



# Monterey Bay National Marine Sanctuary

## Dungeness Crab Fishing Gear Working Group Update

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# Outline

1. NOAA Fisheries updates on whale entanglement reports- comparing years 2014 – 2016 by Dan Lawson and Lauren Saez
2. Fishermen's Best Practices Guide
3. Best Fishing Practices Guide Communications
4. Enhanced Reporting to Inform Co-occurrence of Whales and Fishing Effort



Illustrations provided by Pieter Folkens

# Whale Entanglement Reports

## All entanglement reports

State/Region	1982-2013	2014	2015	2016 (through 6/30)
BC Canada	0	1	0	1
CA	281	22	58	39
OR	24	6	1	1
WA	31	3	3	0

## Confirmed entanglement reports

State/Region	1982-2013	2014	2015	2016 (through 6/30)
BC Canada	0	1	0	1
CA	213	15	46	25
OR	17	5	1	1
WA	23	3	2	0

# Comparing 1982-2013, 2014, 2015 and 2016: Whale entanglement reports by month and species

	Humpback				Gray				Other*			
Month	82-13	2014	2015	2016	82-13	2014	2015	2016	82-13	2014	2015	2016
January	1	0	2	1	26	1	0	0	1b, 1F, 3U	0	0	0
February	1	0	2	2	20	0	2	1	1U	0	1F	0
March	1	0	1	1	53	0	4	0	1S, 4U	1U	1U	0
April	1	1	0	6	50	1	0	2	1M, 2U	1U	1K	1K, 1U
May	11	3	4	10	22	2	1	0	1U	2U	3U	5U
June	4	3	5	9	7	0	0	0	1F, 2M, 3U	0	0	1B, 1U
July	7	1	5	NA	9	1	1	NA	1F, 7U	0	0	NA
August	20	2	2	NA	9	0	1	NA	2M, 5U	0	2U	NA
Sept	4	7	6	NA	3	2	2	NA	1S, 2U	1U	1B, 2U	NA
October	8	2	6	NA	4	0	0	NA	1S, 3U	0	1F	NA
November	5	1	2	NA	2	0	0	NA	2F, 1M, 4S	0	3U	NA
December	3	0	0	NA	4	0	1	NA	1M, 7S	0	0	NA

\*B= Blue Whale, b= Bryde's Whale, F= Fin Whale, K= Killer Whale, M= Minke Whale, S= Sperm Whale, U= Unident

# Entanglements reports by county (California)

County	Total: 1982-2013	2014	2015	2016
Del Norte	5	0	0	0
Humboldt	9	0	0	1
Los Angeles	47	3	6	1
Marin	12	0	1	1
Mendocino	11	0	4	0
Monterey	31	12	16	24
Orange	27	0	12	4
San Diego	49	3	4	2
San Francisco	7	0	0	1
San Luis Obispo	10	1	1	0
San Mateo	11	0	0	3
Santa Barbara	38	1	7	1
Santa Cruz	5	1	4	0
Sonoma	0	0	0	2
Ventura	12	1	3	0

# Sources of Entanglements

- In **2014**: of the 32 reports, 11 were identified as fishing gear, 1 weather buoy, and 20 were not able to be identified to a specific source
  - Dungeness crab: 4 confirmed (2 CA, 1 OR, 1 trap attached: state unknown)
  - Gillnet: 1
  - King crab, suspected: 1
  - Sablefish: 1
  - Spot prawn: 4
- In **2015**: of the 62 reports, 23 were identified as fishing gear and 39 were not able to be identified to a specific source
  - Dungeness crab commercial (confirmed): 10
  - Set gillnet and tribal gillnet: 5 confirmed, several others suspected
  - Dungeness crab recreational: 1
  - Spiny lobster: 1
- In **2016** (through June 30): of the 41 reports, 21 were identified as fishing gear and 20 were not able to be identified to a specific source
  - Dungeness crab commercial: 11 confirmed, several others reported as “crab pots”
  - Sablefish: 2 (1 of these still awaiting further evaluation)
  - Spot prawn: 2
  - Gillnet: 1



# Dungeness crab entanglements

- 2014: 4 total (all humpbacks): 2 CA, 1 OR, 1 unknown (trap attached)
  - Report locations: 2 Monterey, 1 Los Angeles, 1 Washington
  - Gear set locations: Monterey, San Francisco, Columbia River, 1 unknown
- 2015: 11 total: 8 CA, 2 OR, 1 CA rec
  - Report locations: 6 Monterey, 1 Mendocino (1 killer whale), 1 Orange, 1 San Luis Obispo (gray whale), 1 Santa Barbara
  - Gear set locations: 2 Oregon, 2 Morro Bay, 2 Monterey, 1 Santa Cruz, 4 unknown
- 2016: 11 total: 10 CA
  - Report locations: 9 Monterey (8 humpbacks, 1 killer whale), 1 San Diego (blue whale), 1 Canada (humpback)
  - Gear set locations: 6 Monterey, 1 San Francisco

# Best Practices Guide

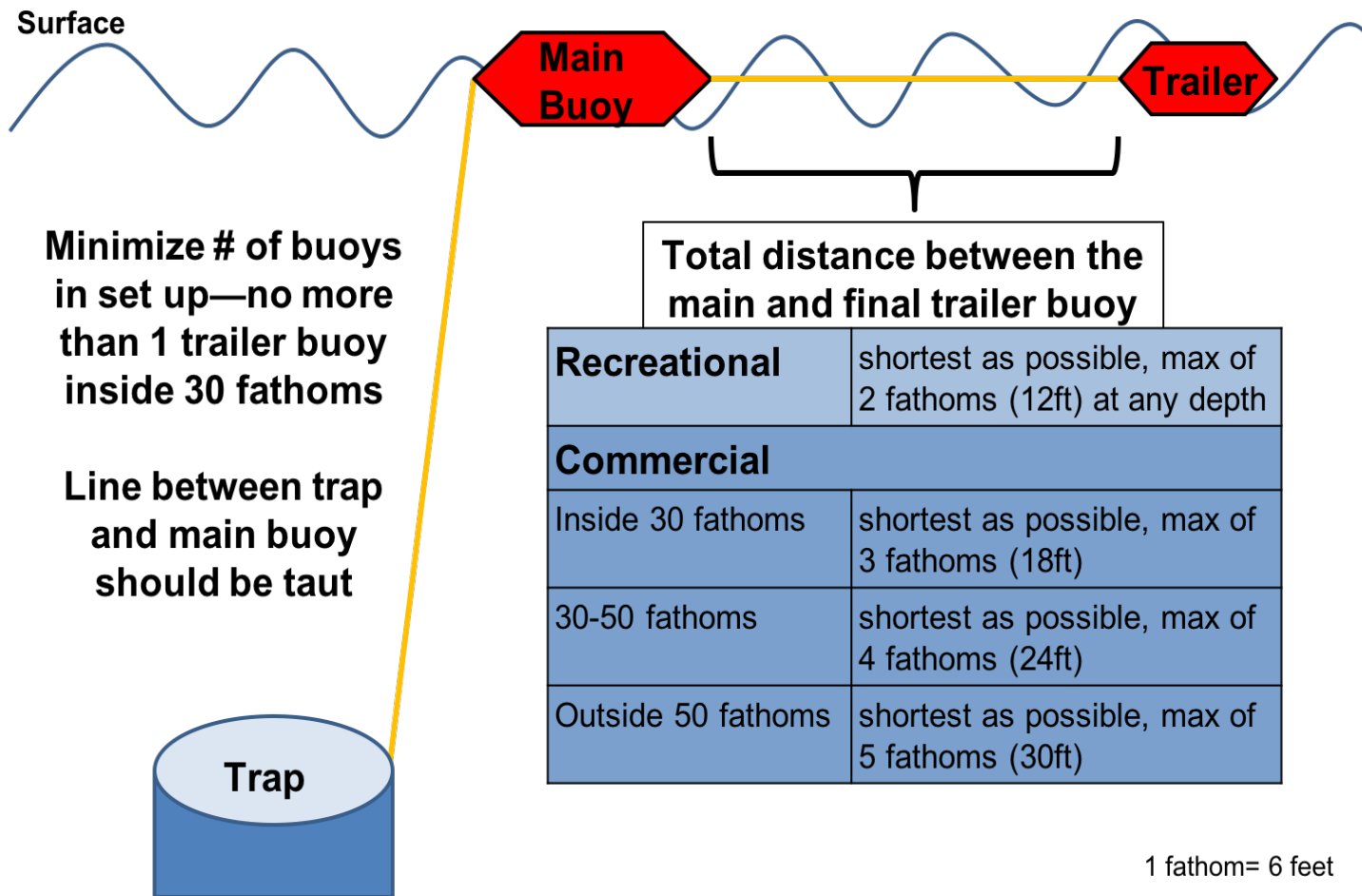
WG Developed a Best Practices Guide:

## California Dungeness Crab Fishing: Ways to Minimize Whale Entanglement Risk:

- When trap is in the water, use the proper length and weighting of lines to keep the line between the trap and buoy running vertical
- Configure gear to minimize the extent of line that could be floating at the surface at any time
- Maintain gear to ensure lines and buoys are in good working condition
- All gear should be clearly marked consistent with applicable regulation
- Avoid setting gear in the vicinity of whales whenever possible.
- Avoid setting gear in the trawl zones or in shipping lanes.
- If you encounter lost gear: Notify the owner or put out a call on the local VHF.



# 2016-17 Buoy Set-Up Best Practices



# Best Practices Guide cont.

## Reporting entangled whales:

- Report entangled whales IMMEDIATELY to the NMFS whale entanglement response hot- line at 1-877-SOS-WHAlE (1-877-767-9425) or hail the U.S. Coast Guard on Channel 16. If possible, stand by for responders.
- Respond promptly if you are contacted by NMFS, CDFW, or any other government agency regarding a whale entangled in your gear and provide as much information as possible regarding your fishing gear and practices.



# Best Practices Guide cont

**If you see an entangled whale...Record the following information to help responders:**

- 🎬 Date
- 🎬 Time of last sighting (24 hr clock)
- 🎬 Your name, vessel name/call sign, phone #
- 🎬 General or specific location (lat/long)
- 🎬 Species
- 🎬 Approximate size/age class
- 🎬 General condition of whale
- 🎬 Is the animal moving (speed/heading)?
- 🎬 Description of gear (markings, colors, shape)
- 🎬 Weather/seas (wind, swell, visibility)
- 🎬 If possible, document with photos (see photographing tips below)



# Best Fishing Practices Guide Communications

- The Best Practices Guide is being distributed by Working Group participants to peers and fishing associations, as well as through CDFW and U.S. Coast
- The Guide is posted on CDFW, OPC and NMFS websites, and pending approved funding support by OPC, through Coast Guard distribution channels
- The Guide will be printed and distributed to gear shops, fuel docks, and shared at fishing community events.
- It will also be highlighted in media releases and/or interviews involving Working Group participants or agency staff anticipated to announce the start of the 2016-17 fishing season.



# 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

- The following 3 proposed projects will help fill this data gap:
  - **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 to gain a better understanding of whale patterns in the winter and in the spring especially - OPC has earmarked \$60K in 2 phases to take place
  - **Surveys to Collect Fishing Effort and Whale Data:** The Working Group, together with NMFS, CDFW, the Southwest Fisheries Science Center, Coast Guard, & Sanctuaries 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**

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

Currently, data gaps exist that prevent a thorough understanding of the co-occurrence of whales and fishing effort in California

- The following proposed projects will help fill this gap:
  - **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.



# Additional Strategies

## Other Considerations:

- **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 a “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 during the 2016-17 season. The Working Group will be kept informed of any events, and will act as a liaison to the fleet in the event that CDFW issues a notification or advisory.
- **Next WG Meeting is in April/May 2017.** There will be a workshop in Oregon in March/April led by NMFS/CDFW



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