



**CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE (DEPARTMENT)
DECLARATION OF A STATEWIDE FISHERY CLOSURE FOR
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 May 18, 2021, 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 May 12, 2021. Prior to this risk assessment and management response, I considered the Working Group’s May 13, 2021 management recommendation and other relevant information provided to my staff.

II

There are no marine life concentration survey data to inform the risk assessment in Fishing Zones 2, 3, 5, and 6. Pursuant to Section 132.8(c)(2)(B)(1), I must implement a protective management action.

III

The number of Humpbacks observed in Fishing Zone 1 and 4 exceeds 10 and a running average of 5, respectively. Pursuant to Section 132.8(c)(2)(B)(2)(a), I must implement a protective management action.

IV

Pursuant to Section 132.8(e)(5), I must allow use of any authorized Alternative Gear during a closure on April 1 or later.

V

Pursuant to Fish & Game Code Section 9002.5(b)(1)(A)(ii) and implementing regulations in Section 132.7 of Title 14 of the California Code of Regulations, I may authorize retrieval operations under the Lost or Abandoned Dungeness Crab Trap Gear Retrieval Program when take of crab is restricted pursuant to Section 132.8.

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, Blue 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 132.7 and 132.8 of Title 14 of the California Code of Regulations, I am implementing the following management actions:

1. Starting at 12:00PM on June 1, 2021, a Fishery Closure of Fishing Zones 1-7 (statewide) for commercial Dungeness crab for the remainder of the 2020-21 season, All Dungeness crab traps must be removed from ocean waters. The take and possession of Dungeness crab is therefore prohibited after 12:00PM on June 1, 2021. This closure does not apply to fishing activity with authorized Alternative Gear types as stated below.
2. Authorized Alternative Gear may be used in all closed Fishing Zones. Currently there are no authorized Alternative Gear types. If an Alternative Gear type is authorized before the statutory season closure dates, it may be used for take of Dungeness crab.
3. Retrieval operations under the Lost and Abandoned Dungeness Crab Trap Gear Retrieval Program may begin on June 7, 2021 at 6:00AM.

Updates and material regarding future entanglement risk evaluations in the commercial Dungeness crab fishery will be made available on the Department's web page:
<https://wildlife.ca.gov/Conservation/Marine/Whale-Safe-Fisheries>.


Charlton H. Bonham, Director

5/18/21 3:18 pm
Date/Time

ATTACHMENT TO DIRECTOR'S MAY 17, 2021 DECLARATION OF A STATEWIDE
FISHERY CLOSURE FOR THE COMMERCIAL DUNGENESS CRAB FISHERY DUE TO
RISK OF MARINE LIFE ENTANGLEMENT

Information referenced in this Attachment is further described in the Available Data compilation dated May 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 1, 2, 5, and 6:** No current data are available for these Zones, which triggers management response under RAMP (c)(2)(B)(1).

Relevant Management Considerations Under Section 132.8(d)

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

Fleet representation on the Working Group opposed the Department's initial recommendation of a statewide Fishery Closure, with only two Working Group members supporting. The Working Group provided an alternative recommendation of a Depth Constraint in Fishing Zones 1-5 and a Fishery Closure in Zone 6, which received support from 13 members of the Working Group and was opposed by two members. The recommendation memo is available on the Department's web page: <https://wildlife.ca.gov/Conservation/Marine/Whale-Safe-Fisheries>.

After the Working Group meeting but in advance of the Director's final determination, additional observational data from a UCSC survey in Fishing Zone 4 was provided via Cascadia Research reporting 31 sightings of 61 humpback whales over a 4-day survey period. These additional data confirm the predicted increased presence of actionable species in and/or near fishing grounds.

2. Information from NOAA

No additional information was provided for this risk assessment.

3. Effectiveness of Management Measures to Minimize Entanglement Risk

The running average sightings of Humpback whales in Monterey Bay (Zone 4) is now near historical average, which is an indication of increased migration when compared to previous reporting periods. Vessel surveys in Zone 1 observed moderate numbers

of Humpback whales. Observational data confirms presence of Actionable Species in the Fishing Grounds. As a result of marine life concentration triggers for Humpback whales being met, anticipated increasing densities of Humpback whales in the Fishing Grounds over the coming weeks, and the minimum two-week lead time requested by the fleet to safely remove all gear from the water, a Fishing Zone closure on June 1 is the most effective Management Action for Zones 1 - 7 to minimize entanglement risk Dungeness trap fishing gear and Humpback whales.

4. Total Economic Impact to the Fleet and Fishing Communities

A statewide fishing closure will impact operators and businesses still participating in the fishery. However, effort has continued to decrease with each bi-weekly reporting period as fishery participants switch to other fisheries or conclude fishing for the season. Additionally, while there will be economic impacts to individual participants, given the time of year and expected increasing entanglement risk through the remainder of the season, the short-term economic costs to individuals must also be weighed against the longer-term viability of the fishery statewide.

5. Data Availability Within and Across Fishing Zones

Monterey Bay Whale Watch (MBWW) data are available for Fishing Zone 4. Cascadia Research vessel survey data are available for Zone 1. Point Blue Conservation Science observation data are available for Zones 3, 4, 5 and 6, and additional observation data is available for Zone 4. The Habitat Compression Index and Whale Watch 2.0 habitat predictions are available for all Zones. No data is available for Zone 2 specific to whale or sea turtle presence. Given lack of data in Zone 2, the Department considered data available from adjacent Zones in determining management response.

6. Known Historic Marine Life Migration Patterns

Presence of Humpback whales in typically high concentrations areas in Fishing Zone 4 are near average based on MBWW data, and observation data in the same area supports increased whale presence from prior weeks. Additionally, Cascadia Research vessel-based surveys observed whales off Reading Rock near Trinidad.

Continued relative absence of Blue whales is consistent with their overwintering at breeding areas outside of California.

Pacific Leatherback sea turtles typically do not begin to arrive in California waters until late June based on sea turtle tagging studies and historical surveys.

7. Fishing Season Dynamics

Season price negotiations delayed the actual start of fishing following the December 23, 2020 statewide opener. Most vessels began setting gear on Monday January 11, 2021.

Based on CDFW landings data, 359 vessels have participated in the fishery as of May 4, 2021. Week 5 had the highest number of potential traps deployed across all Fishing Zones, with an estimated total of 94,675 traps. The most recent landings data indicates decreased fishing activity statewide, landing volumes remain the same for Fishing Zones 1, 2, 5, and 6. The estimated maximum number of traps is currently 16,750, which is another decrease from the last risk assessment when 28,975 were estimated. Fishing Zone 3 has the highest estimated number of traps deployed at 11,250 traps. Bi-weekly trap reporting also confirms Fishing Zone 3 has the highest number of deployed traps. Average fishing depths statewide range from 10-21 fathoms, with maximum depths ranging from 35-80 fathoms.

8. Known Distribution and Abundance of Key Forage

Krill abundance (higher offshore in the outer slope) is also anticipated to be closer to average yearly values while anchovy is still considered to be above average, given the historical record.

Cool ocean temperatures and strong spring upwelling conditions continued from February to March and the Habitat Compression Index (HCI) for both months indicates a low compression state. It is anticipated that cool conditions with expanded upwelling habitat will continue with no impact of habitat compression that would otherwise be anticipated to result in increased concentrations and aggregations forage (and therefore whales) nearshore.

9. Ocean Conditions

La Niña conditions persisted in March with a 80% chance of a transition from this condition to ENSO-neutral during May-July 2021.

The latest outlook of late winter/spring ocean ecosystem conditions shows that ocean conditions have cooled significantly over this past winter and conditions in spring are trending toward cool and productive conditions. It is anticipated that cool conditions will continue, with expanded upwelling habitat and no signs of impact of habitat compression that would be anticipated result in increased concentrations and aggregations of whales and forage nearshore.

10. Current Impact Score Calculations

- a. Fishing Season – 0.38 for Humpback whales; 0 for Blue whales and Pacific Leatherback sea turtles
- b. Calendar Year – 0.38 for Humpback whales; 0 for Blue whales and Pacific Leatherback sea turtles

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

Based on Monterey Bay Whale Watch data, Cascadia Research vessel surveys, Point Blue Conservation data, and additional sources of observation data, significant migration into the Fishing Grounds has begun and is expected to increase over the coming weeks. This is supported by whale concentrations increasing to historical averages in Fishing Zone 4 based on MBWW data, sightings of 45 Humpback whales over two days by Cascadia Research, and an increase in observations of Humpback whales as reported to Point Blue Conservation by trained naturalists associated with the National Marine Sanctuaries and National Park Service as well as trained observers.

Chosen Management Action and Rationale

Based on the management considerations outlined above, the Director will implement Fishery Closure statewide (Fishing Zones 1-7) beginning at 12:00PM on June 1, 2021.

No current survey data was available for Fishing Zones 2, 3, 5, and 6, which requires analysis of the management considerations under Section 132.8(d) and appropriate management response under Section 132.8(c)(2)(B)(1). Similarly, available survey data in Fishing Zones 1 and 4 reported more than 10 Humpback whales and a running average of greater than 5, respectively, which requires either a Fishing Zone closure or other protective management action under Section 132.8(c)(2)(B)(2). Those sections anticipate a broader analysis of the factors impacting entanglement risk statewide. Section 132.8(d)(5) anticipated that if data are not available, data from adjacent Fishing Zones may be used.

Available data since the last risk assessment indicates that Humpback whale migration to California waters is well underway, and Humpback whale numbers are expected to increase over the coming weeks. Based on the available data in Fishing Zones 1 and 4, Humpback whales are also likely to be present in higher numbers than previously observed in Fishing Zones 2, 3, 5, and 6. Increased whale presence increases the risk of co-occurrence between Dungeness crab gear and Humpback whales and therefore increased entanglement risk. Although fishing activity has been declining in recent weeks, remaining fishing activity poses an entanglement risk, particularly in Fishing Zones 1 (where reporting indicates over 5,000 traps are currently being fished, and possibly as high as 7,200 based on landings data) and Fishing Zone 3 (where reporting indicates over 8,300 traps are currently being fished, and possibly as high as 11,250 based on landings data).

Furthermore, observational data in Fishing Zone 4 indicates an increase in Humpback whale activity in shallower waters. As whale concentrations increase, they are expected to disperse more widely across the Fishing Grounds, including into shallower waters which is more likely to overlap with fishing activity. Lack of data in certain Fishing Zones of the state supports a more restrictive management response in those areas given the time of year and anticipated increase of whale presence due to migration into California waters. Additionally, fleet representation on the Working Group indicated up to two weeks is necessary to remove all gear from the water; starting the process immediately is necessary in order to ensure reduction in entanglement risk as soon as possible. The RAMP regulations anticipate a Fishery Closure when marine life concentration triggers are reached, and best available science does not support a different management approach as protective of Humpback whales, Blue whales, or Pacific Leatherback Sea Turtles.

Pursuant to Section 132.8(e)(5), the Director shall allow use of any authorized Alternative Gear. Currently there are no authorized Alternative Gear types. If an Alternative Gear type is authorized before the statutory season closure dates, it may be used for the take of Dungeness crab.

Under the Lost or Abandoned Dungeness Crab Trap Gear Retrieval Program, the Director may authorize the beginning of retrieval operations during a period of time when take of crab is restricted pursuant to Section 132.8. Authorization of this program beginning June 7, 2021 at 6:00AM will further reduce entanglement risk by removing lost or abandoned gear.