



**CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE (DEPARTMENT)
DECLARATION OF CONTINUED FISHING SEASON DELAY 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)”), I find and declare that:

I

On November 19, 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 November 15, 2021. Prior to this risk assessment and management response, I considered the Working Group’s November 17, 2021, management recommendation and other relevant information provided to my staff.

II

Aerial surveys undertaken by NOAA researchers on November 10 and 11 observed 73 humpback whales in Zone 3. Vessel surveys undertaken by Cascadia Research observed 79 Humpback whales in Zone 3 over two surveys days, with single-day observations of 44 whales and 21 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 continued presence of Humpback whales, with the most recent weekly running average of 8.7 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

Telemetry data show a Pacific leatherback sea turtle present in Fishing Zone 4. Pursuant to Section 132.8(c)(2)(A)(4)(c), I must implement a Fishing Zone delay or other protective management action.

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 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

VI

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. Continuation of the delay of the opening of the commercial Dungeness crab fishery in Fishing Zones 3 and 4. Take and possession of commercially caught Dungeness crab is prohibited in the delayed Fishing Zones.
2. Continuation of the temporary recreational crab trap prohibition in Fishing Zones 3 and 4. The deployment and use of crab traps in any recreational fishery is temporarily prohibited in those Zones.
3. Fleet Advisory for both commercial and recreational fisheries in Fishing Zones 1, 2, 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.

This declaration superseded my declaration on November 1, 2021. This management action is in effect until modified. The next risk assessment is expected to occur on or before 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 web page:
<http://www.wildlife.ca.gov/Conservation/Marine/Whale-Safe-Fisheries>.



Charlton H. Bonham, Director

11/19/21 3pm PT

Date/Time

ATTACHMENT TO DIRECTOR NOVEMBER 19, 2021, DECLARATION CONTINUED
FISHING SEASON DELAY 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 November 17, 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:** 73 Humpback whales observed during NOAA/Upwell aerial surveys, and 44 and 21 Humpback whales were observed by Cascadia Research vessel surveys during two survey days.
- **Fishing Zone 4:** weekly running average of 8.7 Humpback whales based on Monterey Bay Whale Watch (MBWW) data. Pacific leatherback sea turtle telemetry data indicate turtle presence.

Relevant Management Considerations Under Section 132.8(d)

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

Recommends that the commercial fishery open as scheduled on December 1. Commercial fishery participants should implement best practices, but CDFW should not open the fishery under a Fleet Advisory. The recreational fishery should remain open in Fishing Zones 1 and 2. While recreational fishery participants should continue to implement best practices, the Fleet Advisory should be lifted beginning December 1. There was broad support for CDFW's preliminary recommendation of an ongoing delay for the commercial season opener in Fishing Zones 3 and 4 and a continued crab trap restriction for the recreational fishery in those Zones.

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, continuing the temporary prohibition on the use of recreational crab traps and 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 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 and Pacific leatherback sea turtles.

Based on data for Fishing Zones 1, 2, 5, and 6, Humpback whale concentrations are minimal, although whales are still 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 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 any possible 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

Upwell/NOAA aerial survey data are available for Zones 3 and 4. Cascadia Research vessel survey data are available for Zones 1, 3 and 4. MBWW data are available for Fishing Zone 4. 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. In conjunction with the statewide survey data collected in advance of the November 19 risk assessment, 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 distributed 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 4.

7. Fishing Season Dynamics

Current domoic acid testing results indicate a potential delay for the commercial fishery in the northern portion of Zone 3 (Sonoma/Mendocino County Line to Point Reyes). Quality testing is complete for Zones 1 and 2, results indicate no additional delay will be required. 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

Both the Cascadia Research surveys and Upwell/NOAA surveys observed Humpback whales inshore and offshore feeding on schooling fish, a key prey element for Humpback whales. Leatherback foraging habitat, as indicated by aggregations of brown sea nettles and presence of large molas, were evident from around Point Reyes in depths of 20-40 fathoms. Krill were not observed.

9. Ocean Conditions

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 at least nine Humpback whales known to be from California waters have arrived in the Mexico breeding grounds, three of which were seen off California in 2021. Prior survey data by CDFW and the USCG indicates that few whales were present in Zones 1 and 2, indicating migration has likely occurred in the northern Fishing Zones. Prior survey data also indicates low concentrations of whales in Zones 5 and 6. However, 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. At least one Leatherback sea turtles is still present offshore of Monterey Bay, although given the time of year is anticipated to be moving away from the Fishing Grounds. Humpback whales were observed foraging inshore and offshore.

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 in Fishing Zones 3 and 4, and continue the 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 29.89(c)(4) of Title 14 of the California Code of Regulations. A Fleet Advisory is issued for the recreational and commercial fisheries in Fishing Zones 1, 2, 5, and 6.

Aerial and vessel survey data, including data from MBWW, 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 aggregations of schooling fish present Humpback foraging opportunity in that area. The wide distribution of Humpback whales both inshore and offshore in Zones 3 and 4 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.

Furthermore, telemetry data show a Pacific leatherback sea turtle in Fishing Zones 4, and data indicates Leatherback sea turtle foraging opportunity is still present in Zone 3. Section

132.8 anticipates a delay in the season opener in the event Pacific leatherback sea turtles are present. Although it is anticipated that any remaining Pacific leatherback sea turtles are headed out of California waters, given the critical status of the species and the possibility of Pacific leatherback sea turtles remaining in observed foraging areas in Fishing Zones 3, a season delay/temporary crab trap prohibition is the most protective management response.

Although current survey data was not available for Zones 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, 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.