

# Exhibit B

## Commercial and Recreational Fixed-Gear Regulations

September 13, 2019

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Marine Resources Program

# Exhibit Overview

Issue 1 – Whale entanglement mitigation

Issue 2 – Crab biotoxin management

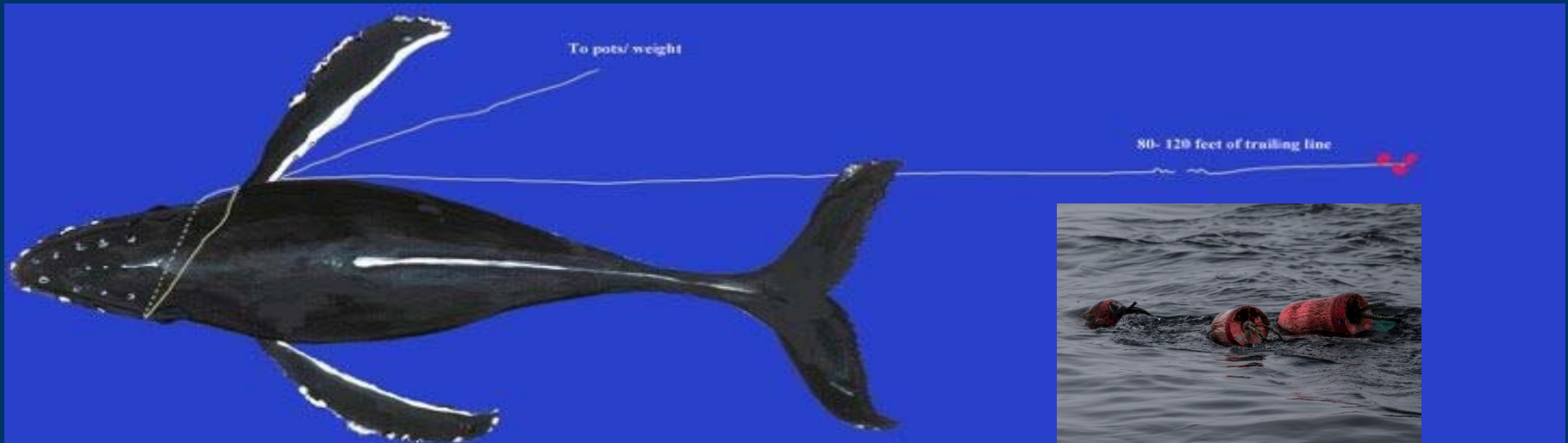
Issue 3 – Commercial crab season opening



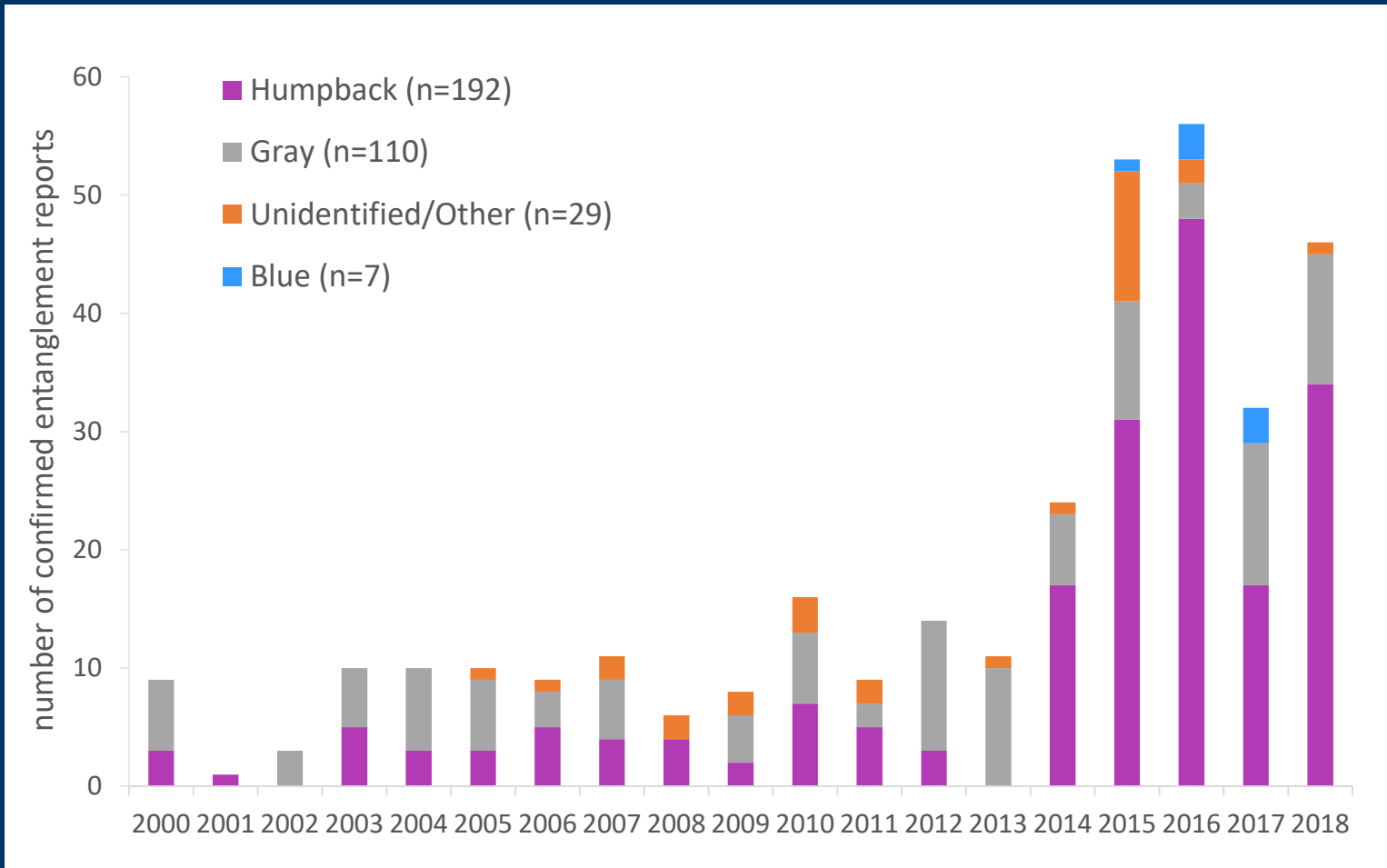
Photo: ODFW

# Issue 1: Whale Entanglement Mitigation Measures

- Background
- ODFW's efforts to reduce risk
- Proposed regulatory changes
- Next steps

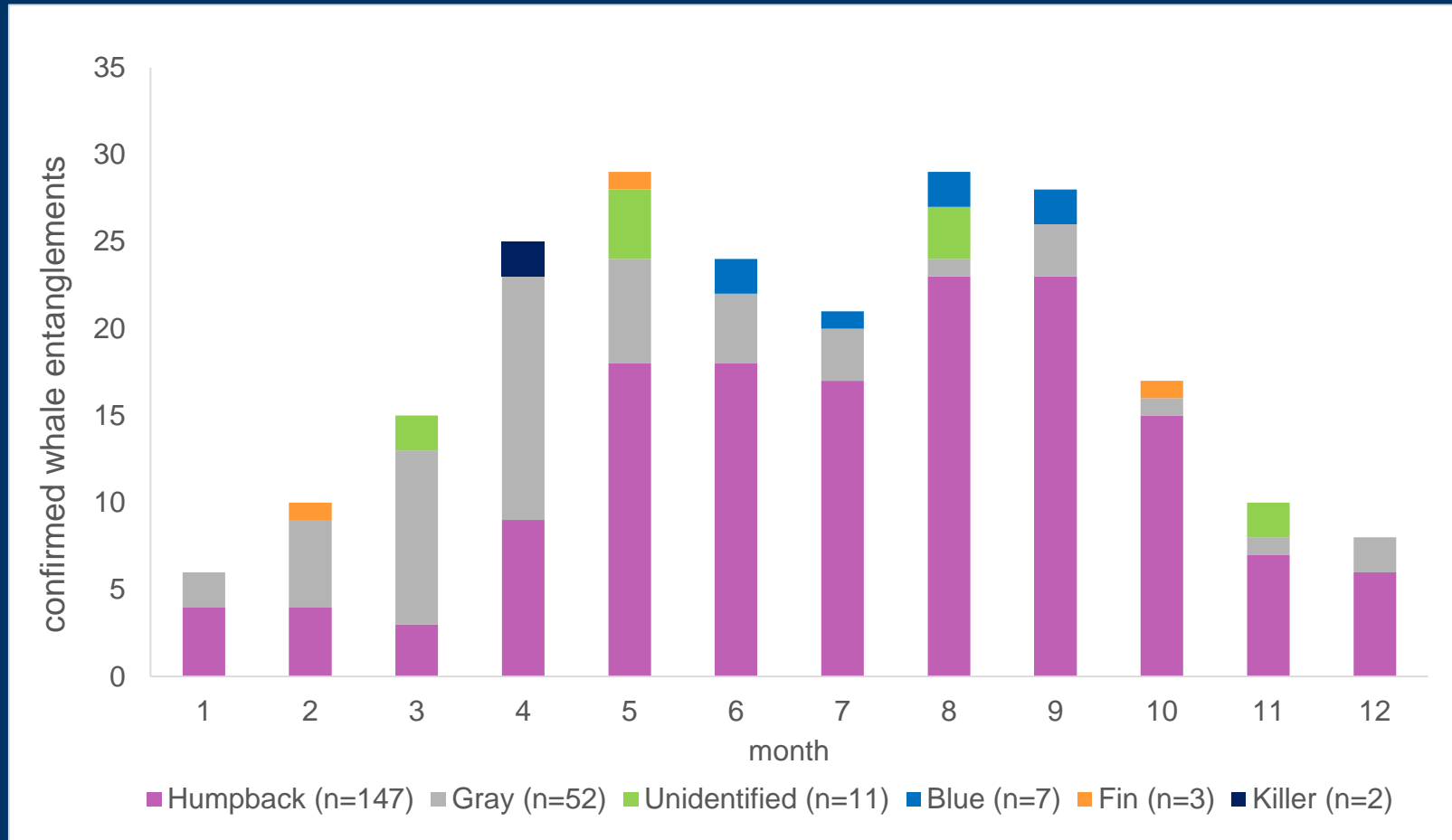


# Confirmed Whale Entanglements on the West Coast by Year



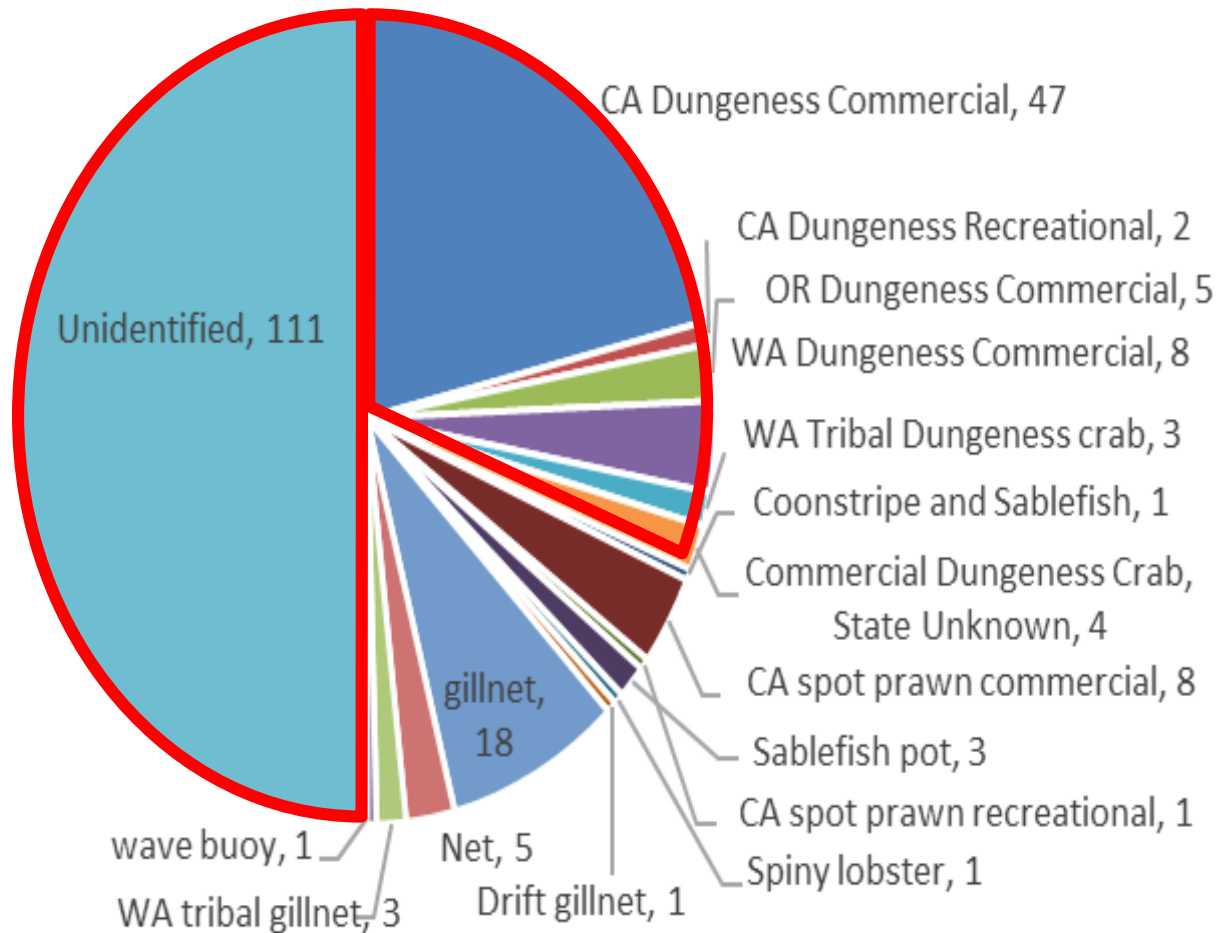
Source: NMFS

# Confirmed Whale Entanglements on the West Coast by Observation Month 2013-2018



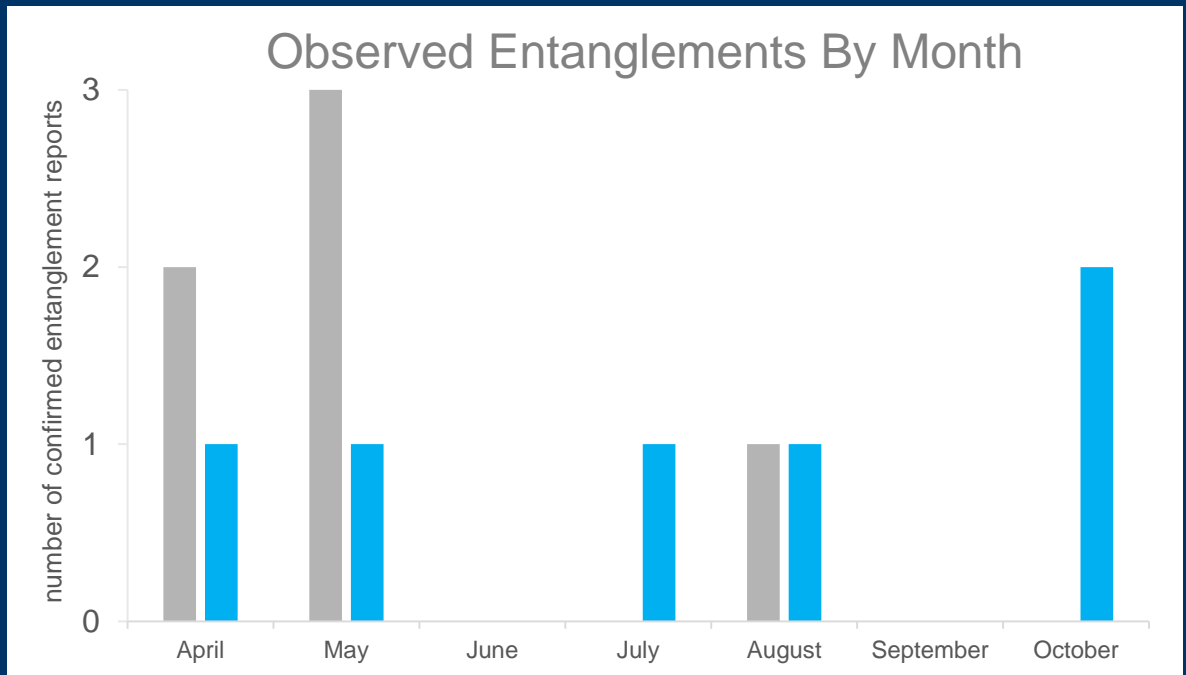
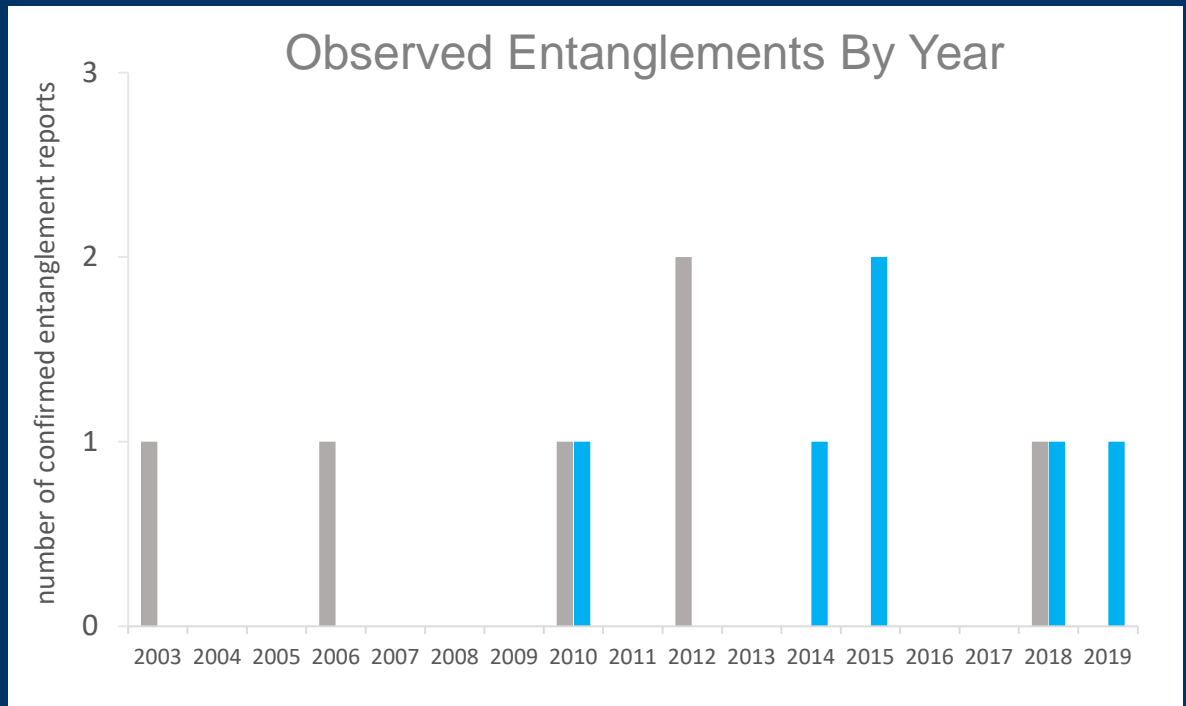
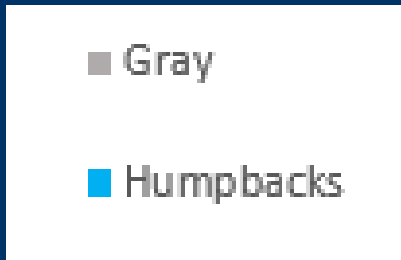
Source: NMFS

# Sources of entanglements on the West Coast 2013-2018



Source: NMFS

# Entanglements Confirmed in Oregon Dungeness Crab Gear



Source: NMFS

# Entangled whales off Oregon



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



# ESA Compliance

- Center for Biological Diversity v CDFW lawsuit over lack of an incidental take permit (ITP) for ESA-listed species
  - March 2019 - settlement resulted in April 15 closure
- OR, WA, CA all applying for ITPs
- Development of Conservation Plan (CP) required
- Extensive multi-year process
- Proceed with state management measure development and implementation, while CP is being developed and evaluated

# Existing Dungeness crab fishery 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 retrieval allowances

**2007-08** – Required logbooks (accountability)  
14-day landing requirement

**2010-11** – Increased derelict gear retrieval allowances

**2011-12** – Incentivized derelict gear retrieval by  
allowing crab retention (in-season)

**2013-14** – Incentivized post-season derelict gear program  
allowing pot ownership

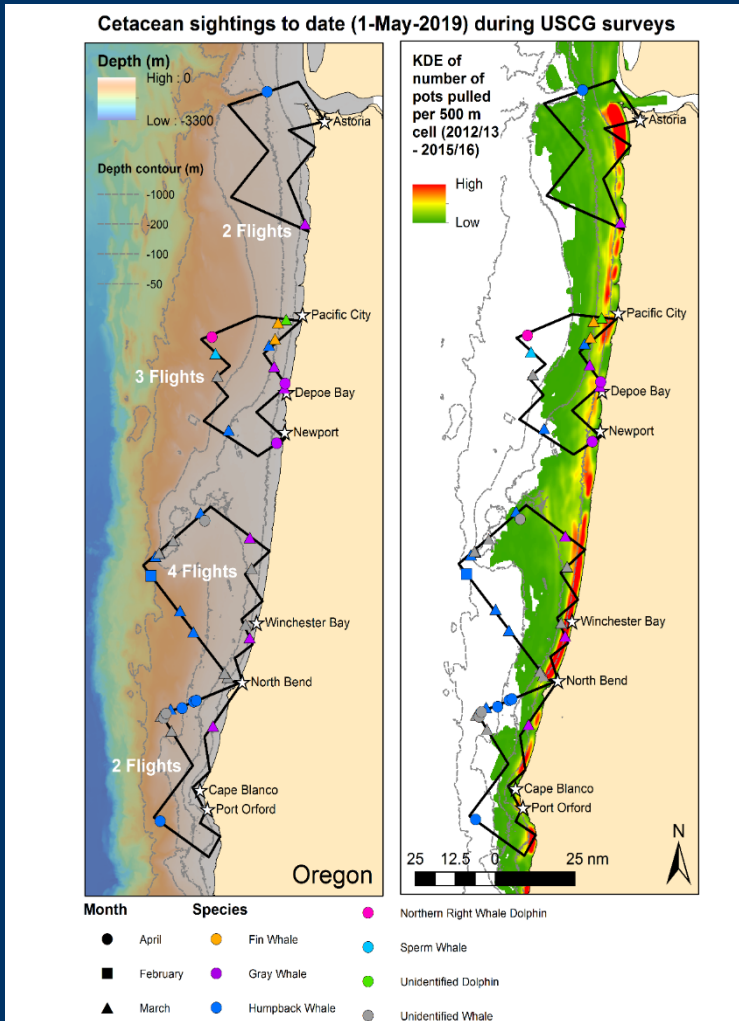


Photos: ODFW

# ODFW's Recent Efforts to Reduce Risk

Timeframe	Actions
2010 - 2012	Collaborated with NOAA on co-occurrence modeling efforts and fixed gear guide
2015 - in progress	Targeted fleet outreach on issue
2017 - 2018	Participated in PSMFC whale entanglement mitigation workshops
2017 - in progress	Oregon Whale Entanglement Working Group (member) <ul style="list-style-type: none"><li>▪ Best Fishing Practices Directive</li><li>▪ Oregon whale surveys and co-occurrence modelling</li><li>▪ Industry survey</li></ul>
2018 - in progress	Developing phased approach of potential management measures <ul style="list-style-type: none"><li>▪ Learn more from each event</li><li>▪ Reduce risk of entanglement</li></ul>

# Oregon Whale Entanglement Working Group



## Oregon Commercial Dungeness Crab Fishing 2017 - 2018 Directive to Minimize Whale Entanglement Risk



Recommended by the Oregon Whale Entanglement Working Group



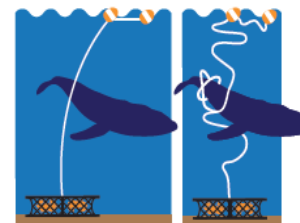
### Reasons for Directives

National Marine Fisheries Service (NMFS) has confirmed significant increases in large whale entanglements over the last few years, and specifically in Dungeness crab fishing gear. This situation threatens the stability of the fishery and coastal fishing communities. By using these voluntary best practices, the Oregon Dungeness crab fleet can take an important step towards reducing the risk of whale entanglements.

**The best known way** to reduce risk of whale entanglement is to reduce the amount of gear and line in the water during the spring and summer months, when whales are in the area.

### Best Practices During Crab Season

- Use the minimum amount of scope required to compensate for tides, currents and weather. Whales are more likely to become entangled with slack lines, which can potentially create a "floating snare".
- When changing set location across depths, adjust the length of pot lines by adjusting shots (i.e., measured length of line) to maintain taut vertical lines.
- No excess lines should be floating at the surface. Floating line should only be between the main buoy and trailer buoy(s).
- Remove any fishing gear you are not actively tending during the season.
- Avoid setting gear in the vicinity of whales whenever possible.
- Communicate the locations of high whale activity with other fishermen.



Keep line between pot and main buoy running taut and as vertical as possible.

### Why Report?

Understanding where, when, and how entanglements occur is essential to prevent future entanglements. Timely reporting is critical to facilitate response efforts, when appropriate.

### Report Entangled Whales

1-877-SOS-WHAlE



Report entangled whales **IMMEDIATELY** to the NMFS whale entanglement response hotline at 1-877-SOS-WHAlE (1-877-767-9425) or call the U.S. Coast Guard on Channel 16. If possible, stand by.

### Photograph Entangled Whales

**WHALE:** side view of dorsal fin (or hump); flukes (especially if underside is raised); head; any part of the body where gear may be present.

**ENTANGLEMENT:** buoy(s); tags; lines on the body; trailing lines (including distance from whale); netting (if present); other gear if present.  
*Do not approach within 100 yards.*

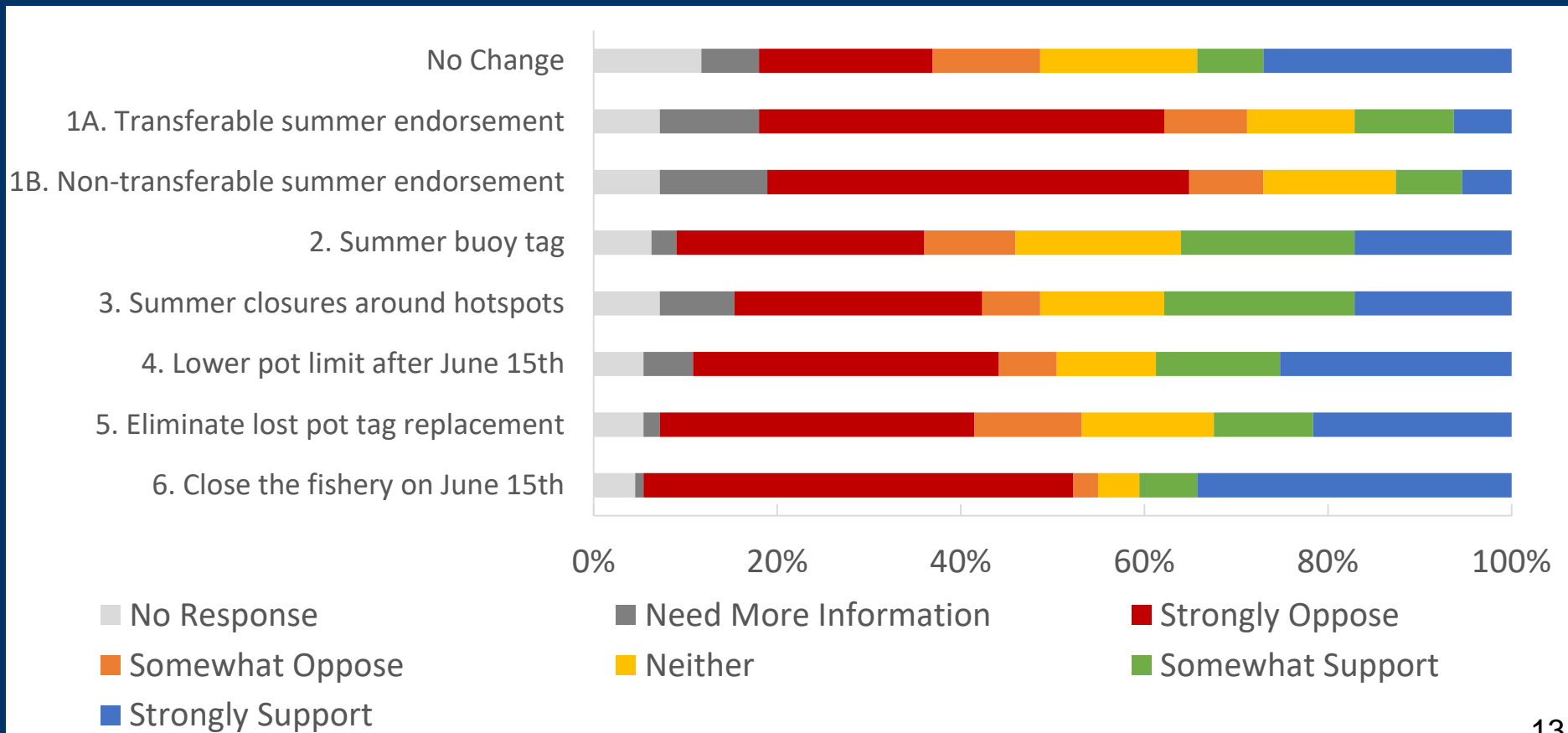
### Respond Promptly if Contacted

If you are contacted about a whale entangled in your gear, please respond. You can help prevent future entanglements by providing as much information as possible about your fishing gear and practices.



# OWEWG Whale Entanglement Survey

- Lots of concern about entanglements amongst the fleet
- Fleet following many best practices for entanglement avoidance
- Industry is very divided on potential mitigation measures



# Additional Public Involvement



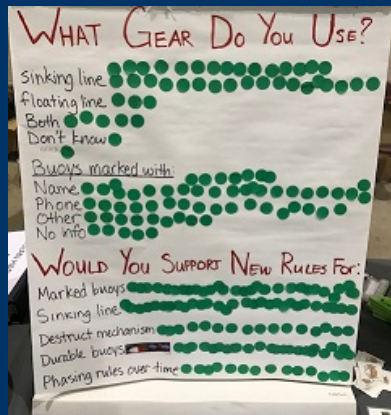
## Reducing Risk of Whale Entanglement

Since 2014, there has continued to be an increase in the number of reported whales entangled in fishing gear from fixed gear fisheries along the West Coast, primarily in Dungeness crab gear. In some cases, entanglement in fishing gear has led to serious injury and directly caused death of whales. The most recent summary of entanglement information is available on NOAA Fisheries website: [http://www.westcoast.fisheries.noaa.gov/protected\\_species/marine\\_mammals/fisheries\\_interactions.html](http://www.westcoast.fisheries.noaa.gov/protected_species/marine_mammals/fisheries_interactions.html).

To address the issue, Oregon Sea Grant has been convening a collaborative Oregon Whale Entanglement Working Group (OWEWG) since May, 2017. The goal of the OWEWG is to gather Oregon stakeholders together to develop and help prioritize options for short- and long-term modifications to gear and fishery practices to reduce the risk of whale entanglements in Dungeness crab gear and other fixed gear fisheries. This past winter and spring the OWEWG sent Dungeness crab permit holders a survey to gather information about your concerns regarding entanglements, about the Best Practices Directive developed by the OWEWG, and about the management options developed by the OWEWG to reduce risk of entanglement. Thank you to those of you who responded to the survey! Since then, the OWEWG has worked further on its recommendations, focusing on improving information about entanglements that occur (such as through enhanced gear markings), and management options to reduce risk (such as various ways to reduce the number of vertical lines in the water). Summarized results from the survey and proceedings of all of the meetings held to-date are on Sea Grant's website at <https://seagrant.oregonstate.edu/whale-entanglement>.

## Developing Management Alternatives to Minimize Entanglement Risk

ODFW is now beginning to develop proposals for regulation changes which will be considered by the Fish and Wildlife Commission. As a first step, we met with many of you during our coastwide crab industry meetings in October, when we provided information about the current state of the entanglement issue and led discussions on management options. Dan Lawson, from NMFS Protected Resources Division, also traveled with us and met with you. We shared the results of the OWEWG survey and described the management options that have been proposed to reduce risk of entanglements. Although lightly attended in some ports, we really appreciate those of you who participated and helped us develop options for moving forward on this issue in order to maintain this very important fishery.



- Public Meetings
- Industry Notices
- Annual Crab Newsletter
- Tri-State Dungeness Crab Committee Meeting
- Oregon Dungeness Crab Advisory Committee
- OFWC Director's Report Briefing
- Recreational Crabber Surveys

# Whale Entanglement Mitigation Management Approach

**Phase 1 – Learn more about entanglements and prepare for future management measures to reduce risk**

Target implementation – start of 19-20 season (commercial)  
January 1, 2020 (recreational)

**Phase 2 – Reduce risk of entanglements**

Additional outreach – October 2019

Planned OFWC exhibit – February/March 2020

Target implementation – Spring of 19-20 season

**Future Phases - Develop additional management measures as needed**

# Entanglement Mitigation Measures - Phase 1

## **Staff Recommended Requirements: (Issue 1 in Agenda Summary)**

1. Commercial crab gear buoy color and pattern registration
  2. Recreational crab gear marking
  3. Remaining fixed-gear commercial gear marking
- ✓ Double-sided buoy tags (non-rulemaking)

**Goal:** Learn more about each entanglement

**Public Support:** OWEWG preliminary recommendations  
Strong commercial and recreational  
industry support



# Entanglement Mitigation Measures - Phase 1

## **Staff Recommended Requirement: (Issue 1 in Agenda Summary)**

4. Establish a control date of August 14, 2018 for potential commercial crab fishery “late season” limited entry system

**Goal:** Prepare option for a potential future entanglement risk reduction tool

**Public Support:** OWEWG preliminary recommendation  
Limited industry support

# Whale Entanglement Mitigation Next Steps

- Continue phase 2 development
  - October 2019 industry meetings
  - Focused on risk reduction – reduce vertical lines
- Feb/Mar 2020 OFWC: consider phase 2 measures
- Continue work on CP for compliance with ESA
  - Phase 1 and 2 measures will be foundation of plan
- Develop additional management measures as needed



# Issue 2: Crab Biotoxin Management Measures



## Recent crab biotoxin events

Crab Season	Management Actions
2015-16	Season opening delays
2016-17	Season opening delays 1 in-season evisceration order
2017-18	Season opening delays 1 in-season evisceration order
2018-19	Season opening delays 2 in-season evisceration orders

## Public Involvement

- Rules Advisory Committee
- Public Meetings
- Industry Notices
- Annual Crab Newsletter
- Tri-State Dungeness Crab Committee Meeting
- Oregon Dungeness Crab Advisory Committee

# Oregon's Recent Crab Biotoxin Management Efforts

- **May 2017** – Convened Rules Advisory Committee
- **Sep 2017** – Adoption of a new ODA rule that clarifies procedures for testing crab for biotoxins and biotoxin management options
- **Nov 2017** – Implemented temporary enhanced record keeping requirements
- **Feb 2018** – Adoption of Senate Bill 1550 to clarify ODFW record keeping authority, gave ODA authority to use ODFW required records
- **Apr 2018** – Permanent adoption of ODFW record keeping requirements
- **Nov 2018** – Modified electronic fish ticket system to include new harvest areas
- **Jul 2019** – Finalized modifications to fish ticket tracking system to allow multiple crab harvest area designations on fish tickets and agency reports

# Crab Biotoxin Management Measures

## **Staff Recommended Requirements:**

1. Require electronic fish tickets for all commercial crab landings
2. Auto-adoption of commercial in-season evisceration requirements and closures

- Goals:**
1. Increase efficiency, effectiveness and compliance with biotoxin management measures
  2. Help inform future whale entanglement risk reduction

**Public Support:** RAC recommendation  
Strong industry support

# Issue 3: Commercial Crab Season Opening Measures



## Public Involvement

- Public Meetings
- Industry Notices
- Annual Crab Newsletter
- Tri-State Dungeness Crab Committee Meeting
- Oregon Dungeness Crab Advisory Committee

# Commercial Crab Season Opening Measures

## **Staff recommends modifying Tri-State Protocol to include:**

1. Allow more than two areas with different opening dates to be established within the Tri-State region based on crab quality
2. Allow moving the latest season opening date to Feb 1, in some situations

- Goals:**
- 1) Allow more flexibility to open areas when ready
  - 2) Increase market value
  - 3) Adapt to new biotoxin and entanglement threats

**Public Support:** Tri-State adopted  
Strong industry support

# Commercial Crab Season Opening Measures

## **Staff recommended requirement:**

3. Clarifying definition of “fishing” in relation to “fair start” regulations and align with WA and CA regulations

- Goals:** 1) Consistency of regulations across the Tri-State region  
2) Administrative and enforcement efficiency

**Public Support:** no known impacts to industry



# Staff Recommendation Summary

Staff recommends adopting OARs as proposed in Attachment 3 for the following issues:

<b>Issue</b>	<b>Proposed management measure</b>
1. Whale entanglement mitigation	<ol style="list-style-type: none"><li>1. Commercial crab gear buoy color and pattern registration</li><li>2. Recreational crab gear marking</li><li>3. Remaining fixed-gear commercial gear marking</li><li>4. Establish a “late season” control date</li></ol>
2. Crab biotoxin management	<ol style="list-style-type: none"><li>1. Electronic fish tickets for all commercial crab landings</li><li>2. Auto-adoption of in-season evisceration requirements and closures</li></ol>
3. Commercial crab season opening	<ol style="list-style-type: none"><li>1. Adopt revised Tri-State protocol</li><li>2. Clarify definition of “fishing” for season opening regulations</li></ol>

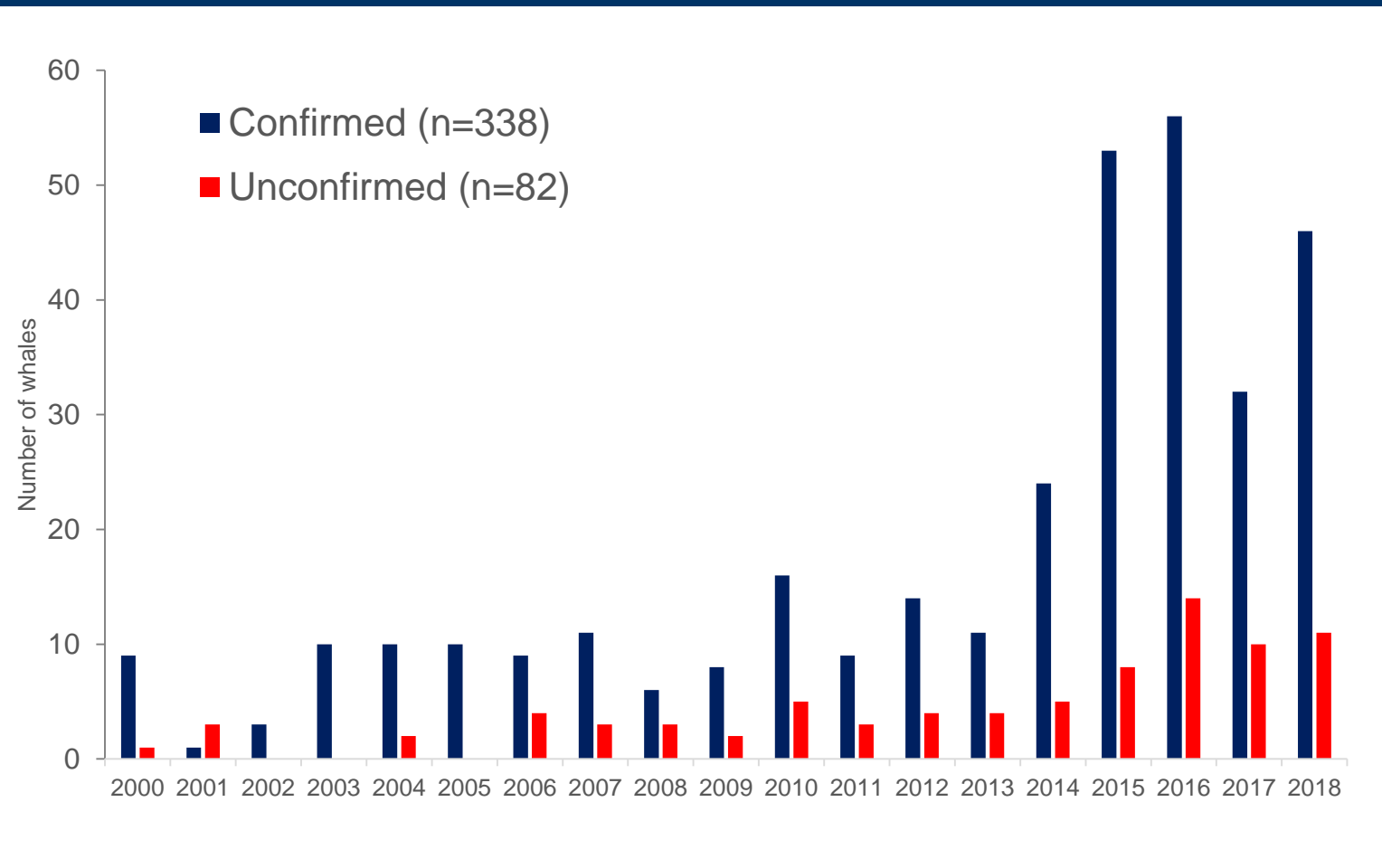
# Questions?



Photo: ODFW

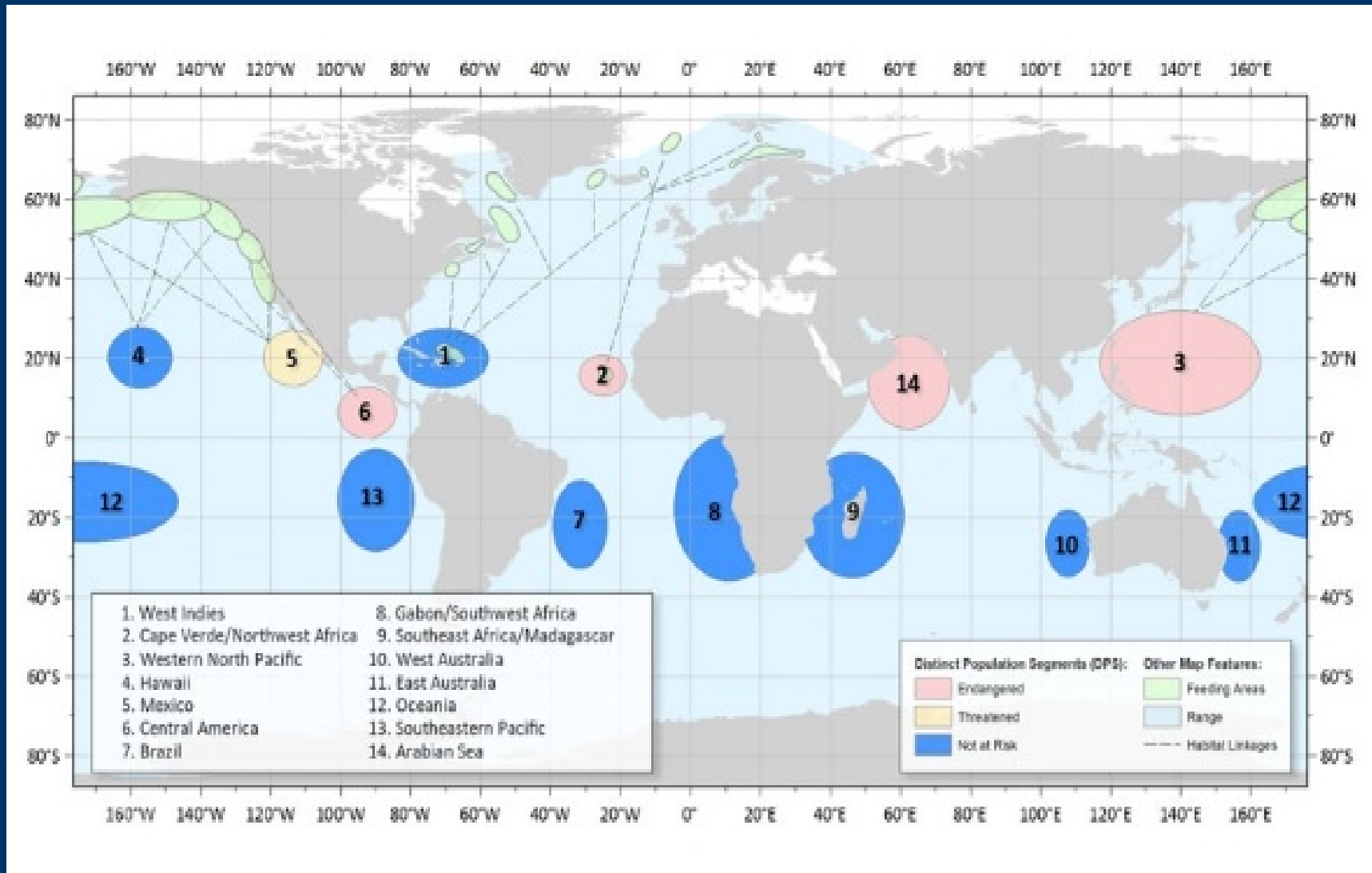
# Backup Slides

# Whale Entanglements on the West Coast 2000-2018

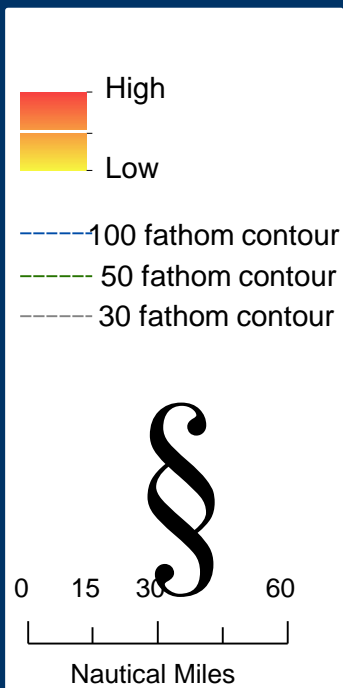
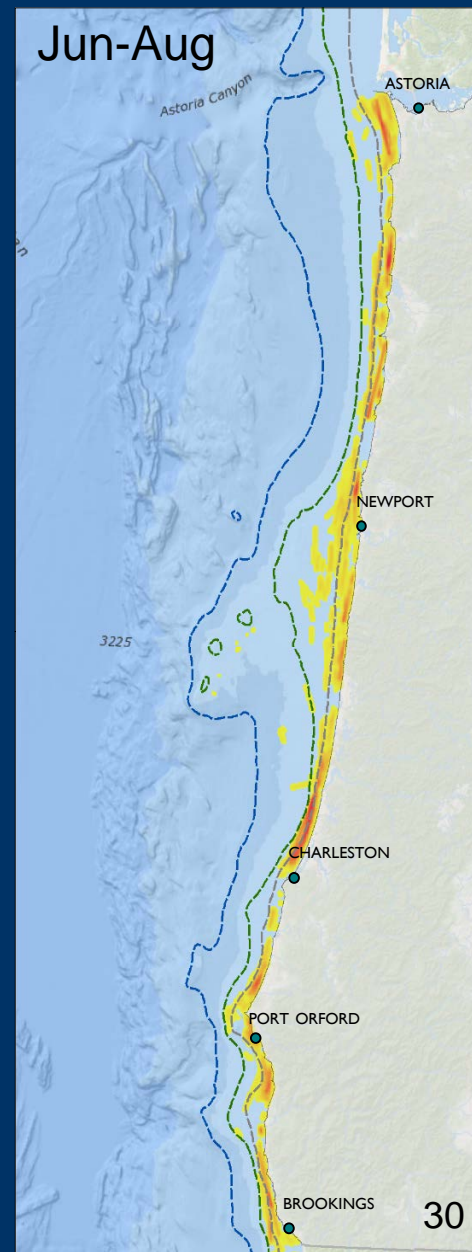
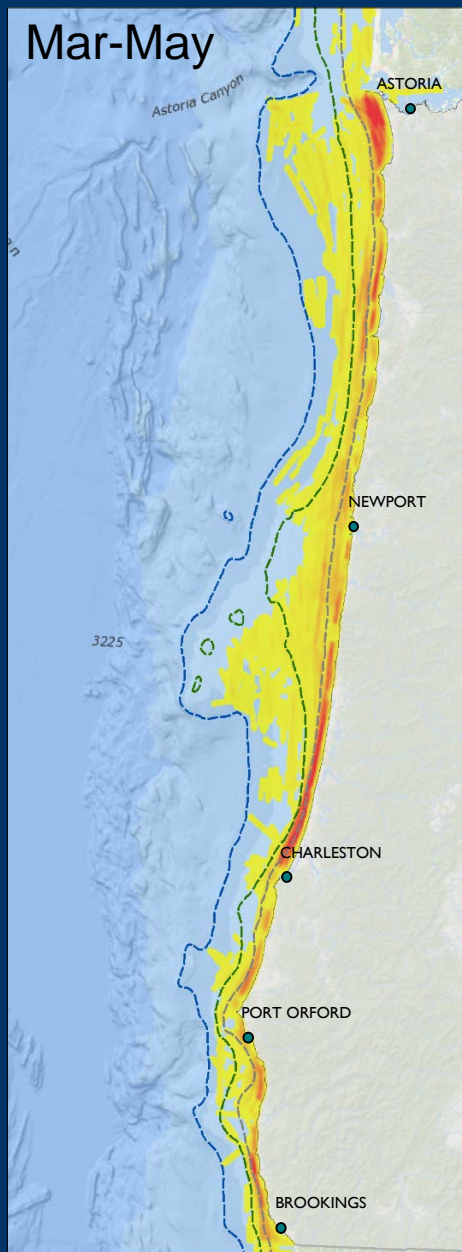
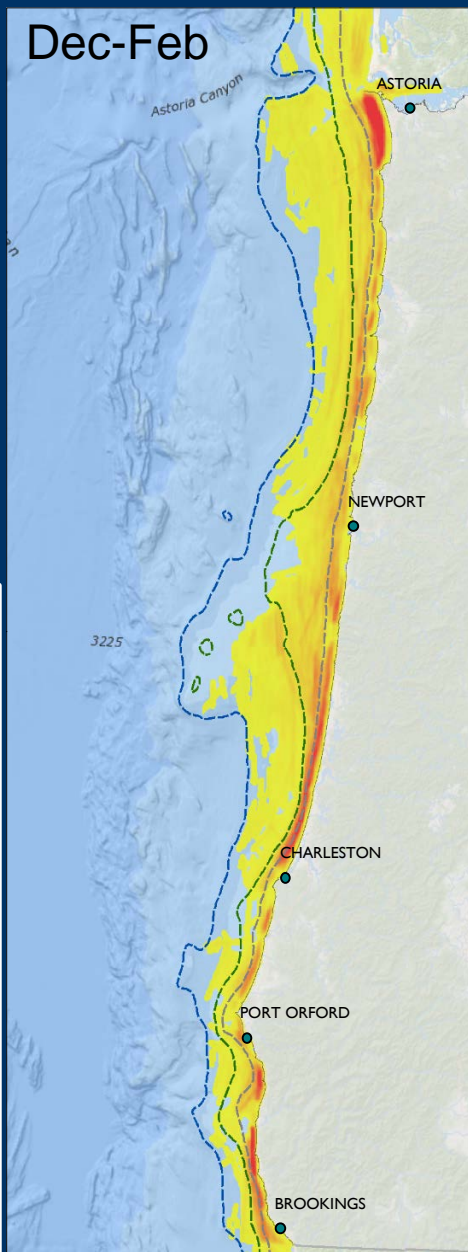


Source: NMFS

# Humpback Distinct Population Segments



# Commercial Dungeness Crab Fishing Effort



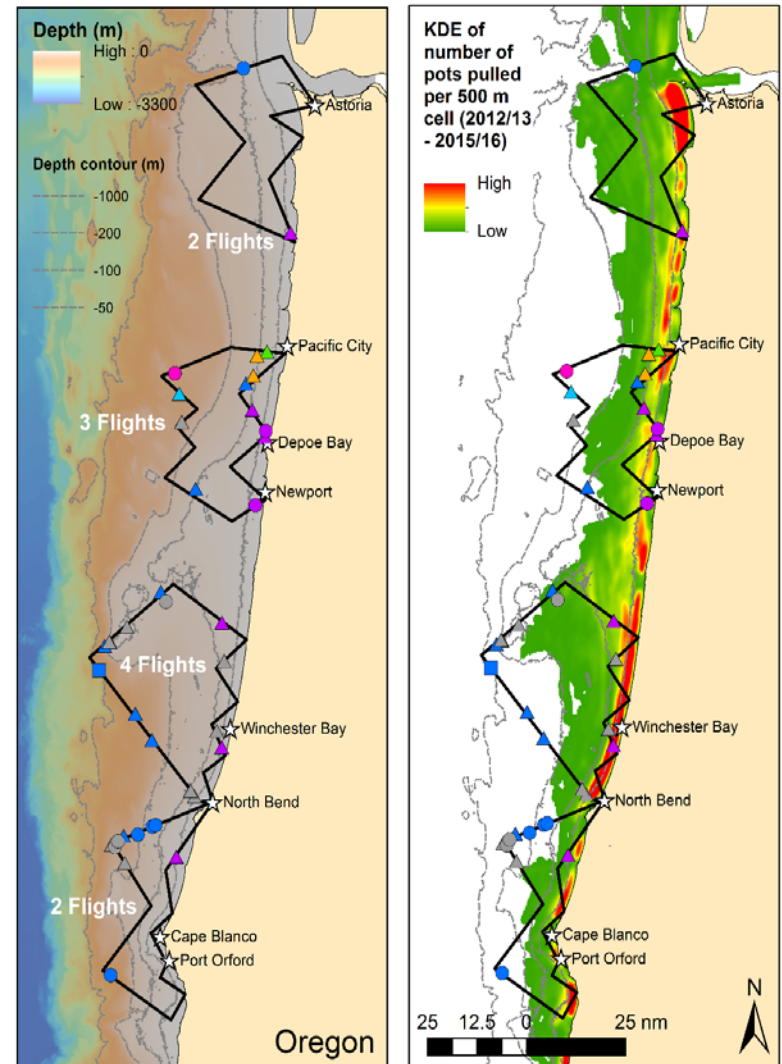
# Oregon whale surveys and co-occurrence

## 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 sighting data collection



Cetacean sightings to date (1-May-2019) during USCG surveys



# ODFW October Crab Industry Meetings

		<b>Reduce Risk</b>	<b>Minimize economic impact</b>	<b>Equitable fleet wide</b>	<b>Logistics</b>	<b>Industry survey support</b>
1A	Transferrable summer endorsement	Red	Green	Green	Yellow	Red
1B	Non-transferrable summer endorsement	Yellow	Yellow	Yellow	Yellow	Red
2	Summer buoy tags	Yellow	Green	Green	Yellow	Yellow
3	Summer closures around hotspots	Green	Green	Green	Red	Yellow
4	Lower pot limit after June 15th	Green	Green	Yellow	Yellow	Yellow
5	Eliminate lost pot tag replacement	Yellow	Green	Green	Green	Red
6	Close fishery on June 15th	Green	Red	Red	Green	Yellow
7	Minimize surface gear	Yellow	Green	Green	Yellow	White
8	Longline	Yellow	Yellow	Yellow	Red	White



Mitigation Measure	Informational	Reduce Risk	OWEWG Preliminary Recommendation
Control date for potential “late season” limited entry fishery		X	X
Require electronic crab tickets	X		
Buoy color and pattern registration	X		X
Double-sided buoy tags (non-rulemaking)	X		X
Require recreational gear marking (timing is tentative)	X		X
Require all commercial fixed-gear marking			
Eliminate the two-week gear clean-up period (timing is tentative)		X	X
“Late season” reduced pot limit/buoy tag	X	X	no agreement
Initiate “late season” derelict gear removal, once the regular season ends (requires legislative action)		X	X
Season opening protocol changes to open earlier when possible		X	

# West Coast Potential Entanglement Mitigation Measures

Mitigation Measure	Oregon	Washington	California
Control date for potential “late season” LE fishery	X		
Require electronic crab tickets	X	X	X
Buoy color and pattern registration	X	current	
Double-sided buoy tags (non-rulemaking)	X		
Require recreational gear marking	X	current	current
Require marking all commercial fixed-gear	X	current	X
Eliminate the two-week gear clean-up period	X	current	current
“Late season” reduced pot limit and buoy tag	X	X	
“Late season” derelict gear removal efforts	X	X	
Real-time risk assessment and area closures	Increasing data	Increasing data	X
Line requirements (surface, scope, break-aways or markings)		X	X
Season opening protocol changes to open earlier when possible	X	X	X

# 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

# Phase 2 – In Development

## Staff's preliminary proposal:

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. Permanent elimination of 2-wk gear removal period

## In addition, also considering including:

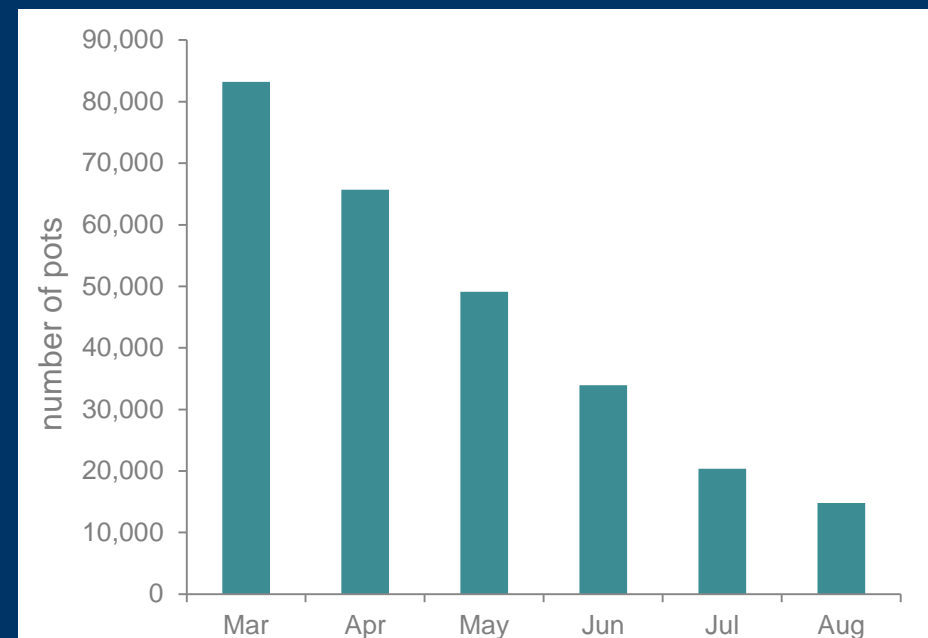
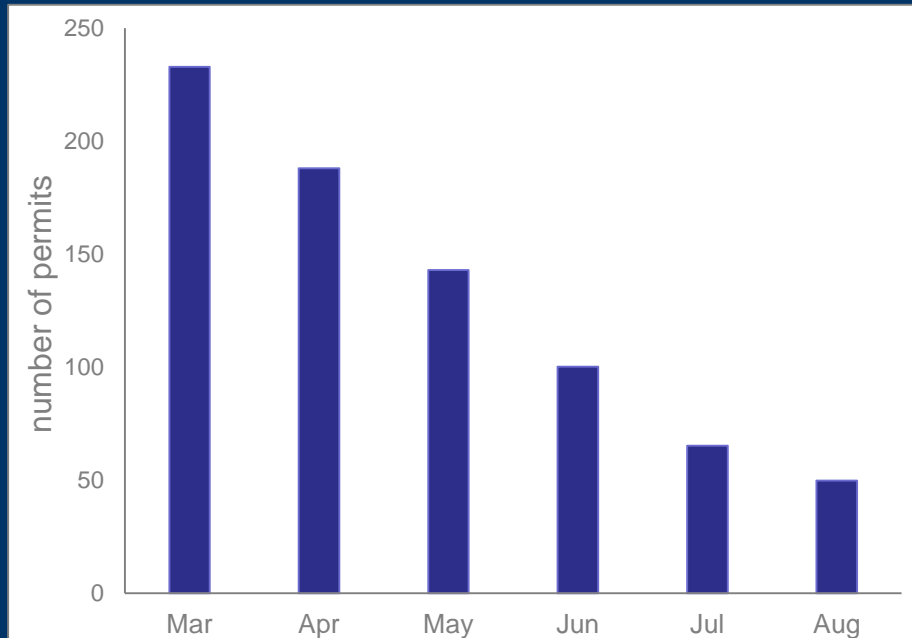
1. Eliminate replacement tags
2. Require gear modifications (surface gear and scope)
3. Require line marking

# “Late season” Pot Limit 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?