

## Postseason Risk Assessment Evaluation, July 2018 2017-18 Risk Assessment and Mitigation Program (RAMP) Pilot

Dear CA Fishing Leadership and Members of the Whale Watch Community,

As part of the Risk Assessment and Mitigation Program (RAMP) 2017-18 Pilot, the California Dungeness Crab Fishing Gear Working Group (Working Group) reconvened on July 10, 2018 to conduct a postseason risk assessment evaluation. This was the last of three planned risk assessments under the RAMP (see [here](#) for summaries from the pre- and mid-season assessments).

During the postseason assessment, the Working Group discussed each of the priority factors—*forage/ocean conditions, whale concentrations, fishing dynamics, and rate of entanglements*—and how each factor and related criteria had been successfully applied during the RAMP pilot. Additionally, the group reviewed information available on each factor looking ahead into the summer months and in anticipation of the 2018-19 fishing season. Key highlights from the discussion include:

- **General:** Overall, the Working Group expressed support and confidence in the RAMP pilot structure and function, and looks forward to working - in partnership with commercial and recreational fishermen - to continue to develop and fine-tune the program, with the goal to implement this version of the RAMP during the 2018-19 fishing season. The group discussed the importance of maintaining open lines of communication with the Oregon and Washington Working Groups that are also working to address the issue of whale entanglements in Dungeness crab fishing gear.
- **Rate of Entanglements:** To date, NMFS reported there have been two confirmed entanglements in California Dungeness crab fishing gear during the 2017-18 fishing season: one in December 2017 and one in July 2018, both involving humpback whales. The Working Group reflected on the importance of maintaining this factor as one that, when elevated, leads to the immediate convening of the Evaluation Team; challenges with the delay in receiving entanglement information; and the need for continued discussion on the appropriate role of the Working Group under circumstances where the rate of entanglements is elevated but the gear involved is primarily “unknown” in origin, as was the case when the Evaluation Team was convened in June 2018. The group discussed the merits of increasing communications and coordination during the spring months (March-June) in an effort to closely monitor all of the risk factors, including the rate of entanglements.
- **Forage/Ocean Conditions:** Jarrod Santora, Associate Researcher at the University of California, Santa Cruz and Working Group Advisor, confirmed that the spring 2018 forecasted forage/ocean conditions materialized as anticipated: a good krill year due to upwelling and concentrated patches of anchovies along the coast. Jarrod and the Working Group will continue to monitor the [ENSO alert system](#), which currently forecasts a 65%-70% chance for El Niño conditions during winter 2018-19. The Working Group reflected on the need to make stronger connections between forage conditions and fleet behavior; the local and regional role that currents may play in relative entanglement risk; and adapting forage data to help inform blue whale patterns as part of next season’s implementation of the RAMP.
- **Fishing Dynamics:** Fishermen on the Working Group shared that increased efforts were made to remove all gear from the water in the Central Management Area at the end of the season on June 30, and fishermen working in the Northern Management Area are actively removing their gear in advance of the July 15 season end date. The group reflected on the effects of the crab quality delay in the Northern Management Area on shifting fishing effort compared to years with no delay; the need for continued outreach to ports not represented on the Working Group (e.g., Santa Cruz); and the need for ongoing evaluation and review of how to learn and build upon supplemental projects conducted during the 2017-18 pilot (e.g., fishermen’s text thread, solar loggers, etc.). The Working Group highlighted the

value in gaining on-the-water reports from the commercial fleet and opportunities to expand this in the future, as well as improving outreach and coordination with the recreational fleet.

- **Whale Concentrations:** Karin Forney, Research Biologist with NOAA's Southwest Fisheries Science Center and Working Group advisor, shared the most recent 7-day composite running average of Monterey Bay whale watching operations' sightings ([here](#)) as a proxy for whale presence based on migration patterns. The Working Group reflected on the opportunities and limitations of using this datastream as a proxy for whale concentrations; the importance of aerial surveys for capturing both whale counts and trap numbers over a large geographic scale, acknowledging limitations due to weather; the possibility of revisiting vessel-based surveys to help supplement aerial survey data; and the interest of continuing to merge available whale, fishing, and forage information to gain a better understanding of the relationships across risk factors.

The Working Group plans to develop a more comprehensive lessons learned summary, and anticipates making this publicly available following their August meeting. This update will be shared via the [DCTF email list](#), the [Working Group webpage](#), and [CDFW's crab webpage](#). The Working Group welcomes your feedback and insights about the Working Group's efforts and the 2017-18 RAMP pilot.

Please visit <http://www.opc.ca.gov/whale-entanglement-working-group> or contact the Working Group at [info@cawhalegroup.com](mailto:info@cawhalegroup.com).