



# US West Coast: Fishermen engagement and response



Global Assessment of Large Whale Entanglement and  
Bycatch Reduction in  
Fishing and Aquaculture Gear

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**West Coast Large Whale Entanglement Response  
Coordinator**

- 
- Outreach/ awareness
  - Engagement
  - Response
  - Investigation
  - Preventive measures

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- Outreach/ awareness
  - Engagement - Fishers
  - Response
  - Investigation
  - Preventive measures - Pingers



# Outreach



- General
- Targeted
  - Potential response teams
  - Observer program
  - On-water community (e.g. tour)
  - Fishers

Never done - dynamic environment



**ATTENTION!**

**REPORT ENTANGLED WHALES**  
Prompt reporting is the best way to assist an entangled animal.

**DO NOT APPROACH OR ATTEMPT DISENTANGLEMENT.**

Report All Entangled Whales in Washington and Oregon to the Entanglement Reporting Hotline:  
**1-877-SOS-WHALE**  
(1-877-767-9425)

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# West Coast Changes





- Increase in reports:
  - 2002 - 2012: avg ~10 confirmed cases/ year
  - 2015: 61 reports (48 confirmed)
  - 2016: 24 reports (13 confirmed)
- Most gear still not identified (39 unknowns)
- Most was dungeness crab pot (n=11)
- This year reports aligned with crab opening (delayed due to domoic acid)

**Best Practices Guide:**  
**California Dungeness Crab Fishing**  
*Ways to Minimize Whale Entanglement Risk*

**Whale Entanglement Response Hotline**  
**(877) 303-WHALE**  
**(877) 767-3425**  
Or Call USCG on Channel 16



**Suggestions to minimize entanglement risk in fishing gear:**

- 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 and taut. Whales are more likely to become entangled with slack lines. Use the minimum amount of scope required to compensate for tides, currents, and weather, as necessary. When changing set location throughout the season, adjust the length and weighting of trap lines as necessary to maintain taut vertical lines.
- Configure gear to minimize the extent of line that could be floating at the surface at any time. Use sinking or weighted vertical lines and minimize the amount of trailing surface gear used.
- Maintain gear to ensure lines and buoys are in good working condition and will not break under natural conditions such that gear could become lost or irretrievable. Lost gear contributes to marine debris and increases the risk of whale entanglement.
- 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 gear involved in entanglements.
- Avoid setting gear in the vicinity of whales whenever possible.
- Avoid setting gear in the trawl zones or in shipping lanes. Large vessels in heavily trafficked areas, like shipping lanes, can displace fishing gear. This can result in tangled gear which may increase the risk of entanglements.
- If you encounter lost gear, notify the owner or put out a call on the local VHF. You can also report lost fishing gear to the Sea Doc Society by phone (1-888-491-GEAR) or online at <http://www.seadocsociety.org/report/>.

**Reporting entangled whales:**

- Report entangled whales IMMEDIATELY to the NMFS whale entanglement response hotline at 1-877-303-WHALE (1-877-767-3425) or call the U.S. Coast Guard on Channel 16. See tips on reverse side for details on reporting. 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. Gaining a better understanding of where, when, and how entanglements are occurring is essential in working to prevent them in the future.

 If you have a suggestion for reducing entanglements in fishing gear, contact Justin Vezblcke, NMFS West Coast Region, Whale Entanglement Response Coordinator, [Justin.Vezblcke@noaa.gov](mailto:Justin.Vezblcke@noaa.gov), (562) 980-3230. 



# Alaska



- Prince William Sound and Copper River Basin had a large number of cases (gillnet)
- Novel co-occurrence of whales and gear?



Courtesy of Kate Wynne



# Focus on fishers: Why?



- Makes sense (major resource)
- Expansive
- Willingness
- Need (less \$, no gear guys, things different)
- Tended fisheries (first line of defense, on-site observations)
- Everyone is a fisher in AK (Major industry)
- In CA help put out a whale entanglement brushfire



Courtesy of Kate Wynne



Courtesy of Kate Wynne



# Fisher workshops/ trainings



- First- 2006 in Petersburg (AK SeaGrant, NMFS, Sanctuary, Fishers)
- AK locations:
  - Kodiak
  - Throughout SEAK
  - Cordova (PWS)
- Other locations (West Coast and HI)







# Fisher - prevention



- Preventive measures (first line of defense)

- Disentanglement

- As a fisher

- As an authorized

Solution not disentanglement, but prevention (entanglement res

## Marine Mammal Entanglement Wheelhouse Guide for Commercial Fishermen

NOAA Fisheries Protected Resources 24-hour hotline

(888) 774-7325

### How to prevent entanglements Tips from fishermen

**Make noise.** Changing the speed or direction of your vessel (put vessel in and out of gear) can sometimes make whales aware of your presence and cause them to change course.

**Put tension on the net or line by towing on the net.** A whale is less likely to get entangled and more likely to go through a taut net than a loose one.

**Towing the net** may also help create bubbles or sound that could deter a whale.

**Use sinking (rather than floating) line** on pot gear whenever possible.

**Stay aware of your gear** so you can act quickly if you encounter a whale.

**Use the radio.** If you see a whale approaching, let others fishing in your area know so they can take steps to avoid it.

**Report ghost gear.** If you come across or know of lost gear, report it at [www.mcafoundation.org/report.html/](http://www.mcafoundation.org/report.html/).

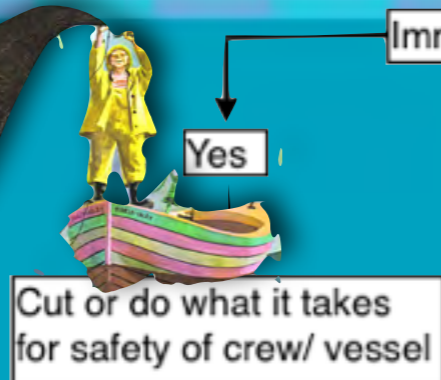
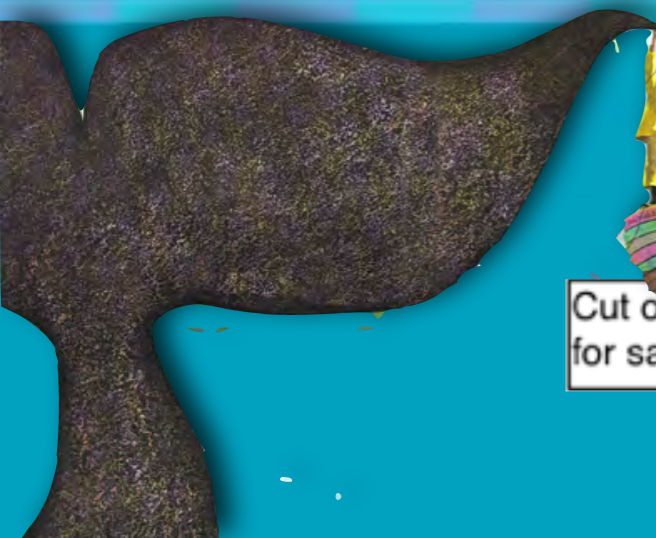
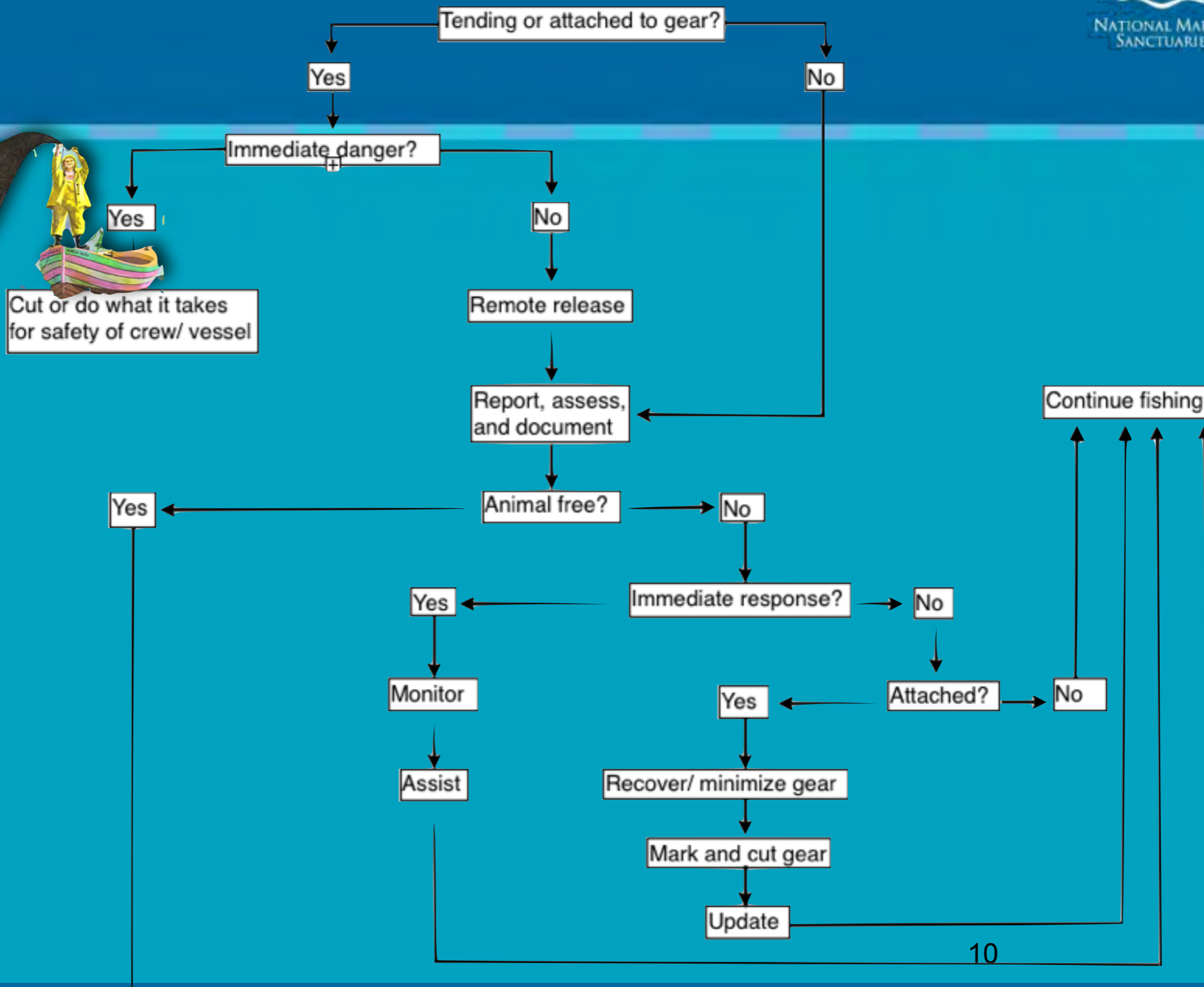
If you have your own tip you'd like to share, contact Sunny Rice, Alaska Sea Grant Marine Advisory Program in Petersburg, (907) 772-3381 or [fnar@uaf.edu](mailto:fnar@uaf.edu).

**Report the incident** to the NOAA Fisheries Marine Mammal Authorization Program. You can get the appropriate form from local enforcement or from the NOAA Fisheries website at <http://alaskafisheries.noaa.gov/protectedresources/observers/mmamform.pdf>. Your Marine Mammal Authorization allows for the legal "incidental take" of marine mammals in the course of commercial fishing. You must, however, report any incidental injuries or mortalities to marine mammals within 48 hours of the end of your fishing trip.

**! Do not get in the water with the whale or approach a free-swimming entangled animal.**



# Fishermen entanglement response actions



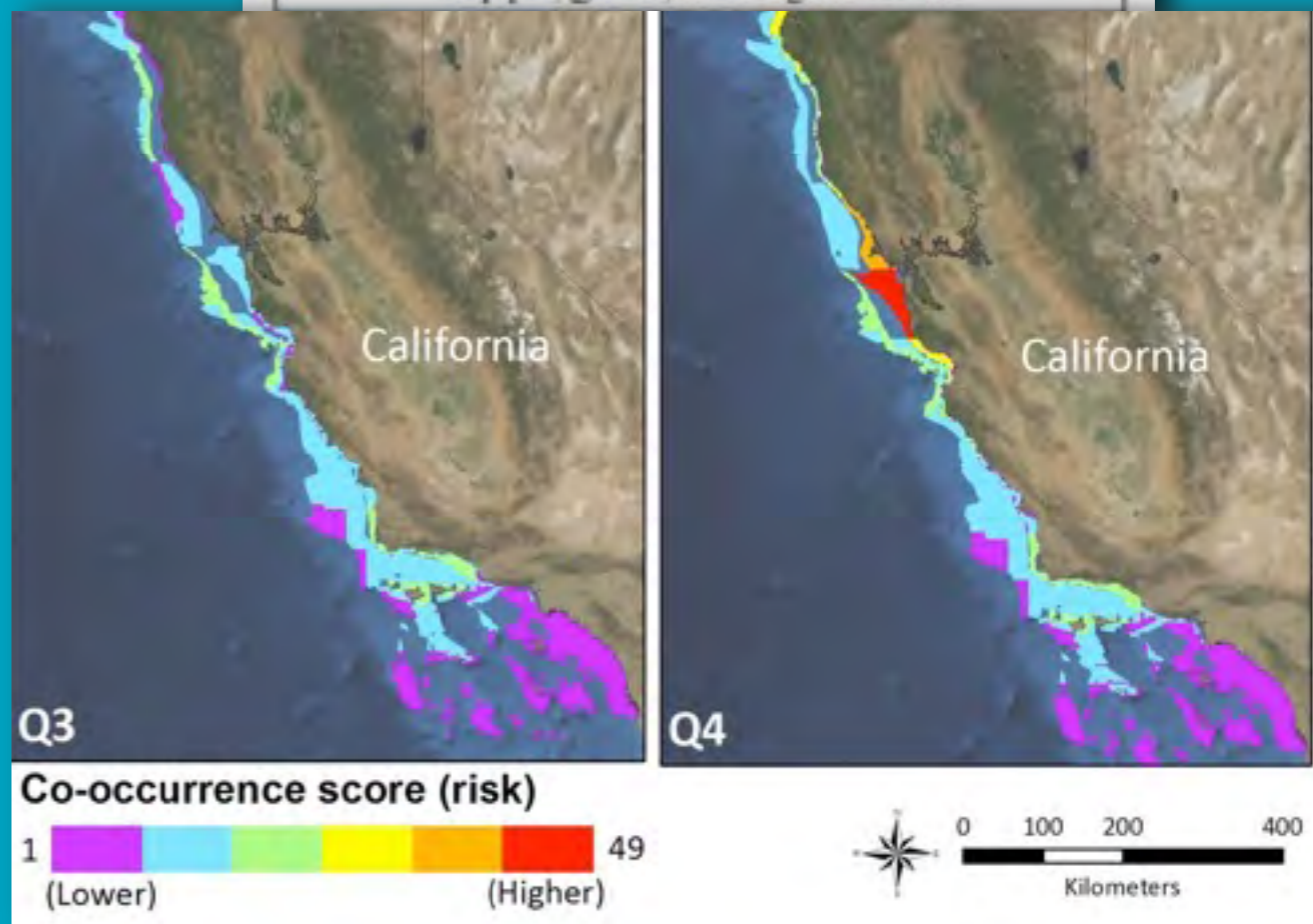


# Investigation



- Gear investigation
- Other means
  - Mapping entanglements with gear (Saez)
  - Gear Guides (CA, soon AK)
  - Gear markings (CA, BC)

**Fixed Gear Guide:**  
California, Oregon, and Washington  
Commercial Fisheries  
Trap/pot, gillnet, and longline/set line



Saez e





Video courtesy of Lou Douros/ Northern Wake



# Pinger - use

- Started 5 years ago
- Voluntary / proactive
- Fishery types
  - Setnets
  - Driftnet
  - Seine
- From Kodiak through SEAK
- ~ 3000 distributed, est. ~1000 in currently in use





# Gear mods/ practices - pingers



- Two models:
  - Future Oceans - Fumundo
  - Fishtek - Banana pinger
- Focused on humpback whale
- 3kHz (some dual freq. - 10kHz)
- 80 - 135 dB
- \$75 - \$150/ ea





# Pinger - Policy



- Not mandated/  
approved
- Harm = take
- Frustration/  
concerns (on all  
sides)





# Pingers - concerns



- Efficacy
- Impacts (e.g. displacement?) with an eye on the alternatives



NOAA Fisheries MMHSRP (permit #922-1905)



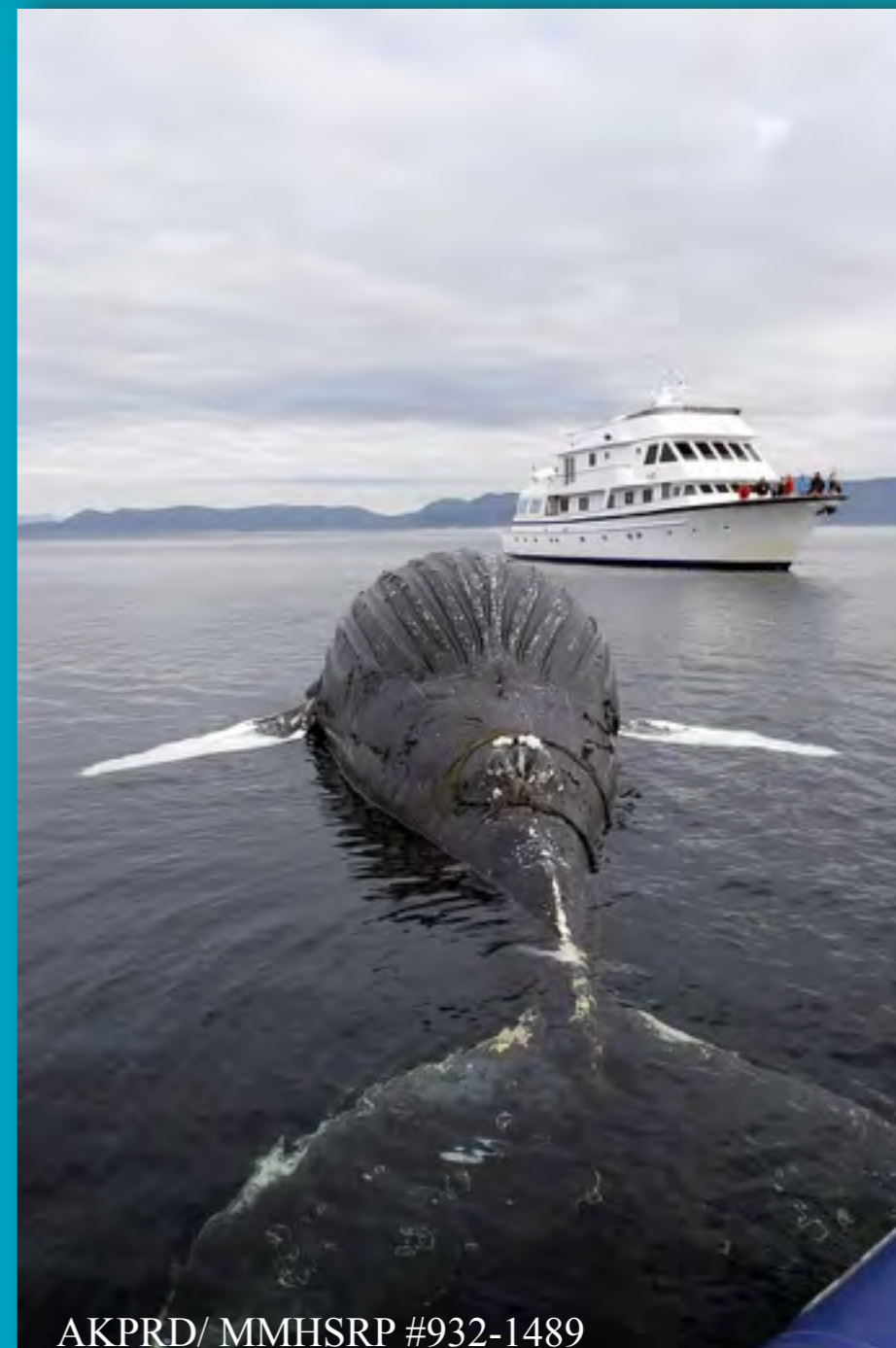


# The pinger questions



## Efficacy

- Costs (upfront to maintenance)?
- Robustness and Use?
- Legal?
- Will catch be **NEGATIVELY** affected?
- Will sea lions or other scavengers be **ATTRACTED** to the catch (depredation)?
- Do they prevent entanglement (alert vs deterrent)?



AKPRD/ MMHSRP #932-1489



# The pinger questions



## Impacts?

- Will humpbacks **AVOID** nets, yet not be **DETERRED** from feeding?
- Are there any **OTHER IMPACTS** to the whales and fishing effort?

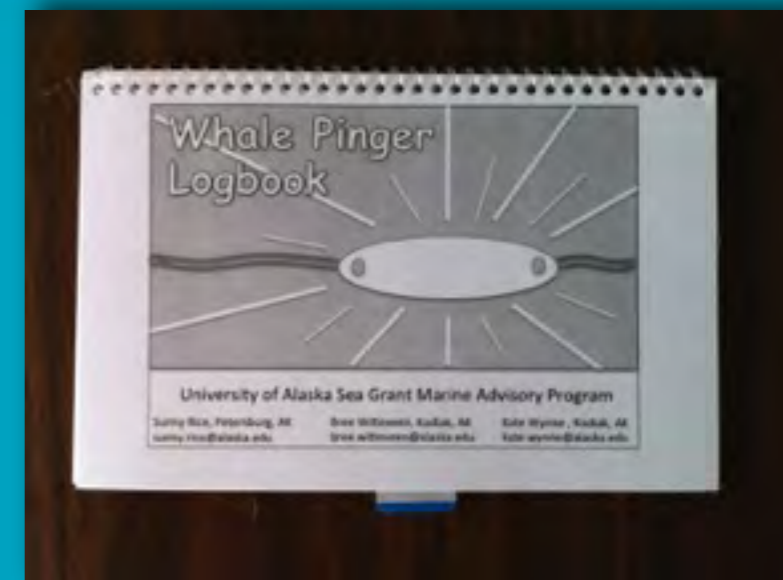




# Investigation: Field Study



- Mostly anecdotal observations
- Logbooks
- Surveys (N=16)
- Documentation
- Observer Program
- Investigations elsewhere

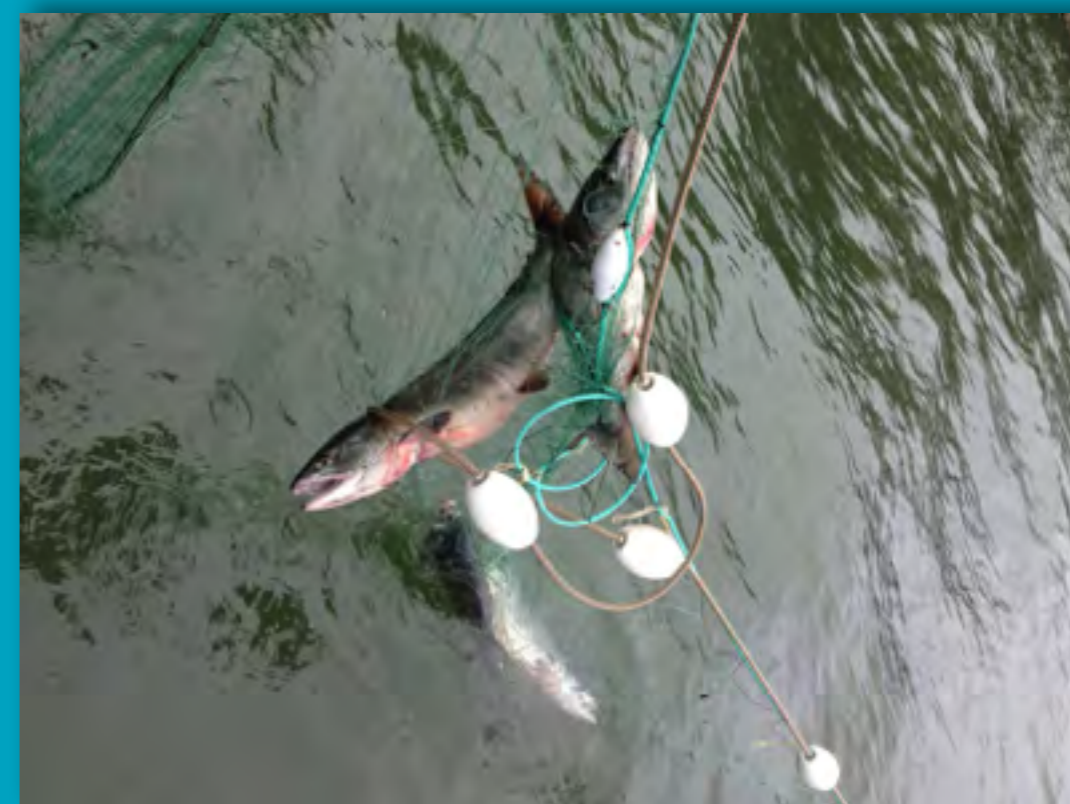




# Preliminary Results



- Humpbacks observed to approach, turn, and **AVOID** nets
- Salmon catch **NOT NEGATIVELY** affected
- **No attraction of sea lions** or other scavengers reported thus far
- **No quantifiable impact to animals yet**
- **But no quantifiable results on reducing entanglement**



Courtesy of Ed Hansen



# Considerations



- Low numbers being used (voluntary)
- Over a great range
- Sporadically (openings , when whales present)
- Lower densities (gear and in use)
- 80 - 135 dB and limited range (100s of Ms, masking)



# Current use

- Hollings grant
- Rebate offer (increase use?)
- Increase engagement





# Conclusion

- More work needed (are they working? to is their any harm to target or other species?)
- Jury is out
- Questions like: Alert vs a deterrent, delisting of humpback whales

# Acknowledgements

- NOAA Fisheries Office of Protected Resources (Marine Mammal Health and Stranding Response Program)
- NOAA Fisheries Protected Resources Division
- NOAA Hawaiian Islands Humpback Whale National Marine Sanctuary
- NOAA Office of Law Enforcement
- U.S. Coast Guard
- National Park Service
- AK Sea Grant
- University of Alaska
- ADF&G, CAF&G, HI DLNR
- Non-profits (NGOS)
- Commercial tour/ charter operations
- Fishers
- Volunteers/ Private citizens

Special thanks to: Kate Wynne, Sunny Rice, Aleria Jensen,  
Bridget Mansfield





# Mahalo

## Any questions?



NOAA HIHWNMS/ MMHSRP #932-1905