



**CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE (DEPARTMENT)  
DECLARATION OF FISHING SEASON DELAY FOR  
THE COMMERCIAL DUNGENESS CRAB FISHERY AND TEMPORARY CRAB TRAP  
PROHIBITION FOR THE RECREATIONAL 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, Sections 132.8 (“Section 132.8”) and Section 29.80(c)(7) (“Section 29.80(c)”), I find and declare that:

I

On November 1, 2021, I evaluated entanglement risk for the commercial Dungeness crab fishery pursuant to Section 132.8(b) and the recreational Dungeness crab fishery pursuant to Section 29.80(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 October 22, 2021, and with an updated notice of all non-confidential data on October 29, 2021. Prior to this risk assessment and management response, I considered the Working Group’s October 26, 2021, management recommendation and other relevant information provided to my staff, and consulted with the president of the Fish and Game Commission.

II

On October 18 and 19, staff from the Department’s Marine Region conducted aerial surveys of Fishing Zones 2 through 5 and observed 48 Humpback whales in Fishing Zone 3. Aerial surveys undertaken by NOAA researchers throughout October showed Humpback whale abundances ranging from 34 to 96 whales in Fishing Zone 3. Pursuant to Section 132.8(c)(2)(A)(4)(a), I must implement a protective management action in the commercial crab fishery.

III

NOAA-standardized data from commercial whale-watching trips in Fishing Zone 4 throughout the summer and fall show continued presence of Humpback whales, with the most recent weekly running average of 18.9 Humpback whales in Monterey Bay. Pursuant to Section 132.8(c)(2)(A)(4)(a), I must implement a protective management action in the commercial crab fishery.

IV

Aerial surveys undertaken by NOAA researchers throughout October showed at least four distinct individual Pacific leatherback sea turtles in Fishing Zone 3. Additionally, telemetry

data show a Pacific leatherback sea turtle foraging in Fishing Zones 3 and 4. Pursuant to Section 132.8(c)(2)(A)(4)(c), I must implement a protective management action in the commercial crab fishery.

V

Numerical triggers for marine life concentrations have been reached in Fishing Zones 3 and 4 for Humpback whales and Pacific leatherback sea turtles. Pursuant to Section 29.80(c), I must implement a protective management action in the recreational Dungeness crab fishery. Section 29.80(c) requires that any temporary prohibition on the use of crab traps extend the general crab trap prohibition outlined in Section 29.80(c)(4).

VI

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 Pacific leatherback sea turtles based on the best available science. Additional information on the relevant management considerations is provided in the attachment to this declaration.

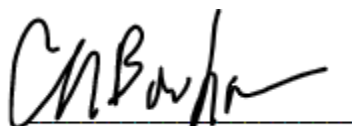
VII

**THEREFORE**, under the authority granted by Fish and Game Code Sections 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 actions:

1. The opening of the commercial Dungeness crab fishery in Fishing Zones 3 and 4 is delayed. Take and possession of commercially caught Dungeness crab is prohibited in the delayed Fishing Zones.
2. The deployment and use of crab traps in any recreational fishery is temporarily prohibited in Fishing Zones 3 and 4.

This management action is in effect until modified. The next risk assessment is expected to occur on or before November 22, 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

11/1/21 3:13 PM PT  
Date/Time

ATTACHMENT TO DIRECTOR'S NOVEMBER 1, 2021 DECLARATION OF FISHING SEASON DELAY FOR THE COMMERCIAL DUNGENESS CRAB FISHERY AND TEMPORARY CRAB TRAP PROHIBITION FOR THE RECREATIONAL DUNGENESS CRAB FISHERY  
DUE TO RISK OF MARINE LIFE ENTANGLEMENT

Information referenced in this Attachment is further described in the Available Data compilation dated October 29, 2021 and located at the Department's [Whale Safe Fisheries web page](#), 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 observed during CDFW aerial surveys, and 32 humpback whales observed during NOAA and Upwell surveys, in addition to Pacific leatherback sea turtles.
- **Fishing Zone 4:** weekly running average of 18.9 Humpback whales based on Monterey Bay Whale Watch data. Pacific leatherback sea turtles observed during NOAA and Upwell surveys.

**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 delay of the recreational crab trap fishery in Fishing Zones 1 and 2 until November 12, 2021, to then open with a Fleet Advisory; and to open the commercial trap fishery in Fishing Zones 1 and 2 on December 1, 2021, with a Fleet Advisory. However, the group recognized the dates were subject to change based on the next risk assessment. For Fishing Zones 3 and 4, the group recommended delaying the recreational crab trap fishery until November 12, 2021, to then open with a Fleet Advisory, and the commercial fishery until November 19, 2021, to then open with a Fleet Advisory; both dates would be subject to change based on the next risk assessment. The Working Group supported opening the recreational fishery and commercial fisheries in Fishing Zones 5 and 6 on time under a Fleet Advisory.

The recommendation memo is available on the Department's [Whale Safe Fisheries web page](#).

No other information was made available to the Department.

## **2. Information from NOAA**

No additional information was provided for this risk assessment.

## **3. Effectiveness of Management Measures to Minimize Entanglement Risk**

Based on the available information, a temporary prohibition on the use of recreational crab traps in Fishing Zones 3 and 4 and a delay of the commercial season in Fishing Zones 3 and 4 is likely to be the most effective management action to reduce entanglement risk. A season delay/temporary prohibition would 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 and Pacific leatherback sea turtles.

Based on data for Fishing Zones 5 and 6, Humpback whale concentrations are minimal. A Fleet Advisory will keep anglers 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 commercial season delay will impact operators and businesses. There will be economic impacts to individual operators, however given the risk of entanglement (which is expected to decrease), the short-term economic impacts must be weighed against the longer-term viability of the commercial fishery across California.

Economic impacts from a temporary recreational trap prohibition are unknown at this time given the lack of data on the fishery, however businesses dependent on recreational fishing activity may be impacted.

## **5. Data Availability Within and Across Fishing Zones**

CDFW and/or USCG aerial survey data are available for Fishing Zones 1 through 5. NOAA and Upwell aerial survey data are available for Fishing Zones 3 and 4. Monterey Bay Whale Watch (MBWW) data are available for Fishing Zone 4. Cascadia Research vessel survey data are available for Fishing Zones 3 through 6. Point Blue Conservation Science observation data are available for Zones 3, 4, and 6. The Habitat Compression Index is available for Zones 2, 3, 4 and the northern portion of Zone 5. Whale Watch 2.0 habitat predictions are available for all Zones. The Department considers this comprehensive data set to adequately cover the full

geographic extent of Fishing Zones 1 through 6 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) south to Mexico and Central America. Aerial surveys indicate continued presence of large aggregations of Humpback whales across Fishing Zones 3 and 4. Based on MBWW data, observed Humpback whale numbers are above average when compared to historical data, which may indicate that the bulk of the migration has yet to begin.

Pacific leatherback sea turtles typically forage in an area extending from Monterey Bay to Point Reyes during the summer months. Recent surveys and satellite tagging observations indicate foraging turtles are still present in Fishing Zones 3 and 4.

## **7. Fishing Season Dynamics**

Preliminary domoic acid testing results indicate a potential delay for the commercial fishery in the northern portion of Zone 3. Results for an area that encompasses Zones 5 and 6 are pending. 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.

## **8. Known Distribution and Abundance of Key Forage**

Abundant schooling fish, a key prey element for Humpback whales, were evident during aerial surveys conducted off the coast of San Mateo County and the Gulf of the Farallones. Presence of dense aggregations of brown sea nettles and abundant large molas, indicators of leatherback foraging habitat, was evident from around Point Reyes to Pigeon Point within water depths of 20-40 fathoms, as well as between Davenport and Año Nuevo. Krill were not observed.

## **9. Ocean Conditions**

La Niña conditions are currently forecast, with an 87% chance of La Niña in December 2021-February 2022. Waters in the Southern California Bight (Fishing Zone 6) remain warmer than normal. Within Fishing Zones 1-5, nearshore waters are cooler than usual for this time of year.

## **10. Current Impact Score Calculations**

- a. Fishing Season – n/a
- 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**

The large numbers of humpback whales distributed across Fishing Zones 3 and 4 is an indication that significant migration has yet to occur out of central California waters. Aerial and vessel survey data is supported by MBWW data and Point Blue Conservation Science observation data collected by trained naturalists associated with the National Marine Sanctuaries and National Park Service as well as trained observers. Leatherback sea turtles are also still present within the Gulf of the Farallones and offshore of Monterey Bay. Humpback whales were observed foraging in 20-50 fathoms and Leatherback sea turtles were observed foraging in 20-40 fathoms.

### **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 and 4, and temporary crab trap prohibition in the recreational Dungeness crab fishery in Fishing Zones 3 and 4. Use of crab traps in other recreational fisheries is also temporarily prohibited pursuant to Section 29.80(c)(4) of Title 14 of the California Code of Regulations. A Fleet Advisory is issued for recreational fishery in Fishing Zones 1, 2, 5, and 6, and the commercial fishery in Fishing Zones 5 and 6.

Aerial and vessel survey data, supported by observation data from Point Blue Conservation Science, shows large aggregations of foraging Humpback whales in Fishing Zones 3 and 4 could be at risk of entanglement with recreational and commercial crab traps. Additionally, data indicates that large aggregations of schooling fish still present Humpback foraging opportunity in that area. The wide distribution of Humpback whales across Fishing Zone depths from 20-50 fathoms 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. Additionally, 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.

Furthermore, multiple Pacific leatherback sea turtles were observed in Fishing Zones 3 over recent weeks, telemetry data show a Pacific leatherback sea turtle foraging in Fishing Zones 3 and 4, and data indicates Leatherback sea turtle foraging opportunity is still present in those areas. Section 132.8 anticipates a delay in the season opener in the event Pacific

leatherback sea turtles are present. Given the critical status of the species and likelihood of Pacific leatherback sea turtles remaining in foraging areas in Fishing Zones 3 and 4, a season delay/temporary crab trap prohibition is the most protective management response.

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, 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.