

# CALIFORNIA DUNGENESS CRAB FISHING GEAR WORKING GROUP

## RECOMMENDATIONS MEMO

**TO:** California Ocean Protection Council, Deborah Halberstadt, Executive Director  
California Department of Fish and Wildlife, Charlton Bonham, Director  
California Fish and Game Commission, Eric Sklar, President  
Joint Committee on Fisheries and Aquaculture, Mike McGuire, Chair  
Pacific States Marine Fisheries Commission, Randy Fisher, Executive Director

**CC:** California Ocean Protection Council, Jenn Eckerle, Deputy Director  
California Department of Fish and Wildlife, Craig Shuman, Marine Region Manager  
California Fish and Game Commission, Melissa Miller-Henson, Deputy Director  
California Fish and Game Commission, Susan Ashcraft, Marine Advisor  
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National Marine Sanctuaries, West Coast Regional Office, Lisa Wooninck, Policy Coordinator  
Pacific States Marine Fisheries Commission, Dave Colpo, Senior Program Manager  
California Dungeness Crab Task Force (DCTF), DCTF Administrative Team  
Marine Mammal Commission, Dennis Heinemann, Senior Advisor, Fisheries and Ecosystems  
Oregon Whale Entanglement Working Group, Amanda Gladics, Facilitator  
Washington Whale Entanglement Working Group, Fran Recht, Facilitator

**FROM:** California Dungeness Crab Fishing Gear Working Group

**DATE:** October 15, 2018

**RE:** Updates and 2018-19 recommendations to advance the Risk Assessment and Mitigation Program (RAMP) and reduce whale entanglements

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Since September 2015, the California Dungeness Crab Fishing Gear Working Group (Working Group), a diverse multi-stakeholder group, has been taking steps to identify and reduce risk of whale entanglements in Dungeness crab fishing gear. During the 2017-18 fishing season, the Working Group piloted a Risk Assessment and Mitigation Program (RAMP) to support the state in working with experts—agencies, fishermen, researchers, representatives from environmental organizations (NGOs), and others—to identify and assess elevated levels of entanglement risk, explore information needs, and determine the need for management options that could be recommended to CDFW.

**Formalizing the RAMP:** With the recent passage of [Senate Bill \(SB\) 1309](#), which will become effective on January 1, 2019, the Director will have authority to restrict the take of Dungeness crab in a timely manner—and lift any restrictions in a similar manner once significant risk has abated—in areas where the fishery is posing significant risk of marine life entanglement, as determined in consultation with the Working Group. SB 1309 also requires CDFW to adopt regulations to evaluate and respond to potential risk of marine life entanglement on or before November 1, 2020 in consultation with the Working Group and other stakeholders. The RAMP is intended to guide this effort, and during the August and September 2018 meetings, CDFW presented draft rulemaking language based on the RAMP’s evolving structure and

function to the Working Group for review and feedback. CDFW will continue to develop the RAMP rulemaking package for public review in advance of November 1, 2020.

**2017-2018 RAMP Pilot:** Since the last recommendations memo in January 2018, the Working Group met on April 23-24, 2018, August 1-2, 2018, and September 25-26, 2018 to consider lessons learned from the 2017-18 RAMP pilot. Based on this learning, an updated 2018-19 RAMP has been developed to include:

- The Working Group evaluated and fine-tuned the risk factors (rate of entanglements, forage/ocean conditions, whale concentrations, and fishing dynamics) based on lessons learned. These updates include convening the Working Group more frequently to evaluate risk particularly in the spring months, including new guiding questions for most risk factors to more readily assess risk, and specific recommendations requesting funding to strengthen the RAMP data inputs (see recommendations below).
- In addition to humpback whales, the 2018-19 RAMP will be expanded to consider blue whales and has developed relevant draft criteria and guiding questions to pilot during the upcoming season. The Working Group requested to receive information about other marine species, including fin whales, gray whales, and leatherback sea turtles, starting in late 2018 to gain a better understanding of how these marine species will be considered within future iterations of the RAMP.
- The RAMP will utilize and consider both systematically and opportunistically collected data related to fishing dynamics and the distribution and concentrations of other humpback, blue whales, and other marine life to help inform the RAMP's development and implementation. These data may come from aerial surveys, vessel surveys, data loggers, crowd-sourced information, and other means.
- Recognizing the experience that the Working Group has gained on the issue of whale entanglements in California, the agencies (CDFW, National Marine Fisheries Service (NMFS), Ocean Protection Council (OPC) and the United States Coast Guard) may convene the Working Group to consider circumstances of increased rate of entanglements in California waters in fishing gear other than California Dungeness crab.

**Surface Gear Rulemaking:** During its April 2018 meeting, the Working Group provided input on CDFW's draft rulemaking package that would restrict the amount of surface gear used at different depths. This rulemaking is based on the voluntary Best Practices Guides that have been in place during the 2016-17 and 2017-18 fishing seasons. It is anticipated this rule will be in place for the 2018-19 fishing season. For additional information, visit <https://www.wildlife.ca.gov/Notices/Regulations/Crabbing-Gear>. The Working Group is currently updating the 2018-19 Best Practices Guide to reflect the new surface gear regulations, once approved.

## RECOMMENDATIONS

The following recommendations were identified by the Working Group over the course of three meetings in 2018. This information is intended to help inform decision makers and those interested in this issue, including other fixed gear fisheries.

**Recommendation #1. Request to the OPC to Direct General Funds for RAMP Operations and Support, Including Data Gathering, Gear Innovation, and Evaluation.** The Working Group appreciates the dedicated efforts that the state, the Legislature, and its partners have taken to secure long-term funding to support the RAMP. With the recent designation of \$5.5M from the General Fund to reduce the risk of entanglement

of marine life in fixed fishing gear, the Working Group recommends the following be considered by the OPC as priorities for the allocation of this available funding:

- *RAMP Operating Funds* - The Working Group recommends the OPC allocates a portion of the General Fund allocation to fully support RAMP coordination and operations, including the consideration of stipends for Working Group participants.
- *Solar Logger Pilot Project* - A solar logger pilot project was implemented during the 2017-18 fishing season to test the tool's ability to inform the overlap of fishing gear and whale distribution. The Working Group recommends expanding the solar logger pilot beyond the existing 12 commercial vessels to include up to 40 commercial volunteers (3-4 per port/port complex) from Port San Luis/Avila to Crescent City. This could include boats that may be involved in pre-season domoic acid and quality testing, and dually permitted vessels in Oregon and Washington. The Working Group also supports the expansion of this pilot project to involve up to 20 whale watch boats and/or Commercial Fishing Passenger Vessels (CPFVs) from Port San Luis/Avila to Crescent City. This project is anticipated to provide valuable information for both the whale concentrations and fishing dynamics risk factors, including further learning about the relationship and overlap of whale distribution and fishing activities. Additionally, this project will help inform the best way forward to scale the use of data loggers for fishing and whale watch vessels to inform a comprehensive view of fishing and whale dynamics. The Working Group also recommends CDFW, Pacific States Marine Fisheries Commission (PSMFC), and other experts collaborate to evaluate solar logger data from commercial fishing vessels and whale watching operations and attempt to assess and map the overlap of fishing and whale distributions.
- *Synthesis of Available Whale Data* - The Working Group recommends the Whales Project Team and/or other experts synthesize available whale watch data (e.g., Monterey Bay Whale Watch) and compare this information with other whale sightings datasets (e.g., systematic vessel and aerial surveys) to evaluate the utility of whale watch data (local and regional) in informing the RAMP. This project will also assess the relationship between various whales, fishing, and forage data sets from recent years and improve integration and interpretation of whale watching observations and other sightings data in the RAMP and inform prioritizing these survey methods in the future, including resource allocation decisions. This project will inform the evaluation of the whale/forage model, which is currently in development.
- *Automation of Forage/Ocean Conditions Data* - The Working Group sees great value in Dr. Jarrod Santora's work tracking forage/ocean conditions to understand predicted and current whale distribution patterns. The Working Group recommends Dr. Jarrod Santora develop a process to automate the forage/ocean data analysis and sharing capabilities, in combination with integrating his expert opinion and interpretation of the analyses. The project will further define and quantify the objective criteria to guide the RAMP, expedite the process to analyze and share available data, and increase transparency within the fleet regarding how the evaluation of this risk factor is conducted.
- *Additional RAMP Information Gathering Efforts* - The Working Group recommends maintaining the flexibility to conduct both planned and responsive data gathering efforts, including, but not limited to, aerial and vessel surveys, to inform the RAMP factors in response to elevated entanglement risk.
- *Gear Innovations Research & Development Projects* - The Working Group recommends the OPC allocate a portion of the General Funds to support shovel-ready gear innovations projects to test during Spring 2019, based on established criteria that will be developed by the Working Group

and/or CDFW (see Recommendation #3). The Working Group also recommends the OPC consider funding the development of a process to assist the state in forwarding research and development projects in the longer term (see Recommendation #3).

The Working Group would like to be informed and, as appropriate, involved in the design of the above recommended projects.

**Recommendation #2. Improve Risk Assessment Factor Criteria for Blue Whales and Take an Opportunistic Approach to Data Gathering for Other Marine Life:** The Working Group recommends the Whales Project Team continue to refine and inform the draft objective criteria and guiding questions developed for blue whales for the Working Group's review and consideration throughout the 2018-19 season. The Working Group also recommends gathering relevant information about other marine life (e.g., gray whales, fin whales, leatherback turtles, etc.) for consideration in the RAMP. Where possible, the Working Group requests that agencies and other experts provide this additional information to help inform the RAMP's development. The Working Group will continue to consider and be responsive to other marine species during the 2018-19 RAMP.

**Recommendation #3. Establish a Transparent and Clear Process to Assist the State in Prioritizing Research and Development Projects:** The Working Group recommends establishing a transparent and clear process to assist the state in identifying, assessing, and prioritizing proposed research and development projects to help further inform the RAMP, and specifically gear innovations that could be included in the management measures toolbox (MMT) of the RAMP ([here](#)). As a first step, the Working Group recommends convening a workshop in 2019 to review, discuss, and evaluate the merits of new and existing proposals and develop a longer-term strategy for implementing a research and development program. Based on the success of PSMFC in convening past similar workshops, the Working Group recommends the OPC work with PSMFC to convene California, Oregon, Washington, East Coast, and international fishermen, innovators, and others to consider innovative ideas. While needing additional discussion, the Working Group recommends the OPC, PSMFC, and CDFW develop a request for proposals (RFP) process that would identify criteria to help with prioritizing projects (e.g., innovation must be economical, enforceable, safe, reliable, fishable, reduce entanglement frequency, functioning prototype, etc.).

**Recommendation #4. CDFW to Prioritize Engaging with Other Fixed-Gear Fisheries:** With the passage of SB 1309, the Working Group recommends CDFW work with other fixed gear fisheries (both commercial and recreational) to address the complex issue of wildlife entanglements. The Working Group recommends that CDFW, fishermen, and others consider the tools developed by the Working Group has developed to date, including best fishing practices concepts, surface gear rulemaking concepts, gear marking ideas (e.g., double-sided tags, rope markings, buoy markings, etc.), and RAMP concepts to help other fisheries develop tools that are specific to their fishing practices. The Working Group welcomes the opportunity to share its work on this issue with other fisheries per CDFW's needs as these communications take place. Additionally, the Working Group recommends the report from the August 29-30, 2018 Forensic Review Workshop, which included a robust discussion about gear marking, be made available to other fixed gear fisheries for consideration.

**Recommendation #5. CDFW Presentation to the Fish and Game Commission (FGC) and/or Marine Resources Committee (MRC):** The Working Group recommends that CDFW present information about the RAMP to the FGC and/or MRC during the 2018-19 season. The Working Group also recommends CDFW initiate discussions with the FGC and/or MRC about reducing entanglement risk in the recreational Dungeness crab fishery and other fixed gear fisheries.

**Recommendation #6. Improved Inter-agency Coordination Between CDFW and the Coast Guard:** The Working Group recommends that CDFW and the Coast Guard develop a Memorandum of Understanding (MOU), or update an existing MOU, to help with inter-agency RAMP coordination. This would include, but not be limited to, the Coast Guard appointing a representative to serve on the RAMP's agency body, to work together to coordinate aerial surveys using Coast Guard aircrafts/vessels and to explore available Coast Guard technologies that may help reduce entanglement risk, and establish a process to communicate RAMP management measures (voluntary/mandatory) via the Coast Guard's 'Broadcast Notice to Mariners' radio channel. Additionally, Working Group participants look forward to working with the Coast Guard to coordinate, design, and carry out pilot aerial surveys to test out protocols to collect data to use in the RAMP.

The Working Group looks forward to continuing to engage with the OPC, CDFW, FGC, Joint Committee on Fisheries and Aquaculture (the Legislature), DCTF, and others to inform Working Group discussions and share Working Group outputs. The Working Group welcomes the opportunity to have direct communications at any time about the RAMP and continues to be committed to providing recommendations to support thriving whale populations along the West Coast and a thriving and profitable Dungeness crab fishery.

Information about the Working Group and its activities, including summaries, memos, members list, background materials, and other resources are available at <http://www.opc.ca.gov/whale-entanglement-working-group>. Questions, ideas, and feedback about the RAMP can be directed to [info@cawhalegroup.com](mailto:info@cawhalegroup.com) or 707-832-4088.

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