL CRAB FISHERY, AND FLEET ADVISORY DUE TO RISK OF MARINE LIFE ENTANGLEMENT

Information referenced in this Attachment is further described in the Data Summary Compilation dated December 8, 2021, 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:** 60 Humpback whales observed by Cascadia Research vessel survey.
- **Fishing Zone 4:** weekly running average of 6.3 Humpback whales based on Monterey Bay Whale Watch (MBWW) data.

Relevant Management Considerations Under Section 132.8(d)

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

There was some support by the Working Group to open the commercial and recreational fishery on December 20, 2021, in Zones 3 and 4 under a Fleet Advisory, pending additional data. An additional recommendation was put forward to open the recreational fishery in Zone 4 immediately, but it did not receive broad support and some opposed. There was limited support for CDFW's preliminary recommendation, with most opposed.

2. Information from NOAA

No additional information was made available for this risk assessment.

3. Effectiveness of Management Measures to Minimize Entanglement Risk

In Zone 3, the aerial survey and vessel-based observations show continued aggregations of foraging humpback whales. Given the still significant numbers of foraging Humpback whales, a continuation of the Fishing Zone delay/temporary trap prohibition is the most effective Management Action for Zone 3. A season

delay/temporary trap prohibition will prevent crab traps from entering the water, which removes any entanglement risk from both the commercial and recreational fishery in those Zones. 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.

In Zone 4, the aerial survey, vessel-based observations and MBWW data show continued aggregations of humpback whales and foraging occurring along the canyon edges, although weekly averages from MBWW data are decreasing over the past few weeks. Given observed locations of humpback whales, a Depth Constraint for the commercial fishery is the most effective Management Action for Zone 4 to minimize co-occurrence with Dungeness crab trap fishing gear and Actionable Species. A Fleet Advisory in Zone 4 will further minimize entanglement risk by ensuring the commercial and recreational fleets are aware of the known locations of Humpback whales in the area, and modify fishing practices accordingly.

Based on data for Fishing Zones 1, 2, 5, and 6, Humpback whale concentrations are minimal, although whales are still likely present. A Fleet Advisory will ensure both the commercial and recreational fleets are aware of the possibility of marine life entanglements in the area, even though risk is low, and encourage them to modify fishing practices accordingly.

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 possible loss of the holiday market, possible fishing effort shift, and general economic impacts due to the ongoing COVID pandemic. A depth constraint in Fishing Zone 4 will allow fishing opportunity for operators and businesses during the coming holiday.

5. Data Availability Within and Across Fishing Zones

CDFW aerial survey data is available for Fishing Zones 3 and 4. Cascadia Research vessel survey data are available for Zones 3 and 4. MBWW data are available for Zone 4. Point Blue Conservation Science observer data is available for Fishing Zones 3, 4, and 6. The Department considers this data set to adequately cover the full geographic extent of Fishing Zones 3 and 4 (the only remaining Zones at issue) 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 north-central California (where high numbers of Humpback whales were observed in Fishing Zone 4) south to Mexico and Central America. Aerial and vessel-based surveys indicate continued aggregations of humpback whales broadly distributed across Fishing Zone 3. Based on MBWW data, observed Humpback whale numbers are slightly above average when compared to historical data, an indication that migration out of California waters is still ongoing.

7. Fishing Season Dynamics

There are no domoic acid public health advisories currently in effect for Fishing Zone 3 or 4. Landings information collected by the Department indicates low fishing activity in the currently open Fishing Zones. Fair start provisions would be in effect for the opening of both Fishing Zones 3 and 4. Anecdotal information from fishery participants indicates a general trend of greater effort shift to the northern coast, which could indicate lower effort in an opener on the central coast. Anecdotal information and contact with Department staff indicates other fishery participants are foregoing currently available fishing opportunities to wait for the season opener in Fishing Zone 3.

8. Known Distribution and Abundance of Key Forage

Based on aerial and vessel surveys within Fishing Zone 3, Humpbacks were distributed widely both inshore and offshore feeding primarily on schooling fish at a variety of depths. CDFW aerial surveys on November 27, 2021, observed bait balls off Bodega Bay and Point Reyes in waters between 50 and 100 m (27-54 fathoms) deep, and surveys on December 2, 2021, observed numerous bait balls across a range of depths.

9. Ocean Conditions

No additional information was request for this data assessment. Based on the previously available information, La Niña conditions are currently forecast, with an approximately 90% chance of La Niña continuing through the winter and an approximately 50% chance of it continuing into spring 2022. Waters are cooler than usual in the nearshore portions of Fishing Zones 1 – 6.

10. Current Impact Score Calculations

- a. Fishing Season – 0
- b. Calendar Year – 1.13 for Humpback whales; 0 for Blue whales and Pacific leatherback sea turtles

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

Cascadia Research reported that at least 18 Humpback whales known to be from California waters have arrived in Mexico breeding grounds, ten of which were seen off California in 2021 (some as late as October 10). However, the large numbers of Humpback whales distributed across Fishing Zone 4 as well as slightly above average numbers of Humpbacks seen based on MBWW data is an indication that migration out of California waters is still ongoing. Aggregations of whales seen in Zone 3 were widely distributed across the Fishing Zone. Humpback whales in Zone 3 were seen in depths between 50 and 100 meters (27 and 54 fathoms). Smaller aggregations in Zone 4 were primarily located on the edges of the shelf and canyon at depths greater than 50 fathoms. Whale sightings by Point Blue Conservation Science support whale presence in Fishing Zone 4 is primarily located at the shelf break and canyon edge.

Chosen Management Action and Rationale

Based on the management considerations outlined above, the Director will continue the delay in the opening of the commercial Dungeness crab season and continue the temporary crab trap prohibition in the recreational Dungeness crab fishery in Fishing Zone 3. Use of crab traps in other recreational fisheries is also temporarily prohibited pursuant to Section 29.89(c)(4) of Title 14 of the California Code of Regulations. The commercial fishery will open in Fishing Zone 4 on December 16, 2021 with a 64-hour presoak period beginning at 8:01am on December 13, 2021, subject to a Depth Constraint. A Fleet Advisory is issued for the recreational and commercial fisheries in Fishing Zones 1, 2, 4, 5, and 6.

Aerial and vessel survey data shows large aggregations of foraging Humpback whales in Fishing Zone 3 could be at risk of entanglement with recreational and commercial crab traps. Additionally, data indicates that aggregations of schooling fish present Humpback foraging opportunity in that area. The wide distribution of Humpback whales both inshore and offshore in Zone 3 indicates that a depth restriction on fishing activity would be ineffective in reducing entanglement risk as these are depths at which fishing activity tends to occur. Furthermore, given the high volume of traps anticipated to be set during a season opener, it has been determined that a trap reduction would not sufficiently reduce entanglement risk. A season delay is the most protective management action given existing whale presence. At this time, no data available indicates a different management response is appropriate for the recreational fishery.

Although available data in Fishing Zone 4 shows that Humpback whale sightings remain slightly above average, vessel survey data largely observed humpback whales at depths greater than 50 fathoms. Lower whale densities that are trending downward combined with observations mostly occurring in deeper waters indicates a Depth Constraint limiting fishing to waters shallower than 40 fathoms would be an effective management action to reduce the

risk of marine life entanglement. Furthermore, the fair start provision and anecdotal information from fishery participants indicates lower levels of fishing activity are anticipated for the season opener in Fishing Zone 4 as fishery participants choose to wait for opportunity in Fishing Zone 3.

Pursuant to Section 132.8(b)(4), the Director must lift or modify any restrictions in a manner that promotes fair and orderly fisheries. Here, recreational and commercial fishing in Fishing Zone 4 were both delayed from the traditional season opening dates, which typically provide for a recreational-only fishing period in advance of the commercial season opener. In order to provide for an orderly opening consistent with existing expectations and historic practice the recreational fishery will open in advance of the commercial pre-soak.

Although current survey data was not available for Zones 1, 2, 5, and 6, survey data was collected in those Zones in advance of the November 1 risk assessment and sufficiently indicated low presence of whales such that it was no longer necessary to focus available resources in those areas to collect additional data. Given the availability of survey data statewide in advance of November 1, the no data scenarios under Section 132.8(c)(2)(A)(1)-(3) are no longer applicable, and Zones can be evaluated based on the totality of the management considerations and available data (including previous survey data). Fishing Zones 3 and 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. Although no triggers for management action were met in Fishing Zones 1, 2, 5, and 6, past survey data indicates small concentrations of Humpback whales in those Fishing Zones. Both recreational and commercial fleets should use additional precaution when setting gear in those areas. A Fleet Advisory under section 132.8(e) is not 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 for any remaining Humpback whales in those Fishing Zones.