

## **Risk Assessment and Mitigation Plan (RAMP) Monthly Operations and the Role of the California Dungeness Crab Fishing Gear Working Group under the proposed regulations 132.8 Title 14, CCR**

This draft operations document has been prepared to provide an overview of how the proposed RAMP regulations will be implemented and outline the respective roles of the California Dungeness Crab Fishing Gear Working Group and the California Department of Fish and Wildlife and its Director. It is subject to change once the RAMP regulations are approved prior to November 1, 2020.

### **Summary**

The California Dungeness Crab Fishing Gear Working Group (WG) and advisors are comprised of individuals who have expertise and firsthand knowledge of the fishery and relevant science. Their input is critical to implementing RAMP in such a way that it achieves its goal of minimizing marine life entanglement risk and impacts to the fishery. The California Department of Fish and Wildlife (CDFW) will conduct risk assessments monthly and/or schedule risk assessment meetings with the Working Group when new data are available or when a RAMP trigger has been reached. RAMP risk assessments may occur more frequently depending on management needs and/or data availability. Risk assessments will be conducted beginning in November and continue through June or until the season closes in each Fishing Zone. The Working Group will have access to all non-confidential data under consideration by CDFW and data will be made available in advance of the scheduled risk assessment meeting. New information may also be made available when the Working Group meets. See process outline and Figure 1 below for additional detail.

### **Risk Assessment Process Outline:**

1. Beginning in October each year, CDFW monitors available data/RAMP triggers (Entanglements and Marine Life Concentrations as defined in RAMP).
2. At least monthly, CDFW compiles/reviews available data for the risk assessment.
3. Risks Assessments will be scheduled once per month or when a RAMP trigger has been reached. Risk assessment dates will be determined by anticipated data availability or when RAMP triggers have not been reached.
4. No RAMP trigger reached, CDFW provides available data to WG for review. CDFW returns to monitoring without requesting a WG meeting.
5. Risk triggered under RAMP, CDFW notifies WG (*48-hour notice*).
6. CDFW makes an initial risk assessment including a proposed Management Action(s) (subsection 132.8 (e)), informed by Management Considerations (subsection 132.8 (d)). Initial risk assessment and Management Action will be

sent to the WG in advance of the meeting. (*Note: RAMP provides a default management response in subsection 132.8 (c)*)

7. WG meets and reviews available data and initial CDFW risk assessment, including Management Action(s).
8. WG considers severity and geographic scope of risk informed by Management Considerations in subsection 132.8 (d) under RAMP.
9. WG discusses recommended management response(s) informed by Management Actions under RAMP subsection 132.8 (e). WG can support a single Management Recommendation or multiple approaches. Recommendations with broad, cross-representation of WG support based on the best available science will be encouraged. No voting will take place, membership support will be captured in the Recommendations Form (*see page 8 below*).
10. The Management Recommendations Form from the WG will be sent to the CDFW Director, along with CDFW staff recommendation.
11. CDFW Director reviews available data, including Management Considerations under subsection 132.8 (d) WG Recommendation Memo and CDFW staff recommendation.
12. CDFW Director issues a Declaration for Management Action(s). A minimum of 72-hours is provided to the fleet before implementation of any management action change (or removal of a Management Action).
13. Implementation time period for Management Action will be guided by WG recommendation and urgency to address the risk.
14. CDFW continues monitoring available data, when new data becomes available, WG is notified and asked to provide a new management recommendation and/or if RAMP triggers are no longer met, CDFW Director lifts Management Action(s).
15. Available data monitoring resumes.

# RAMP Risk Assessment Operation

CDFW Monitors Available Data and RAMP Triggers

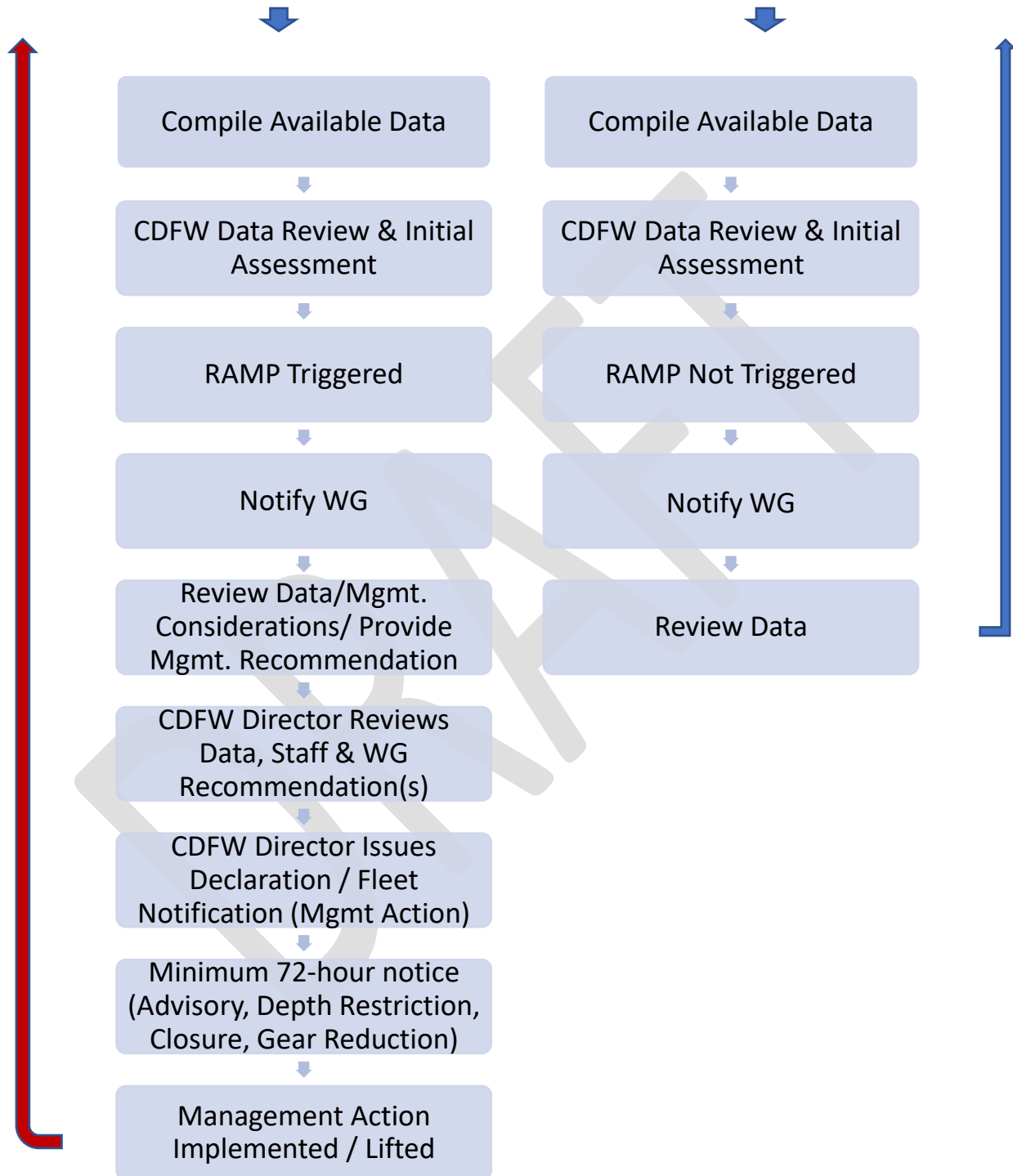


Figure 1. RAMP Risk Assessment Operation Flow Chart

## **CDFW Role and Risk Assessment**

CDFW will monitor available data, notify the WG monthly or once a RAMP trigger has been reached. Risk Assessment calls will be scheduled with a minimum 48-hour notice. Scheduling will be based on data availability, with a priority to receive entanglement and Marine Life Concentrations data prior to convening the WG. CDFW staff will prepare agendas, data compilations, initial assessment of risk/management recommendation and any other supporting materials in advance of the meeting. All materials will be provided to the WG in advance of the meeting, however new data or information may become available which will be shared at the meeting. CDFW will chair the meeting and draft the WG Recommendation Form for review by the WG. Once the WG reviews the Recommendation Form (*typically a 24-hour review period*), CDFW staff will be responsible for forwarding onto the CDFW Director. Once the Director issues a Declaration, CDFW staff will notify the WG, the fleet and public through the Whale Safe Fisheries listserv. CDFW will also update relevant webpages to ensure all materials are publicly available, including the Whale Safe Fisheries webpage.

## **Working Group Role and Providing a Recommended Management Action**

The WG will meet at least monthly (November through June) or once a threshold in RAMP is reached due to entanglement or Marine Life Concentration values in subsection 132.8 (c). They will review available data and determine the severity and geographic scope of risk based on Management Considerations as outlined in RAMP subsection 132.8(d). The WG will not be providing a qualitative assessment of risk (low, medium, high). Based on their independent review of the Management Considerations in subsection 132.8 (d), the WG will consider the appropriate management recommendation based on Management Actions specified under RAMP subsection 132.8 (e). The Working Group will develop a management recommendation based on their independent review of Management Considerations that will help minimize entanglement risk within or across Fishing Zone(s). Management recommendations should be guided and informed by relevant expertise and the best available science. The recommended Management Action must rely on scientific information relevant to the risk and be reasonably explained in the rationale. Each recommendation presented should include its rationale, including benefits/merits and any limitations or tradeoffs to consider for each option.

## **Available Data to Inform Management Considerations Under RAMP**

Currently available data sources provided by CDFW and its partners include:

- NOAA Entanglement Reports
- Cascadia Research Whale Surveys
- CDFW marine landings data and relevant analysis
- CDFW bi-weekly Fishing Activity Reports
- NOAA/UCSC Oceanographic and forage data
- Monterey Bay Whale Watch
- Point Blue Conservation Science Observations
- CDFW Aerial Surveys
- NOAA Aerial Surveys
- USCG Aerial Surveys
- NOAA Leatherback sea turtle tagging and telemetry data
- Solar Logger Pilot Project data

\*Data sources will be continually reviewed by CDFW, and new data will be explored to inform RAMP operations. CDFW will continue to work with the WG and its Data Project Team, scientists, agencies, and others to incorporate new data streams when they become available.

## **RAMP Fishing Zones**

### **132.8 (a)(7) Fishing Zones Proposed under the RAMP regulations**

The RAMP regulation divides the California coast into seven Fishing Zones. Fishing Zone means any of the following areas that extend from zero to 200 nautical miles offshore (U.S. Exclusive Economic Zone).

Zone 1: From the California/Oregon border (42° N. latitude) to Cape Mendocino (40° 10' N. latitude).

Zone 2: From Cape Mendocino to the Sonoma/Mendocino county line (38° 46.125' N. latitude).

Zone 3: From Sonoma/Mendocino county line to Pigeon Point (37° 11' N. latitude).

Zone 4: From Pigeon Point to Lopez Point (36° N. latitude).

Zone 5: From Lopez Point to Point Conception (34° 27' N. latitude).

Zone 6: From Point Conception to the U.S./Mexico Border.

Zone 7: “Pacific Leatherback Sea Turtle Foraging Area” from Point Arena (38° 57. 5' N. latitude) to Point Pinos (36° 38.314' N. latitude).

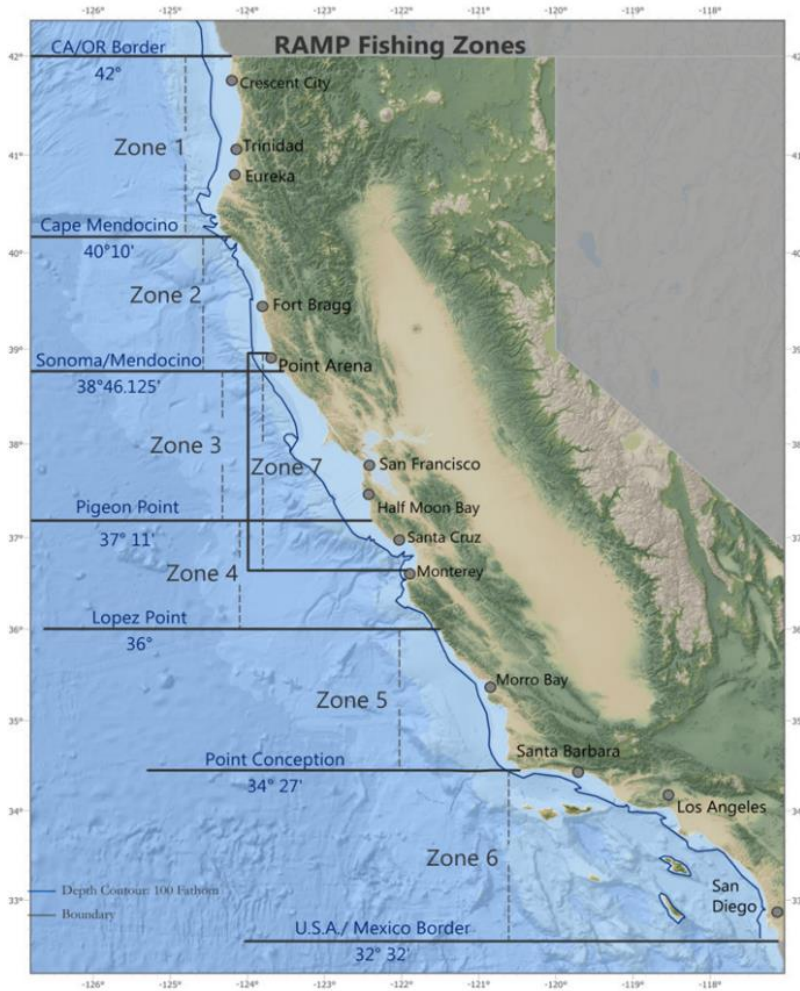


Figure 2. RAMP Fishing Zones

## **RAMP Management Considerations**

### **132.8 (d) Management Considerations Proposed under the RAMP regulations**

Management Considerations 132.8 (d) guide a recommended Management Action by providing context and rationale for the recommended risk minimization approach. Management Considerations discussed by the Working Group will be crucial to forming a management recommendation for the CDFW Director.

- (1) Working Group management action recommendation and best available science made available to the department related to considerations identified in this subsection.
- (2) Information from NOAA.
- (3) Effectiveness of management measures to minimize entanglement risk.
- (4) If deciding between management measures that equivalently reduce entanglement risk, the management measure with the lower total economic impact to the Fleet and fishing communities should be selected. *(modified for additional clarity from proposed regulatory text)*
- (5) Data availability within and across Fishing Zones. Application of management measures can be limited to a Fishing Zone if data are available for that zone. If data are not available, historical data or data from an adjacent Fishing Zone may be used.
- (6) Known historic marine life migration patterns. Entanglement risk is expected to decrease in the fall when Actionable Species are anticipated to leave the Fishing Grounds. Conversely, entanglement risk is expected to increase in the spring when Actionable Species return.
- (7) Fishing Season dynamics, including factors that impact the concentration or geographic location of fishing effort, amount of fishing gear deployed in a Fishing Zone, and season delays based on quality testing and/or public health closures or hazards.
- (8) Known distribution and abundance of key forage (such as anchovy, krill or jellyfish concentrations) and their influence on Actionable Species' feeding behavior.
- (9) Ocean conditions (including but not limited to temperature, upwelling, El Niño, La Niña, weather, currents) that influence presence and aggregation of marine life (such as habitat compression) and affect vessel operations.
- (10) Current Impact Score Calculation within Fishing Season and calendar year.
- (11) Marine Life Concentrations and their spatial distribution over the course of the current Fishing Season as an indication of marine life migration into or out of Fishing Grounds and across Fishing Zones.

## **RAMP Management Actions**

### **132.8 (e) Management Actions Proposed under the RAMP regulations**

Recommended Management Action(s) by the WG are limited by the RAMP regulations as specified below. The CDFW Director will choose a Management Action based on the best available science that will help minimize entanglement risk.

**(1) Fleet Advisory:** If the level of risk is elevated and/or anticipated to increase but more restrictive management actions are not necessary, the Director may issue an advisory notice to the Fleet to employ voluntary efforts and/or measures to reduce the risk of entanglements (i.e., best fishing practices) and to avoid triggering additional management actions.

**(2) Depth Constraint:** The Director may use a depth constraint during the Fishing Season, within any or all Fishing Zone(s), where Dungeness crab may not be taken or possessed in waters within a specified depth range. "Depth" is defined by approximating a particular depth contour by connecting the appropriate set of waypoints adopted in Federal regulations and published in Title 50, Code of Federal Regulations Part 660, sections 660.71 through 660.73 (Revised December 12, 2018), incorporated by reference herein.

**(3) Vertical Line/Gear Reduction:** The Director may decrease the number of vertical lines or amount of gear (e.g., number or percentage of traps) an individual permit holder can use such that there will be a reduction in the total number of lines in use. The Director will determine the reduction amount based on the most recent information provided pursuant to subsection (g). Gear reduction may occur statewide, or within any or all Fishing Zone(s). Buoy tags issued pursuant to Fish and Game Code Section 8276.5 shall be reduced consistent with a Director's declaration, and all unused buoy tags shall be onboard the permitted vessel and available for inspection by the department upon request.

**(4) Fishery Closure:** The Director may prohibit the take and possession of commercial take of Dungeness crab within any Fishing Zone(s).

**(5) Alternative Gear:** During a closure occurring on April 1 or later, and upon authorization pursuant to subsection (h), the Director shall allow the use of Alternative Gear within any closed Fishing Zone(s).



## **Working Group Management Recommendation Form Template**

*(template is currently being revised by CDFW and the WG)*

### **California Dungeness Crab Fishing Gear Working Group Management Recommendation to inform the Risk Assessment and Mitigation Program for the California Department of Fish and Wildlife**

Submitted to the California Department of Fish and Wildlife Director for the Risk Assessment Mitigation Program Section 132.8 Title 14, California Code of Regulations to assess marine life entanglement risk in the Commercial Dungeness Crab Fishery.

**Date:**

#### **A. Scope and severity of risk based on Management Considerations, subsection 132.8 (d):**

- Summary of data available for consideration, aligned with the management considerations in subsection 132.8 (d) to inform the WG management recommendation(s).

#### **B. Management Recommendation(s), subsection 132.8 (e)**

- Working Group recommendation(s) based on Management Considerations in subsection 132.8 (d), including Fishing Zone(s), Management Action(s) to be applied, duration and timing of implementation.

#### **C. Rationale for Management Action(s)**

- Any key information that informed the WG Management recommendation (justification) and level of support among the WG.

## **Frequently Asked Questions:**

**Q:** What is the role of the WG in evaluating risk, does it differ from the 2019-20 season?

**A:** The role of the WG is to evaluate available data (Management Considerations) once RAMP risk triggers are reached and make a management recommendation based on those considerations. The key difference from the 2019-20 season is, risk is determined by RAMP and the WG will now focus on a management recommendation rather than a risk determination.

**Q:** Will CDFW staff support the management recommendation(s) of the WG?

**A:** Yes, if the available data supports the recommendation(s) based on the best available science. CDFW staff may then forward a joint recommendation to the Director of CDFW for consideration.

**Q:** What information will be available to CDFW and WG?

**A:** Any non-confidential data/information that informs the triggers in RAMP and Management Considerations.

**Q:** How do unknown entanglements count toward the impact score?

**A:** Under RAMP they are contributed at 50% based on the proportional known entanglements in commercial Dungeness crab gear. Unknown entanglements in gear that is known to not be commercial Dungeness crab gear will not count toward impact scores.

**Q:** What if gear involved in an entanglement belongs to another fishery?

**A:** If the gear is known to be affiliated with another fishery, the entanglement would not count toward the impact score for the commercial Dungeness crab fishery.

**Q:** How will CDFW determine where the entanglement occurred?

**A:** NMFS may be able to provide that information or it could be determined if the owner of the gear can be identified and can confirm where the gear was deployed. Otherwise it will be difficult to determine.

**Q:** How does the candidacy status of Pacific Leatherback sea turtles under the California Endangered Species Act affect the RAMP?

**A:** Under the candidacy status, no Pacific Leatherback sea turtles may be taken.

**Q:** When does RAMP sunset?

**A:** It is expected that some form of RAMP will exist indefinitely.

**Q:** What happens when whales are delisted?

**A:** An Incidental Take Permit under the Endangered Species Act would no longer be required. However, Marine Mammal Protection Act and state law and policy will still guide the incidental take of marine mammals.

**Q:** Can a vessel transit with crab in a closed Fishing Zone.

**A:** Not under current regulations. Department is looking at options to allow transiting if the vessel has electronic monitoring.

**Q:** Can a Fishing Zone reopen after it closes?

**A:** Yes, if risk is no longer triggered under RAMP, timing would however be a consideration if the normal season is coming to a close or risk is anticipated to increase due to historic marine life migration patterns.