

RECOMMENDATIONS & NEXT STEPS UPDATE

TO: Joint Committee on Fisheries and Aquaculture, Mike McGuire, Chair
Joint Committee on Fisheries and Aquaculture, Jim Wood, Vice Chair
California Fish and Game Commission, Eric Sklar, President
California Department of Fish and Wildlife, Charlton Bonham, Director

CC: California Ocean Protection Council, Deborah Halberstadt, Executive Director
California Fish and Game Commission, Valerie Termini, Executive Director
California Fish and Game Commission, Susan Ashcraft, Marine Advisor
Pacific States Marine Fisheries Commission, Dave Colpo, Senior Program Manager
California Dungeness Crab Task Force (DCTF), DCTF Administrative Team

FROM: California Dungeness Crab Fishing Gear Working Group

DATE: October 24, 2016

RE: 2016-17 recommendations and next steps to reduce the risk of whale entanglements in Dungeness crab fishing gear

APPENDIX: 2016-17 Best Practices Guide

RESOURCE: Information about the Working Group's activities, including meeting summaries, resources, and an electronic version of the Best Practice Guide is available at <http://www.opc.ca.gov/whale-entanglement-working-group/>.

This update outlines the recommendations and next steps identified by the California Dungeness Crab Fishing Gear Working Group (Working Group) on September 21-22, 2016 in their collective efforts to reduce the risk of whale entanglements in Dungeness crab fishing gear. This information is intended to help inform the state and those interested in this issue, including other state-managed fixed gear fisheries. The administration of the Working Group is supported by The Nature Conservancy (TNC), with in-kind contributions by the California Ocean Protection Council (OPC), California Department of Fish and Wildlife (CDFW), and the National Marine Fisheries Service (NMFS).

Background

In April 2015, the California Dungeness Crab Task Force (DCTF) was informed of increasing trends in large whale entanglements, as reported by NMFS. A multi-stakeholder Working Group was convened in September 2015 to discuss this issue and proactively develop short-term and long-term strategies and options for reducing the risk of whale entanglements in California Dungeness crab fishing gear. Information about the Working Group's activities through October 2015, including short-term recommendations that were agreed to, are available at <http://www.opc.ca.gov/whale-entanglement-working-group/>. Between October 2015 and May 2016, the Working Group paused its activities due to lack of funding for administrative support and a season delay due to unprecedented levels of domoic acid. In May 2016, new funding was secured and the Working Group was reconvened and an updated charter was agreed to.

The Working Group is unified in their collective support of thriving whale populations along the West Coast and of a thriving and profitable commercial and recreational Dungeness crab fishery. This collaborative group, comprised of commercial and recreational fishermen, environmental organization representatives, members of the disentanglement network and state and federal agencies, is charged to:

- Provide guidance and recommendations to the California Dungeness crab fishing industry, including the DCTF, about how to avoid/minimize whale entanglements and identify measures or experiments that can be developed or implemented by the fishing community to address the entanglement issue;
- Collaboratively inform and guide the state of California (CDFW, OPC, California Fish and Game Commission, and the Legislature) in addressing key information gaps and/or measures to reduce the risks of entanglements in Dungeness crab fishing gear; and
- Guide whale entanglement reduction efforts by establishing priorities for the Working Group, and help inform other entities seeking to address the issue of whale entanglements in California.

Since May 2016, the Working Group has held two in-person meetings (July 13-14 and September 21-22) and numerous conference calls, and participants have engaged in direct conversations with their peers, colleagues, and constituents to learn about industry and public priorities related to this issue. Meeting and call summaries are available on the Working Group web page.

During the July 13-14, 2016 in-person meeting, the Working Group prioritized its activities and agreed to focus recommendations and next steps on:

- Building a more comprehensive understanding the dynamics of whale entanglements
- Designing and implementing collaborative projects to test/verify gear modifications and enhanced reporting to inform co-occurrence (e.g., aerial and vessel surveys, electronic monitoring)
- Developing appropriate and effective communications materials (e.g., Best Practices Guide) and outreach activities (e.g., NOAA disentanglement trainings)

Building on ideas developed and initial agreements made in October 2015, during its September 21-22 meeting the Working Group developed a series of recommendations and next steps related to these priorities, including anticipated timeframes for implementation to occur within. This includes identifying pilot projects to be tested during the 2016-17 fishing season and recommendations for voluntary actions to be undertaken by the Dungeness crab fishing community.

On October 17, 2016, OPC approved a staff request for \$200,000 (over two years) to support the Working Group's efforts. The Nature Conservancy has also secured \$75,000 in matching funds to OPC's grant. CDFW decided not to submit a proposal to the U.S. Fish and Wildlife Service through their Traditional Conservation Grants Program (Section 6 Grant Program) this Fall, and is looking to partner with the Pacific States Marine Fisheries Commission to develop and execute a Sections 6 grant in 2017. In October 2016, CDFW submitted a Saltonstall-Kennedy grant in support of aerial survey work. The Working Group is actively seeking additional funding support to ensure its recommendations and next steps can be successfully implemented.

2016-17 Working Group Recommendations and Next Steps

All data and information gathered as part of implementing these recommendations will be made available to the Working Group for evaluation and discussion, and will inform future voluntary and/or regulatory recommendations.

Gear Modification

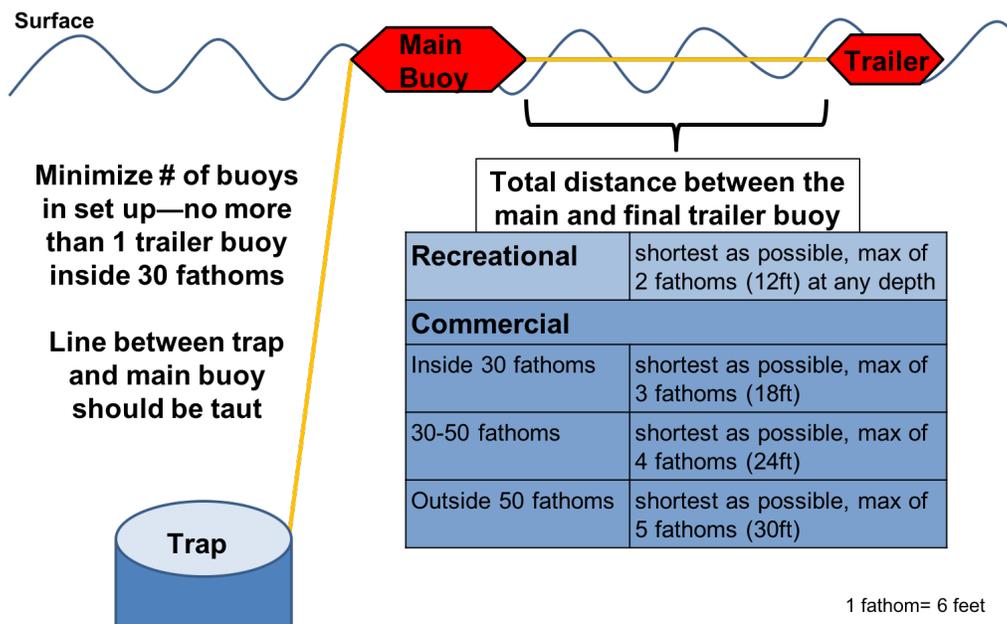
Voluntary Best Fishing Practices

Ocean users, including members of the fishing community, are seeing a shift in fishing practices towards increased surface line and the use of multiple surface buoys. Based on recent observed entanglements, NOAA whale experts and members of the disentanglement network, together with discussions among all Working Group participants, see a potential correlation between the use of excessive line that may be slack, the extent of surface line, and the number of trailer buoys contributing to whale entanglements.

With this in mind, the Working Group has developed a number of best practices related to fishing operations and gear set-up for the 2016-17 fishing season, including:

- **No excess lines should be floating at the surface.** Floating line should only be between the main buoy and trailer.
- **When changing set location across depths, adjust the length of trap lines** by adjusting shots (i.e., measured length of line) to maintain taut vertical lines.
- **Avoid setting gear in the vicinity of whales** whenever possible.
- **Maintain gear to ensure lines and buoys are in good working condition** and will not break under natural conditions causing gear to become lost or irretrievable. Lost gear contributes to marine debris and increases the risk of whale entanglements.
- **All gear should be clearly marked** consistent with applicable regulation. All gear should be maintained so markings are clearly legible to facilitate correct identification of the origins of the gear involved in entanglements.
- **Use the minimum amount of scope** required to compensate for tides, currents and weather, as necessary. Slack lines can potentially create a “floating snare”, which may be more likely to entangle whales.

2016-17 Buoy Set-Up Best Practices



It is anticipated that the voluntary actions in the Best Practices Guide will help reduce the risk of entanglements in Dungeness crab fishing gear. The Working Group is taking steps to evaluate both the level of implementation and the effectiveness of the best practices through informal conversations with peers, survey questions, documentation/analysis of entangled whales historically and during the 2016-17 fishing season, collaboration with the disentanglement network to learn what is being observed on the water, and periodic on-the-water gear checks by CDFW Enforcement. This evaluation will help inform future recommendations and/or management action.

Best Fishing Practices Guide Communications

All best practices have been included in an updated Best Practices Guide (see Appendix), which is being communicated to the broader Dungeness crab fishing community to encourage proactive, voluntary changes in fishing practices during the 2016-17 fishing season. The guide is being distributed by Working Group participants to peers and fishing associations, as well as through CDFW and U.S. Coast Guard distribution channels.

Additionally, the Best Practices Guide is posted on CDFW, OPC and NMFS websites, and pending approved funding support by OPC, the guide will be printed and distributed to gear shops, fuel docks, and shared at fishing community events. The Best Practices Guide will also be highlighted in media releases and/or interviews involving Working Group participants anticipated to announce the start of the 2016-17 fishing season.

Gear Modification Testing

Fishing participants on the Working Group have agreed to participate in two federally funded Bycatch Reduction Engineering Program (BREP) projects under development by NMFS, which are expected to be implemented during the 2016-17 fishing season. Specifically, fishermen will assist in testing different gear set-ups to evaluate line profiles and will test load strengths of different types of fishing line. Additionally, fishing participants will help promote fishermen involvement in a “gear survey” so researchers can gain a better understanding of the types of gear set-ups currently being used, as well as attend a Spring 2017 workshop to further discuss gear design and potential modifications to reduce whale entanglements across the U.S. West Coast.

Enhanced Reporting to Inform Co-occurrence of Whales and Fishing Effort

Currently, data gaps exist that prevent a thorough understanding of the co-occurrence of whales and fishing effort in California. For example, most whale data have been collected during June-November, which are prime seasons for high whale populations off the coast of California. Limited data is available, however, for whale patterns during the height of the Dungeness crab fishing season (December-May). Additionally, there is limited fishing effort data during the Dungeness crab fishing season in California.

To help address data gaps, the Working Group has recommended and developed outlines for three pilot projects, all designed to be implemented during the 2016-17 fishing season (pending funding). These include:

- **Analysis of Historical Data to Inform Whale Behavior Patterns:** Southwest Fisheries Science Center will lead a project to compile existing ocean condition data, prey distribution patterns, and whale sightings. This effort will help the Working Group gain a better understanding of whale patterns in the winter and in the spring especially, since spring is typically the time of year when whales begin to show up in larger numbers to forage along the coast. Once the information is compiled and an initial review of the data has been completed by the project leads, information will be shared with the Working Group to determine the quality of the data. Additionally, the Working Group will consider the value of further processing and integrating the information to create maps of existing data relative to historical entanglement patterns and evaluate capabilities to forecast whale distributions based on ocean conditions and prey distribution. While costs are estimates, the Working Group has earmarked an initial \$30,000 through the OPC funding to conduct the first step (compilation) which will take place in late 2016/early 2017. If the Working Group agrees to the merits of step 2 (processing and integration), an additional \$30,000 in funding could be used to advance this effort.
- **Surveys to Collect Fishing Effort and Whale Data:** The Working Group, together with NMFS, CDFW, the Southwest Fisheries Science Center and the Coast Guard, will design and carry out a number of surveys during the 2016-17 fishing season to collect data on fishing effort and/or whale distribution to the extent possible. Surveys are likely to include 3-5 aerial surveys and/or vessel surveys, and may involve funding support from OPC as well as in-kind support from the U.S. Coast Guard (aerial) and the National Marine Sanctuaries (vessel). Estimated costs for an example aerial survey of Central California are between \$8,000-\$10,000 per survey; however, costs could be reduced by in-kind support.
- **Electronic Monitoring, Pilot Testing:** Fishing participants will work with CDFW and TNC to conduct a series of pilot tests on 2-3 different types of data loggers (e.g., E-catch, West Coast GSI, etc.). CDFW and TNC will lead development of the pilot methodology, with the goal to gain a more comprehensive understanding of useful mechanisms to collect fishing effort data based on feasibility, costs, quality of data, etc.

Lost Fishing Gear Recovery

It is believed lost gear may increase the risk of whale entanglements. The Dungeness crab industry has participated in a voluntary California lost fishing gear recovery program since 2014, and in September 2016, Senate Bill 1287 was passed by the Legislature to establish a statewide, industry-led lost gear recovery program. The Working Group supports the efforts by the DCTF and CDFW to design and implement this program as an important step towards reducing the risk of whale entanglements in lost Dungeness crab fishing gear.

Additional Considerations

The Working Group also identified a number of other items that could benefit from some level of exploration and/or action during the 2016-17 fishing season, including:

- **Gear Marking:** CDFW is exploring the costs and feasibility of printing permit holder information on both sides of Dungeness crab trap tags.
- **Reaching Other Fixed Gear Fisheries:** A copy of this “Recommendations Update” will be shared with fishing leadership throughout California and the West Coast in an effort to keep other fixed-gear fisheries informed of the Working Group’s recommendations and next steps.
- **In-Season Response to Entanglement Events in 2016-17:** The Working Group agreed that CDFW will take the lead in informing the Dungeness crab fleet of any entanglement events and taking action, in coordination with NMFS, to address such events during the 2016-17 season. NMFS and CDFW will keep the Working Group informed of any events, and the Working Group will act as a liaison to the fleet in the event that CDFW issues a notification.

The Working Group is committed to taking these important, proactive steps as outlined to reduce the risk of whale entanglements and provide continued opportunities to harvest crab, provide stability, and help ensure ongoing access to the resource. The Working Group looks forward to continuing to keeping resource managers and decision makers informed of the information collected and evaluations conducted during the 2016-17 fishing season to help inform future voluntary and/or regulatory recommendations to further reduce the risk of whale entanglements off California’s coast.