Reducing risk of whale entanglements in Dungeness crab gear – building resiliency into the crab management framework

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Outline

• Summary of large whale entanglements in fishing gear

• Whales and crab fishing effort off Oregon

• Existing regulations that have reduced risk

• Oregon’s recent efforts to address increasing entanglements

• Summary of working group efforts

• Potential entanglement mitigation management measures
  ▪ Reduce risk
  ▪ Learn more from each event
Confirmed Whale Entanglements on the West Coast by Year

Source: NMFS
Confirmed Whale Entanglements on the West Coast by Month

Source: NMFS
Sources of entanglements on the West Coast 2013-2018*

* 2018 through 6/6

Source: NMFS
Entanglements Confirmed in Oregon Dungeness Crab Gear

Source: NMFS
## Entangled whales off Oregon

<table>
<thead>
<tr>
<th></th>
<th>Gray Whale Eastern North Pacific Stock</th>
<th>Gray Whale Pacific Coast Feeding Group</th>
<th>Humpback WA/OR/CA Stock</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Population trend</strong></td>
<td>increasing*</td>
<td>increasing*</td>
<td>leveling off*</td>
</tr>
<tr>
<td><strong>Population status</strong></td>
<td>delisted 1994</td>
<td>No formal status</td>
<td>Endangered/Threatened</td>
</tr>
<tr>
<td><strong>Primary activity</strong></td>
<td>migrating</td>
<td>feeding</td>
<td>feeding</td>
</tr>
<tr>
<td><strong>Known hotspots</strong></td>
<td>migratory corridors by distance from shore coastwide</td>
<td>coastal reef habitats off central and southern regions</td>
<td>Stonewall and Heceta Banks</td>
</tr>
<tr>
<td><strong>Peak timing</strong></td>
<td><strong>Northbound</strong> - late Jan-Jul, peak Apr-Jul</td>
<td>Jun-Nov</td>
<td>May-Nov</td>
</tr>
<tr>
<td></td>
<td><strong>Southbound</strong> - Oct-Dec, peak in Dec-Mar</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Area utilized</strong></td>
<td>frequently within 2.5-5 nm from shore</td>
<td>frequently within 2 nm of shore</td>
<td>most commonly inside 100 fa</td>
</tr>
<tr>
<td><strong>Prey</strong></td>
<td>na</td>
<td>epibenthic zooplankton, benthic crustaceans</td>
<td>krill and anchovy</td>
</tr>
</tbody>
</table>
Center for Biological Diversity v CDFW lawsuit

- **October 2017** – CBD filed complaint based on alleged illegal take under Endangered Species Act
  - Humpbacks, Blue whales and sea turtle interactions

- **November 2018** – CDFW announced it would apply for Incidental Take Permit

- **March 2019** – Settlement agreement was reached and resulted in April 15 closure for current season and many provisions for future seasons
Incidental Take Permit

- ITP required by ESA for incidental take of ESA-listed species
- April 2019 formalized ODFW intent to apply
- Identifies management actions to minimize risk
- Extensive multi-year process – need to increase staff capacity and expertise to assist with process
  - ODCC has moved to fund up to 100K to help with staffing
- Proceed with state management measure development and implementation, while ITP is being developed and evaluated
Existing regulations that reduce entanglement risk

1984-85 – Season end date Aug 14
1992-93 – 10% cap on summer fishery
1998-99 – 1200 lb trip limits on summer fishery
1995-96 – Limited entry
2004-05 – Groundfish vessel buyback
2006-07 – Pot Limits and buoy tags
  Derelict gear allowances
2007-08 – Required logbooks
  14-day landing requirement
2010-11 – Increased derelict gear retrieval allowances
2011-12 – Incentivized derelict gear retrieval by
  allowing crab retention
2013-14 – Post-season derelict gear program
## Oregon’s Recent Efforts to Mitigate Risk

<table>
<thead>
<tr>
<th>Timeframe</th>
<th>Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010 - 2012</td>
<td>Collaborated with NOAA on co-occurrence modeling efforts and fixed gear guide</td>
</tr>
<tr>
<td>2015 - in progress</td>
<td>Targeted fleet outreach on issue</td>
</tr>
<tr>
<td>2017 - 2018</td>
<td>Participated in PSFMC whale entanglement mitigation workshops</td>
</tr>
<tr>
<td>2017 - in progress</td>
<td>Oregon Whale Entanglement Working Group</td>
</tr>
<tr>
<td>2018 - in progress</td>
<td>Developing phased approach of potential management measures</td>
</tr>
<tr>
<td></td>
<td>- Reduce risk</td>
</tr>
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<td></td>
<td>- Learn more from each event</td>
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Oregon Whale Entanglement Working Group

- Gained a better understanding of the issue and identified information gaps
- Developed an Oregon Dungeness Crab Best Practices Directive
- Helped distribute information on who to call to report entangled whales (1-877-SOS-WHALe)
- Developed and surveyed fleet on range of management options to reduce risk of whale and gear interactions
- Developed preliminary recommendations of management options to reduce risk and learn more from future entanglement events
Oregon whale surveys and co-occurrence modeling project

- Funding – Oregon Dungeness Crab Commission; NOAA Section 6 grant
- Primary goal – better understanding of the who, when, where and why of whales off Oregon
- Survey methods - aerial surveys with USCG, small boat surveys and citizen science opportunistic whale sitting data collection
• Lots of concern about entanglements amongst the fleet
• Fleet following many best practices for entanglement avoidance
• Industry is very divided on potential mitigation measures
Outreach – OWEWG, Oct industry mtgs, newsletters and industry notices

Planned OFWC exhibit – September 2019

Target implementation - start of 19-20 season

1. Control date of August 15, 2018 for potential “late season” LE fishery
2. Mandatory electronic tickets for all crab landings
3. Buoy color and pattern registration
4. Double-sided buoy tags (non-rulemaking)

May include:
5. Require recreational gear marking
6. Require remaining fixed-gear commercial gear marking
7. Eliminate the two-week gear clean-up period after the season ends
Entanglement Mitigation Measures - Phase 2

**Additional Outreach** – October 2019

**Planned OFWC exhibit** – February/March 2020

**Target implementation** – Spring of 19-20 season

1. “Late season” reduced pot limit and buoy tag

2. Initiate “late season” derelict gear removal, once the regular season ends (requires legislative action)

3. Season opening protocol changes to open earlier when possible
“Late season” Effort Reduction

Development needed:

1. When to implement within the season?
2. How to reduce pot limits?

10 season average

10 yr ave. pots used per season = 115,120
Future Entanglement Mitigation Measures

Additional Outreach Planned – Oct 2019; more as needed

Planned OFWC exhibit – TBD

Target implementation – TBD

1. Near-real time vessel monitoring requirement
2. Late season limited entry
3. Others as determined necessary?
Next Steps

1. Consider emergency rule to eliminate 2-week clean up period for end of current season

2. Ongoing industry and public discussions: additional commercial measures, recreational buoy marking, etc.

3. September 2019 OFWC: consider phase 1 measures

4. October 2019 industry meetings: further develop phase 2 measures

5. Feb/Mar 2020 OFWC: consider phase 2 measures

6. Work with NMFS on ITP: ODFW capacity needs, include management measures in ITP development

7. Develop additional management measures as needed
Questions?