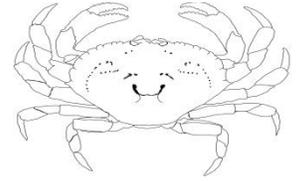




2019 Oregon Dungeness Crab Industry Meetings



Notes

**Italicized text represents an industry participant*
*Non-italicized text represents ODFW, NMFS, or Sea Grant

Coos Bay – North Bend Library
Oct. 17, 1PM-4PM

Attendance (from sign-in sheet): Harry Allen, Aaron Ashdown, Orion Ashdown, Brendan Bates, Ross Bryson, Joe Conchelos, Jamie Doyle, Nick Edwards, Dennis Fesenczl, Jake Fletcher, Clint Funderburg, Jon Gonzalez, Roby Green, Robert Hampton, Jack Kirk, Mike Lane, Rex Leach, Rick Lilienthal, Hugh Link, Tyler Long, Aaron McKenzie, Rep. Caddy McKeown, Nick Mills, Jeff Mulkey, Joe Mulkey, Kyle Novelli, Tim Novotny, John Ott, Jared Reeves, Gary Ripka, Stuart Schuttpelz, Jon Silva, Jeff Sober, Patrick Sullivan, Brett Webb, Buster Webs, Brent Winfield

A. Welcome

- Opens meeting with introductions (name and affiliation)
 - Why we are in the room and why there is a whale on the opening slide instead of a crab vessel – we all want to keep the fishery functioning.
 - Whale entanglement is a difficult issue – how do we constrain something that is working really well in other aspects, except that we are interacting with whales?
 - Oregon gear is entangling multiple whale species, but most importantly humpback whales (ESA-listed)
 - We have changing conditions in the ocean (e.g., the blob) and the increase in entangled whales (~2014, driven by humpback whales, not gray whales) coincides with these changing conditions.
 - Our goal is to make this fishery function in a way that does not entangle whales, because without that it is not going to work for anyone
 - We have a path forward. There are multiple options and ways to address this, but this meeting is about finding the best path that is economically viable and ecologically responsible.
 - Identified ODCAC advisors, because ODFW will be leaning on them throughout this process.
 - Overview of CA settlement which is relevant because it is likely the legal precedent for what the other states will be expected to do and to respond to
 - Terms – 2018-19 season closed on April 19; 2019-20 season (and until submission of draft HCP) will close April 1 south of the Tri-state area; twice monthly meeting with Whale Working Group; district-wide closure if 1 ESA-listed entanglement in crab gear, or 2 unidentified ESA-listed entanglements, or presence of an aggregation of 20+ ESA-listed whales; season will close on April 1 south of the Tri-state area in 2021 (or until Incidental Take Permit [ITP] is issued), except for to ropeless gear.
 - *Do they differentiate between where the entanglement occurs? North or south of the Tri-state area?*
 - This year it is a statewide closure, moving forward it is district-specific so the closure will apply in the district that has had an issue.
 - *The unidentified ESA-listed entanglement can be from any fishery and it will affect crab?*
 - Yes – and that is why it is important that we work to help identify entangling gear.
 - It is up to us to design a fishery that we can live with economically, that we can implement effectively on the water, that we believe makes a difference for whales, and that is adaptable.

B. Whale Entanglement Background Information

- Outlook on whale entanglements along the U.S. West Coast (1:25 pm)
 - We've seen an increase in coastwide entanglements which started around 2014 and has remained elevated in subsequent years; Driven largely by humpback whales, gray whale entanglements have been fairly steady; some confirmed blue whales in recent years
 - NMFS has been getting a lot of requests for this data and they are getting better data in recent years; reporting quality and quantity is also improving, but likely doesn't explain the full increase we've seen.
 - Entanglements confirmed in Oregon crab gear (identified from photographic evidence or recovered gear)
 - All humpbacks off Oregon are thought to be from the Mexico or Central American populations (threatened or endangered)
 - NMFS assessment process – what evidence they look for to confirm entanglements
 - NOAA's management of marine mammals – MMPA and ESA
 - *Do they have a way to estimate when the entanglement actually occurred based on an observation?*
 - They aren't confirming the origin, except for the fishery it came from. It's very hard to get at when and where the entanglement occurred. In some cases, they can estimate that it may have been entangled for a while, but in most cases it's not possible.
 - If they are able to find identifying information, then they will contact the fisher and try to get information about when and where the gear was set, but otherwise they can't.
 - *Is the gear that has been disentangled from whales stored so that it can be examined to determine how it was rigged up?*
 - There have been forensic workshops where they try to determine gear configurations (with fishers in the room) and the main take away is that whales are entangled every which way.
 - *The PBR is based off of the stock assessment – when was the last one?*
 - 2015 {**Post-meeting:** It was determined after the meeting that this is not accurate. There were stock assessment reports issued in each of 2016, 2017, and 2018, but the 2016 and 2017 reports used population estimates through 2011, while the data used in the 2018 report was updated through 2014. The population estimates come from various sources and are updated at irregular intervals.}
 - They put out an entanglement report every year, but the models aren't necessarily updated every year.
 - This is a MMPA metric so it applies to the MMPA stock of whales (OR/CA/WA) and doesn't relate well to the distinct population segments that we have under ESA – There will likely be some attempt to align those.
 - Recently, some humpbacks were removed from the ESA (Hawaiian DPS) but the Central American population segment is still endangered (~700 animals) and Mexican population segment is threatened (~2000-3000 animals)
 - *Some recent evidence of mixing between populations?*
 - There is no recovery plan for the distinct population segments and the West Coast region contacts weren't sure where that process was at.
 - New proposed rule for critical habitat designation for humpbacks
 - Section 6 grant (i.e., whale distribution study) will address some of these information gaps.
 - *So it seems like you're trying to mandate us with incomplete information?*
 - We are trying to make sure that the fishery doesn't get in front of that data. We're working on the numbers and working on the management simultaneously.
 - The PBR changes over time based on NOAA's most recent estimated population numbers.
- Any entanglement of humpbacks is prohibited without authorization (Section 10 permit)
 - *Are the disentangling teams that respond to whales set up to take genetic samples?*
 - They try to minimize additional impact on the already stressed animal.

- Most observed entanglements are never physically responded to, so there is no contact with the whale.
 - Coastwide ship-based surveys every few years (e.g., 2015, 2018) {**Post-meeting:** It was determined after the meeting that the surveys were actually conducted in 2014 and 2018. The one before that was 2008. The reports typically come out during the year after the survey was conducted.}
 - *There was a lot of conversation about this issue at the PSMFC annual conference; working to put pressure at the commission level that this is a high priority and requires funding; NMFS needs the money to evaluate the population, go through their permitting process, and partner with state to conduct research; CA was very engaged in this conversation as well.*
 - *Oregon has a coastal caucus and this issue is already on the agenda for the November meeting and we're just starting to understand the ramifications and potential impacts and it's really important that you stay in touch with your congressional delegation and engage in the conversation. We recognize how important this is.*
 - *NOAA trawl surveys should be conducting these stock assessments and piggybacking on these surveys to get this information.*
 - They do some opportunistic sighting.
 - *How can we make decisions with outdated or lacking information?*
 - The answers to those questions aren't going to change what is going to happen in 2020 or 2021, and so our decision in the next six months has to be about what we are going to do in the next year or two or three. These are great questions and help to arm us with questions for federal partners, but we need to focus on short-term measures. We need to make a change in the next 6 months.
- Section 10 permit and Habitat Conservation Plan
 - Until we have this permit, one whale is too many.
 - NMFS has never issued a Section 10 permit for marine mammals, so this is a new path for everyone, but there are some fundamental elements common to all HCPs.
- *Is the 1.67 (10% of PBR) based off of the 70% or would it actually be 2+?*
 - The 70% will matter and we will also have to account for the whales that are not observed in some way.
- *Who has these permits already (e.g., shipping, NAVY)?*
 - No one has one for marine mammals. The closest example we have is in Puget Sound (rockfish) or East Coast (gillnet, shark)
 - *Is a Carnival cruise ship that takes a whale going to get shut down?*
 - It is not relevant to this process or to what the fishery needs to do. The total population health is related because it impacts the PBR, but otherwise it is a separate issue.
- Key challenges and needs, and scientific support needed
- Oregon's response
 - Phase 1 (gear marking requirements, electronic fish tickets, late season control date)
- *I cannot find one example of an LE fishery that had a control date set to get another LE permit within the fishery (i.e., an LE within an LE)?*
 - No example off the top of my head of that, but LE control dates are a frequent mechanism.
 - It also doesn't matter if an LE program has been put on top of an LE program before in Oregon, if it is collectively considered an effective tool to addressing this problem. And that is true for all of the measures that we are considering – we're thinking outside of the box.
 - *What criteria does a late season LE program involve?*
 - There are no criteria because it hasn't been designed yet. The control date is simply put in place so that there is no additional prospecting in the late spring/summer season when whales are feeding off Oregon.
 - *So are you saying it won't happen without fleetwide support?*
 - It won't happen without a discussion.

- Pot limits did not have fleetwide support, but most have been happy with the strategy that was implemented.
 - The design of the program is really where the rubber meets the road, not the control date.
 - *A lot of concern about what a late season LE program would look like.*
 - This is a long term measure, and today we need to focus on short-term measures (Spring 2020 and December 2020)
- Risk assessment – present and future
- *It's misleading that we throw out coastwide numbers, but we're talking about Oregon.*
 - Even with small numbers, it's still beyond what we can take. We are looking at all of the information (coastwide) to try and identify patterns and understand what we're seeing in Oregon.
 - *It's very frustrating for public perception when big west coast numbers are thrown out by ODFW and in the media.*
 - *Our problem in Oregon is far less than it is in California.*
- *Do we have the same information on boat strikes, Japanese trawlers, and other impacts to whales?*
 - We don't have those numbers in this presentation, but they are part of the stock assessment.
 - *There are people working to show these numbers. Are they working to show those other numbers too?*
 - Yes. It's in stock assessments. For an idea of scale, observed ship strikes are pretty low (maybe 5-6 per year) while estimated ship strikes are ~22. They are doing work on that working with the shipping industry on limiting speeds in high traffic areas (e.g., Santa Barbara channel).
 - Oregon's management of biotoxins in crab is being held up as exemplary. We can fish when other states can't, and that is because industry got involved and concerned and worked with management to figure it out. We are at the same point right now, and every time a whale is being entangled on the west coast you all are being held accountable. So, we have an opportunity to do something about this.
 - *Industry is standing up and saying that Phase II is too much. Gear modifications are one thing, but chopping the season up is too much.*
- *[Questions clarifying the 70% SI/M estimate and the 10% of PBR (NID)]*
 - Different criteria under different acts (MMPA and ESA). And until we come into compliance, any is too much.
- Conservation plan process (and resources)
 - Measures discussed today will be a part of the HCP.

C. Oregon Whale Distribution Study (Sea Grant, 2:40 pm)

- Purpose, funding, methods, future plans
- Standardized survey (where whales are and are not) vs. opportunistic sightings
- Humpback whales are the most commonly observed species. They are most commonly seen between 100 and 200 m depth.
- *Have they seen an entangled whales during these surveys?*
 - No, not to my knowledge.
- *Could these surveys help to inform when there are not whales found? If no whales are seen in February, does that mean it's safe to be there?*
 - The standardized aerial surveys will provide better information about when and where whales are and aren't present. Data provided from the mobile app will help ground truth the models derived from the aerial surveys. More eyes on the water is a good thing.
- *We face a tough decision about whether to call in an entangled whale (that will be used against us) or not.*

- We acknowledge that it is a hard decision, and encourage everyone to still report entangled whales. Clarify that the sightings we're asking people to report through the mobile app are just the 'happy' free swimming, not entangled whales.
- *Is there now funding for the second year?*
 - ODCC funded first year; NOAA Section 6 grant funding for second year.
- Whale Alert Mobile App – citizen science to ground truth predictive models from aerial survey data; why fishers should contribute and potential concerns
- *We need all these sightings – it's important to call these in.*
- *Asking for all sightings? Entangled and not entangled?*
 - Yes. Whales that are non entangled should be reported through Whale Alert. Entangled whales should be called in to the NOAA whale entanglement hotline 877-SOS-WHALE (877 767 9425)
- App overview.

D. Short term measures to reduce risk of whale entanglements in Dungeness crab gear

- Overview of phase II management measures
- Estimated pots and ex-vessel value by month (2014-15 through 2018-19) – there is nothing new in these plots, but they are intended to get everyone on the same page
- “Late season” pot limit reduction – comparing the estimated number of pots by month based on the current pot limit, a 30% reduction, or a flat 200 pot reduction
- *Has there been any mention of a Tri-state buy back? To implement a coastwide reduction in permits/gear in the water?*
 - It was brought up at Tri-state and is included in the measures for long-term consideration.
 - There was also mention of a coastwide pot limit for our border areas; this would mean reducing and allowing only one set of pots for multi-permitted vessels.
 - This is just a concept that could be pursued, it hasn't been designed yet.
- Estimated pots by tier limit and month
- *Have you looked at what the ex-vessel value reduction would be as a result of these pot reductions?*
 - We have limited information on how to evaluate that (it was the same for pot limits). You can look at it for season closures pretty easily, but we don't know if it's a 1:1 ratio (i.e., if you have 30% less pots, do you bring in 30% less value).
 - *As we implement these decisions, can we build in a review option where we may be able to say, “This isn't working” and so we are going to go back to the old pot limits and consider something else?*
 - Our goal is for management to be adaptive.
- *Why aren't we looking at a depth restriction?*
 - The concern there is about structuring management measures on only 8 months of a survey (limited information). We don't feel like we have strong rationale for a depth restriction.
 - The fleet is already moving inside 50 fathoms in most years and we still have interactions. So we don't have evidence that putting in a depth restriction would effectively make a change.
- *Why are we only talking about lines out of the water or cutting our season back. Why aren't we considering gear modifications and boater education?*
 - We want input on that as well, but we don't feel that there is a gear modification that is well supported to reduce risk of entanglements.

Target implementation Apr/May 2020

- 1. Which primary whale entanglement risk reduction measure do you support? Why?**
- 2. What month do you support implementing risk reduction measures? Why?**
- 3. What % reduction of pots do you support? Why?**

- Gear innovation needs to be discussed, but it's not a short-term measure that we can implement in the next six months.
- Limited entry is not on the table for this spring. Pot reduction is.
- *Have there been any studies on the safety to the fleet? If we have a closure in April (with 30% reduction in gear), and if we have a late opening, the little boats will have to take chances and make bad decisions which poses a huge safety risk. The weather in March is not a good place for a small boat to be. The fleet will have a difficult time even complying with this, and will take more chances to avoid getting a ticket. It will be dangerous for a lot of people [applies to closure and to intermission]*
- *Why are we only looking at April and May, instead of June?*
 - We are trying to balance the economic viability of the fishery and the biology of the whales.
 - If we have a lawsuit and it closes the fishery on April 1, how is that better?
- *We are talking about vertical lines in the water. How about we reduce the number of vertical lines and have the pots hooked together (like East Coast lobster pots) to reduce vertical lines, but not reduce pots?*
 - We have heard about that. Longlining is a measure for long-term consideration. We don't have enough information about the severity of an entanglement of a whale with multiple pots.
 - In the past, longlining was prohibited based on gear conflicts, so we would have to consider how to address that before implementation is possible.
- *I don't believe that reduced lines equates to reducing risk of entanglement. If you have 100 pots with taut lines or 60 pots with slack lines, [I think that] the 60 pots present more of a risk.*
 - *We should put that best practice into regulation (like WA).*
 - The other thing that WA has done this year, in addition to tightening up the scope on gear, is to reduce gear by 33% as of July 1, 2019.
- *Ropeless gear has 100% rate of failure (from testing in CA), but something that could work is whale-specific acoustic pingers with an LED light to deter sea turtle interactions and the ability to send location data. Gradual steps and mitigation measures that still allow the fleet to make some money should be the first step, not pot reductions. Reducing lines and reducing pots may not reduce risk, but it will also reduce income. We need to put more of emphasis on still allowing the fishery to operate.*
 - *There is no state or federal law on the west coast that says it is illegal to start using these [pingers] right now. {Post-meeting: NMFS disagrees with this statement. Pingers could be considered harassment.}*
 - His point is valid, but it is not the only thing that will get Oregon or Washington out of this problem.
- *Fishermen education is needed (best practices aren't currently followed by a portion of the fleet). Education on disentanglement measures, taut lines, and eliminating excess line and buoys on the surface. [Education] combined with pingers.*
- *Season intermission is going to kill our fishermen because of the time of year. March and April are still winter months and the weather will make it difficult, especially for the small boats. It would take small boats a month to take all the gear in and then they have to put it all back out, and you're tripling the number of trips crossing the bar. That option needs to be eliminated, it's not necessary when we have other options. Combined with gear recovery flexibility, we can reduce risk without that option.*
- *The first thing we're trying to do is not lose pots which means lost revenue.*
- *WA's pot reduction started in July this year, but will be May 1 moving forward.*
- *Where did the April 1 rationale come from?*
 - It is based on the earliest observed entanglement in OR/WA.

- *No matter what we do, it isn't going to be enough [for the environmental groups]. We should come in slow by looking at pingers and smaller changes. It won't make a difference.*
 - *I have 15 years of experience dealing with these same NGOs. They are going to take our reduction in pots and want to push for it for the rest of the season. They will try to prove an entanglement in every month of the year.*
- *Personally, I don't believe that pots out of the water is going to do anything to reduce risk. Give us a chance to do that with gear modification. We've made the pot limits work, but there is no wiggle room left.*
- *I have a 32' boat. If you take those months out of the fishery, then I'm out of business.*
 - *We don't necessarily think taking all the pots out of the water has to happen. That is why the % reduction is on the table. We are interested in keeping this fishery open as long through the season as we can. We want to keep the small boats in the fleet and we want to keep fishing happening in the summer months. If we didn't think this was an option, we wouldn't be bringing it up.*
- *We're not faced with a lawsuit right now. Why aren't we tabling lines out of the water while we work on these other options, and then we have it in our arsenal if/when we need it?*
 - *We need to make a substantive risk reduction step in 2020. We don't have a gear modification that we can show will reduce risk.*
 - *Where is there evidence that pot out of the water will work?*
 - *It is commonly accepted that less lines is reduced risk.*
 - *We didn't see any reduction in entanglements following pot limits in 2006-07, so how can we say that further reduction of pots will work? You only want input from fishermen if it goes along with what you already have outlined.*
 - *We are tabling it, not saying it's not going to happen. The long-term measures are on the table because someone suggested it, whether I agree with it or not.*
 - *What we have put in place for the fishery so far, is what came out of the OWEWG.*
 - *No one wants us to succeed more than us. We want to address this whale problem, but we're not convinced that this will work.*
 - *At the OWEWG, I never heard one person mention April 1.*
 - *Every OWEWG meeting, Kelly brought up that the agency felt that it needed to be earlier than June.*
- *There are people here who need year round work, more than two or three months. It is hard enough to get employees. We need to try other ideas before we start cutting pots and hurting income. Reducing lines may seem like it will do something, but a whale can still swim through the 70% of remaining pots. A depth restriction or gear technology should be tried first. Maybe longlining. Maybe starting on April or May 1, you do a two pots per line rule which would be a 50% reduction in vertical lines.*
- *In the next few years, these whales could be de-listed. Everyone agrees that there are more whales out there than ever.*
 - *We have talked to the biologists about de-listing and I wouldn't bet on it. I want to keep working towards that.*
- *[Addressing argument that pot limits in 2006 didn't reduce entanglements] Whales are changing behavior. We can't use pot limits as an example for how reducing pots may affect risk. That wasn't an experimental design and isn't applicable to the conditions that we have now.*
 - *There are whales everywhere.*
 - *That could be because they are growing in population, but it could also be that they are changing where they are at. Saying that we didn't have entanglements before pot limits is not good evidence that reducing vertical lines won't help reduce risk.*

- *[referencing the short-term management measures] Does short-term mean temporary?*
 - It could, but in this case short-term means 2020 implementation. However, we have talked about trying to build flexibility into this.
- We are trying to find out which path (i.e., pot reduction, early closure, or intermission) we should go down. After that, a bunch of other things will need to be resolved. You've given us a lot of information today about the intermission being dangerous. We've heard before that a season closure penalizes the small boats and we've heard more about that today. What we haven't heard a lot about is if we pursue a pot reduction, what should it look like? We're not asking you to commit to it, we're asking is that the path?
- *Question 5 (on survey) is very difficult to answer because there is no acceptable option, it's too vague.*
- *Personally, I could see some sort of reduction as of June 1. I'm somewhat supportive of that. I don't like going down the road of pot reduction though because it sets a terrible precedent [for CBD].*
 - *The further out you put a reduction, the better.*
 - *How many boats from the 300 and 500 pot tier are fishing after June 1?*
 - *In 2015, in Port Orford, 50% of the crab was caught from April through August. The small boats are going to be the ones affected by any of these regulations.*
 - *In 27 years, I haven't entangled a whale. WA and CA should be looking at OR to see what we're doing right.*
 - *The April option should be completely thrown out. It isn't an option for small boats, buyers, drivers, etc. We are going to lose infrastructure if we can't bring in crab.*
 - *We need some flexibility. Maybe we should not confine ourselves to the traditional season. Maybe we can fish in August if the whales aren't there. I support the pingers idea, or [a 'Great white fin' deterrent]?*
- *How long have pingers been required in the CA drift gillnet fishery?*
 - *Since 1997, they've been required as part of the Take Reduction Team process.*
- *[I could see some] gear change (longlining) in April/May/June 1, instead of bringing them in. It may be an easier pill to swallow if it's not a complete reduction.*
- *I'm proud of Oregon's role as a leader in crab management. We should focus on OR, and not on what WA and CA are doing.*
- *Oregon got the highest scores (green rating) in 'management' and 'research' out of CA, OR, WA, and Canada from Monterey Bay Aquarium Seafood Watch.*
 - *That relates to substantive measures on the water, not just sticking out heads in the sand. We need to do something.*
- *We're okay with Phase I and could see making the best management practices into rule. It's Phase II that we're not okay with.*
- *If you were to make a major change to your gear (e.g., longlining) in April/May/June, won't that have the same safety issues that were mentioned before?*
 - *One or two pots at a time would be okay, more than that would be a problem.*
- *Word of caution on the pingers. NOAA has implemented those rules in the past in other fisheries and they aren't convinced that it's a solution for this problem. Pingers also create noise which is a known issue for whales.*
 - *Pingers could be used on a portion of gear (30%) and that would reduce interactions by 30%.*
 - *If we were to put a regulation in place in 2020 requiring 1 out of 3 pots to have a pinger on it (at \$60/ea), you would support that?*
 - *It's possible that industry could apply for grants for testing these and for implementation if they were proven effective.*
- *One other question – how do you all feel about the 200 pot flat reduction?*

- *Absolutely not in April or May. After June, maybe because you have a trip limit that doesn't need more than 200 pots. When the OWEWG recommended the 200 pot flat reduction, it is was in relation to a June date.*
- *[General agreement that April or May would not work]*
- The whales show up in April. So what do we do in April?
 - *The pingers. The depth restriction. The longlining.*
 - So moving all of your gear inside a certain depth in April, you'd be okay with that?
 - *A lot of guys will already be in that shallow.*
 - *By April, we are already reducing pots by 30% [referencing the estimated pots by month].*
 - *And we're still entangling whales then.*
- *Pot limits (2006) show a reduction because everyone knew when surveys started coming out that they better put more pots in. So it falsely shows a reduction after pot limits. We have more pots today than we did back then.*
- *Two years ago, I fished late and I had a 10,000 lb week in April (at \$11/lb). It's when we are being paid the highest prices for crab. We've had some very good Aprils. There is a void in the market right there.*
 - *We've had Aprils and Mays where we make more money than in January.*
- *It's make believe that we are going to fish with rope and not entangle one whale.*
 - *And that is why were are doing the ITP.*
- *Does ODFW really believe that this will help us not entangle whales?*
 - *If we come up with a strong plan where we do what we can to reduce risk and we work with NOAA on it and they give us a permit, we are going to be a lot safer than we are right now. Right now we are all extremely vulnerable.*
- *We should be starting with the smaller measures that are good for the fleet and coastal communities, without putting the cart before the horse.*
- *One of the things that we need to do with this HCP is to describe where we start and how we move through options. One way is to start lower (5%) and move towards 10% and then 20% and so on, to have some room to move. The other is to start at 30% and then as gear modifications become more viable, consider backing off the limit and shifting towards modified gear.*
- *Why do you have a problem with the longlining idea?*
 - *I don't, but I've heard concerns from other fishers with that.*
 - *It's not harder to regulate than what we have right now. You put two tags on a buoy that has two pots (on a single line). It would be a 50% line reduction.*
 - *A couple of things about longlining that we've heard: (1) really small boats have a hard time longlining as few as two pots at a time, and (2) you still have line there, maybe quite a bit between pots (could mandate sinking line to help) and there is still potential for bottom feeding whales (e.g., gray whales) which would still be a potential public perception issue even if it is not an ESA issue.*
- *"This or that" regulations may be needed to accommodate different vessel sizes and characteristics. A depth restriction OR longlining requirement.*
- *Seems to be more support for line reduction than for pot reduction.*

Brookings – Harbor Water District Building

Oct. 18, 9AM-12PM

Attendance (from sign-in sheet): Joe Abad, Kyle Aubin, Dale Baines, Clint Beasley, Nick Bordelon, Joe Conchelos, Ralph Dairy, Pat Ellis, Clint Funderburg, Paul Garratt Jr., Jon Gonzalez, Jason Gutierrez, Wesley King, Buddy King, Mike Klein, Gary Klein, Bernie Lindley, Hugh Link, William Manning, Lonnie Marrington, Matthew O'Donnell, Brad Pettinger, Lex Rau, Howard Rigel, Collin Roberts, Chris Sample, Corey Sample, Mike Sine, Joe Speir, John Terebesl, Josh Whaley, Bill Wood

A. Welcome

- Opens meeting by defining the issue and purpose of the meeting
- *There is no scientifically-based study that shows that reduced lines in the water, reduces risk of entanglement. There are studies that prove that gear modifications can reduce interactions with whales.*
 - Every additional line you put in the water, you create a risk for entangling a whale.
- *Several participants expressed concern over growing whale populations.*
 - We're here to talk about the responsibility of the crab fishery to take care of its part of the problem. We often hear that "maybe we entangle one or two whales" but that's not true. We have entangled six whales in Oregon over the last 9 years. One entanglement is illegal – not compliant with federal law.
- *Why isn't gear modification considered a solution?*
 - There has been money on the table for two years and it's [gear innovation] not there. It's not going to be ready for decision-making for next year and we need to get this fishery out of the crosshairs of a lawsuit.
- *The CA settlement is garbage. We would not settle for that. You take away 30% of our gear, we're not getting it back. We go to a lawsuit, the Association has the resources to win it (?).*
- Covered terms of CA settlement.

B. Whale Entanglement Background Information

- Outlook on whale entanglements along the U.S. West Coast (NMFS, 9:20 am)
- Increase in West Coast whale entanglements since 2014-2015, driven by humpbacks and recently some blue whales.
 - *Crab pot specific?*
 - No, these are fishing gear entanglements, but not just crab pots.
- Dungeness crab gear confirmed entanglements in Oregon.
 - *Did these all result in mortality or were they disentangled?*
 - Don't have the numbers here, but they didn't all necessarily die. We will cover how NMFS determines serious injury or mortality risk.
- NMFS assessment process (photos/videos, NOAA observation, trusted/professional source, multiple independent reports, detailed information from expert interview). If someone just calls in and says they saw a whale, that isn't a confirmed entanglement unless it is investigated farther.
- Management under the MMPA and ESA. They are tied together in some ways for whales.
 - MMPA – evaluate entanglement reports, determine "serious injury" = injury with > 50% of mortality (SI/M rate for recent entanglements evaluated to be ~70%). For CA/OR/WA humpback whales, the PBR (under MMPA) is 16.7 seriously injured or killed annually.
 - ESA – populations defined differently (concerned about Central American and Mexican populations here in Oregon). Up in Washington there are some of the Hawaiian population, but not off Oregon.
 - ALL entanglements are take; ALL take is prohibited without authorization.
 - *Why are the fishery managers so behind on getting any ITP?*

- We've been thinking about it for a while. Initially told that the coastwide take was too high to receive an ITP, and that is still the case for CA.
 - We declared as an agency in January 2019 that we would apply. It's a slow process and requires a lot of resources. There is not consensus among the fleet to do that, but every ESA-listed whale that we take as a fishery is against the law.
 - *In the big picture it doesn't fix our problem, it just gives us one whale to take?*
 - We have multiple problems. A permit will not fix the issue, but it will fix "zero allowed take" which is what we have now.
- Section 10 permits and Conservation Plan process
 - NMFS has not previously issued one for ESA-listed marine mammals.
 - *The CP is essentially a report? Is it a staffing issue – is that why it will take until the end of 2020?*
 - We have a couple of resources – staff within ODFW and ODCC-support
 - There are limited NMFS resources as well. NMFS is dealing with permit applications from three states for a permit they've never issued before.
 - On that note, we're working with our congressional folks to address that.
 - *We don't have time to waste. Why can't we get them in the room to tell them it can't take that long.*
 - *"Evaluate impacts" – is that to the whales or to fishermen?*
 - NEPA process looks at impacts to fishermen. ESA is about the whale species.
- Key challenges and needs – resources, coordination across states, resolution of big questions (stocks vs. DPS, unknowns, effectiveness of measures), adaptive approach, gear development.
 - *In reference to the "adaptive approach", is it an option to implement something but then say "this didn't work, we're not doing it"?*
 - It could be additive (e.g., 20% reduction didn't work, so we're moving to 30%), or it could be removing and replacing (e.g., we try weak links and find a whale entangled in gear with weak links so we scrap that plan).
 - *We would like to see some ability to roll back these measures if we see a population increase. We have that in other fisheries.*
- *How do you know if it's an entanglement scar or a scar from something else?*
 - It's not my area of expertise and I don't know what criteria they use. It is something that's been done with right whales on the East Coast. They have scar studies.
 - Another valuable piece of information from those scar studies is data on how many whales are entangled and survive.
- Oregon's response (9:50 am) – timeframe and actions
- Phase 1 measures – mostly informational, but not reducing risk.
- Risk assessment – present
- West Coast Dungeness crab gear entanglement by observation month – peaks in April and May
- Oregon Dungeness crab gear entanglements by observation month
 - *So the numbers are over the last ten years. If we had an ITP back then, we wouldn't be sitting here.*
 - No, we would need to have mitigation measures to get the ITP.
 - *We have mitigation measures – buoy tags, derelict gear recovery, etc.*
 - Buoy tags are informational, not risk reduction. But you could make a case for derelict gear recovery as risk reduction.
- Risk assessment – future
 - *What does monitoring my vessel have to do with whale entanglements?*
 - If we know where gear is, we have more information about where entanglement are occurring. You could substitute "gear monitoring" for "vessel monitoring".
 - We don't have a cost-effective way, at this point, to get location information for every pot so we rely on vessel information.

- Conservation plan – ODFW process and resources
 - The conservation measures implemented before and during the process are part of the plan.
 - *For the CP, I'm assuming there is a management measures toolbox including gear modifications, etc.?*
 - We consider all of the risk reduction measures and those under long-term consideration part of that toolbox.
 - That's what we're talking about today - what we are going to put in that plan.
- *So the 1.67 number is what we will be held accountable for?*
 - You can essentially double our number (of recent entanglements) to account for the 50% that are unidentified gear.
 - *On the PBR, that would be (the 1.67 number) with the 70% SI/M factor on top of that?*
 - There are three things that adjust the 1.67 number. (1) the unknown gear, (2) the unknown whales – never identified to species or never reported, and (3) the 70% SI/M factor. #1 and 2 lower the amount that we can entangle to trigger that, but the 70% mortality factor raises that back up.
 - All of this accounting is required by NMFS.
 - *If a humpback is ESA-listed, we can't get a permit for that?*
 - No, the ESA-listed whales are the ones that we need the permit for.
 - *Is the trigger response automatically a closure?*
 - It could trigger some other management response (e.g., depth restriction) but it is our responsibility to show NMFS that it will be effective.
- [Clarification] CA did not get sued for taking whales, they got sued for not having a permit (though they are also taking too many whales).
- *What's the population level that humpbacks will be delisted?*
 - Great question, with an unknown answer. Recovery plan (from 1991 when the whole population was listed) is not applicable anymore. They are divided into DPS now, and are working on recovery plans for each population segment.
- *On the SI/M determination, are they just automatically figuring the 70% factor or will they make some other determination based on the event?*
 - After a year (the time it takes to make the SI/M determination), it will be based on the circumstances of each individual animal.
- [Clarification] A disentanglement is credited to the fishery. So, there is an incentive to disentangle these whales.
- *Will there be further work on the 70% mortality figure?*
 - That is just a retroactive determination that will self-adjust over time if our mortality impact changes over time.

C. Oregon Whale Distribution Study (Sea Grant, 10:20am)

- Purpose, objectives, funding, methods, future plans
- *Are whale population numbers a part of your study?*
 - This will contribute to stock assessment information, but this study [the aerial survey] is not designed to get full populations figures. It is designed to get information on when and where they are there. However, photo ID information and genetic IDs can contribute to stock assessment.
- Started in February 2019, conducted 29 surveys so far, observed 11 different species or marine mammals, recorded 125 sightings of 410 individuals.
 - *125 sightings and 400 animals, how does that add up?*
 - Sometimes you have a sighting of multiple animals.
- *Why isn't this contributing to the stock assessment?*
 - The photo ID part (from the boat component) will contribute to that. But we are not surveying the whole population if we're only covering Oregon.

- This information is important because if whales breed in Mexico and they go to Japan, they're not impacting the Oregon crab fishery. And that is the gap. We don't know which whales are here and when. So the whale biologists looking at the entire North Pacific (which we are sending some info too), doesn't get at which ones are coming to Oregon.
- *Wouldn't that be dependent on whale food source and temperatures?*
 - Yes. A big piece of this study is figuring out why they are where they are (or aren't).
- *Based on this study, is there a depth that the humpbacks are confined to?*
 - Just looked at Leigh's data and she has observed humpbacks from 30 fathoms to 530 fathoms.
 - Bathymetry could be a tool and this study will help to make those decisions.
- [Clarification] October entanglements – both off of Central California with Oregon gear.
- Of the six humpback entanglements, one was derelict gear and the others were actively fished gear as far as we can tell.
- Whale Alert Mobile App
 - Ground truth the survey data.
 - *[Fishermen's willingness to report whales] depends on the end result. It's never worked out well for fishermen to report that kind of information.*
 - *More whale entanglements are happening right now, and we all understand that, but we're concerned about who is going to protect us? The rules don't help us out. It's a lot of crab gear and a lot of whales, so one per year is really pretty miniscule.*
 - That's what this study is about. We want to be able to tell NMFS and the public how many whales are healthy and happy out there.
 - *Is there any accounting for the increase in whale populations out there?*
 - What is the public focused in on? We have a public perception issue and we're all dealing with it and trying to figure out a way to respectfully deal with that.
 - *I think you need to put some emphasis on public relations – whale populations are growing. ODFW should work to convince the public that the whales are fine and that the fishery isn't evil.*
 - I agree, we need to do more communication with the public. And I think we can talk about this fishery being responsible and sustainable. The ODCC and industry is out in front.
- *A plug for the Marine Resource Education Program – you get a lot of information fed to you about the science and management. I strongly suggest you take it, whether or not you want to believe it, there is a lot of information. It's free – they pay for your transportation and meals. I'm not here to sell it, but please take it. The problem that I have with it – they talk a lot about hake and pollock because that is what they're modeling, but it's a great program.*
- *A comment on reporting whales – it may not be the whale that you see, but the gear being pulled. It's important to call it in so that we can get more information and we may be able to disentangle it so that it doesn't count against us.*
 - Good point - the Whale Alert app is about reporting happy, thriving whales. The reporting hotline is about reporting entangled whales. 1-877-SOS-WHALe (877 767 9425)
- *Be careful about looking at ODFW as an enemy. You're in a situation that we need to navigate carefully. They have helped us navigate challenges in other fisheries (e.g., bycatch reduction in the pink shrimp fishery). They're here to help you navigate where you're at today. Be careful about the decisions that you move forward with. You don't want a letter from CBD. If you get one, it's out of your hands. You're in a box, but it's not a small box like California. ODFW has done a lot of work prior to this and the optics are much better here. Did they get an ITP five years ago? No, because no one would have supported that. If you take a hard line, and force this to go to court, it will really be out of your hands. So this can't be taken lightly. I've been dealing with this in the groundfish fishery for 30 years and you don't want to be there so think hard about the decisions you make.*
 - *It's not necessarily completely out of your hands, we've gone to court with them twice in other fisheries and won. We do want to avoid it, but it's not the end.*
- *Is anyone determining that a disentangled whale is in good shape and it can taken off our count?*

- My understanding is that it is a credit, but not certain how much the credit is. It is determined by NOAA's disentanglement team. But some credit is better than none.
- *Monterey Bay Aquarium Seafood Watch – Oregon is now graded above (green) other states in management and research (ODCC fought for this, it used to be the same coastwide). Other states already got there letters and we haven't (though we still could). We can fix this stuff, but you guys have to give the ideas.*
- Who we're talking to and potential concerns about Whale App
- How to use the app
- *Do the ones from the aerial survey get put into the app so others can see it?*
 - Not at the moment. That information is provided to ODCC and will be reported semi-regularly.
- *Do you have to have service to record a sighting?*
 - It will upload automatically when you get back into cell range.
- *Do you just report that you saw a whale or do you identify it?*
 - It will take you through a series of prompts to identify it.
- *So you're relying on the public to identify whales?*
 - Yes, and there are concerns about that. So one way around that is to basically get as much information as we can from as many people as we can.
 - *So this would allow someone to lie and say that they see whales when they don't see them.*
 - Sure, that is a possibility, but we have data quality controls.
- By helping document what the whales are doing off the coast of Oregon, you're helping to show that whales are thriving off the coast.
- *I'm not condoning this app or reporting whales, because we are all wary of that, but [told a story about fishermen removing pots when an aggregation of whales was around their gear]*
 - That's the kind of story that we need to have coming out of the fleet. If there is a fisherman saying what they're doing to take care of the whales, that's news.
 - *You have people that have grown up with 'Save the Whales'. Knowing that you are working to save the whales, will only help the public perception. That is what is going to keep you crabbing.*

D. Short term measures to reduce risk of whale entanglements in Dungeness crab gear (11:15 am)

- Overview of phase II management measures
- Measure for long-term consideration
- *Who came up with the late season LE permit? That seems discriminatory to me. Fisheries are fluid and so people might fish one thing and then switch to another. Now, if you have a late season LE permit, people who already have crab permits can't go fishing. If you're going to shut something down, it seems more fair to shut it all down then to let some people fish and not others.*
 - We spent a lot of time on late season LE at the Coos Bay meeting. This is a very long-term measure, not something we need to decide for next year. So we can spend time on it, but that doesn't leave us with time to discuss the things that will be happening in 2020.
 - All of the things on the list for long-term consideration are things that we have heard from the fleet. Late season LE was something that came out of the OWEWG meetings.
 - *When you decide which measures will be implemented, are you going to mail the survey to all permit holders? There are some people that are fishing all summer and can't attend meetings.*
 - Needs to be addressed later.

Target implementation Apr/May 2020

- 1. Which primary whale entanglement risk reduction measure do you support? Why?**
 - 2. What month do you support implementing risk reduction measures? Why?**
 - 3. What % reduction of pots do you support? Why?**
- Estimated pots and ex-vessel value by month (2014-15 through 2018-19)

- *So isn't that skewed since we haven't fished December and January in the last few years?*
 - I've highlighted the opening dates for each year to point out why the trend is shifted by a month or two in those years.
- "Late season" pot limit reduction – estimated number of pots under current pot limits vs. 30% reduction vs. flat 200 pot reduction.
- Estimated pots by tier limit and month (three year average) – 500 pot tiers fish earlier and exit earlier, 300 and 200 pot tiers decrease a little but remain relatively consistent throughout the season.
- *So we're talking about reducing pots even more than we already have?*
 - Yes, because we're entangling whales.
- *[Referencing entangled whale observed in October 2015] Observation was in 2015 but it was entangled in 2011-12, so this is a derelict gear issue, not a need for reduction. Taking away our season shouldn't even be on the list. Port Orford is going to die if you take away April/May/June. The numbers are there.*
 - *All of the small boat fleet is going to have this problem. And it's not just the fishermen but all of the people that support or are connected to that industry.*
 - *The ocean is changing, we need to have flexibility and support the small boats who are maybe doing it right. Why are we taking the brunt of this?*
 - The season closure has support from some members of the crab fishery, that's why it's on the list. As does the percent reduction. We understand there are people who do not support it, so tell us about that.
 - *Gear innovation.*
 - Tell us when there is a viable gear option.
 - *The pot reduction issue is a slippery slope. I've dealt with CBD since 2003. When they see something that you're willing to do, they see that and go after that. If we are willing to admit that is our best mitigation measure and then we have an entanglement in winter, they will push for reductions during that time.*
 - The question is, what are they going to do if we don't do anything?
 - *Gear innovation. We can't throw anything out today, but we all need to work together. In other fisheries, we have managed to do this with gear modifications. We will have to have triggers (e.g., depth restrictions) but we've been able to avoid that for the most part.*
 - *You said you have support for the pot reduction. How many are participants in the summer fishery?*
 - I don't have numbers, but it's not none. There are people in the industry who are freaked out about what CBD will do instead and support 30%, or even 50%. Doing nothing is not an option, so what else do we do. We have a whole bunch of things and none of them look great.
 - *I'm speaking as a rep of the Oregon Coast Crab Association. We do not want a lawsuit. We don't want to demonize ODFW. We want to work together, but are adamantly opposed to a reduction of pots/gear. What we want to see is gear modification that keeps our gear on the water so we can fish and make a proactive strategy to reduce whale entanglements. Also, the late season LE program was a recommendation of the OWEWG but for the second week of June, not for April/May.*
 - *The survey that was sent out was also presented that way.*
 - And to that point, it doesn't say anything about April/May/June. That will be part of the design which has not been decided.
 - *But by stepping into this April framework, aren't we setting that up?*
 - No, only for the three viable short-term measures that are ready to put on the water in February.
 - *I don't see anyone in here supporting that.*
 - I think we have a better chance solving this problem ourselves, than letting CBD do it.

- *We don't have a letter of intent from CBD, so we are not under that pressure. Gear modification for mitigation could go into effect this spring. There are some small ideas that the fleet could implement in 2020.*
 - *In this meeting, we have been reprimanded in some way for not having an ITP. We have to have something in that plan that NMFS will say "yes that will reduce whales". If we don't have that, we won't get that permit.*
- *For line reduction, do we have a number we're trying to get to?*
 - *No, but we need to reduce risk..*
 - *The reason we have had more fishing later in the season is because of delayed season openings. So are we chasing the wrong thing. Should we be focusing on how to get out on the water sooner?*
 - *Yes, remember the Tri-state discussion of changing meat quality criteria to 24%.*
 - *The other issue is domoic acid. We need to educate people – the public and industry – that evisceration is not an evil thing.*
 - *We're the only state that can open under an evisceration order.*
 - *When evisceration is enacted, we lose that live market. ODFW needs to communicate to the public that evisceration isn't bad. Just advertise "Don't eat the buttholes this week".*
 - *The biotoxin piece is controlled by ODA (with levels from FDA). And your point is taken about educating the public.*
 - *Evisceration is normally not required coastwide. So if the live market is that important, people can go to those places and buy the crab. We wait and wait and then can't catch crab. My opinion - I think some of our crab went north, south, or offshore.*
- *Discussion of pingers – The P has been presented as the management measure vehicle that will implement these risk reduction measures. But really it's a management measure toolbox, and one of the tools is the 1/3 pot reduction. We aren't so sure that it will reduce the risk of entanglement but we are sure that it will reduce income, so in my opinion it should be plan C or D. I think we should adopt WA's taut line regulation – experts believe that's an effective measure. Ropeless gear is a current modification being tested in CA with a 100% failure rate. So, I want to tee up this other tool – acoustic pingers are used in Alaska and British Columbia, Australia, South Africa, Ecuador. Originally 12 kHz to deter dolphins [but these other pingers are designed to be in the hearing range of humpback whales]. They also ping location data continuously, so you can quantify the effectiveness (or ineffectiveness) of these. Requiring, say, 1 out of every 3 pots to need one. That would be a good start and then you could continue that on the next year. The idea is to avoid risk reduction measures that will also reduce income.*
 - *What is the expense?*
 - *About \$45/ea*
 - *Lifespan?*
 - *There are a couple of battery options that have different prices. One lasts for one year, and one lasts for two years.*
 - *They are fairly hardy (tested in longline fishery). And we may be able to find money for implementation.*
 - *There is some pushback from NMFS about noise pollution that could "harass" the whales and qualify as take under the MMPA. I'm pushing for testing in the near-term because what is the worst that could happen. They don't have the potential to increase interactions, but they could decrease them.*
 - *Would you put that on the buoy or where?*
 - *The sound reaches 100m, so whether you put it on the line or pot would depend on depth. It seems like a lot of the entanglements have surface gear on them, so it might make sense to put them closer to the surface.*

- They emit sound for at least 50 fathoms.
- Pilot programs are a yes. Some sort of fishermen gear innovation group with the Association is on our list to start soon. Clint and I have a disagreement, I don't think it's [gear technology] ready, so we need to work that out. But we are committed to working on gear innovation ideas and support gear innovation.
- *Has any testing been done to say that the frequency will deter a whale?*
 - *Or a crab?*
 - *Yes. They were made mandatory (Take Reduction Plan) in 1997 for cetacean bycatch in the drift gillnet fishery in CA and it also happened to reduce whale interactions, so they tried to make a whale-specific pinger. So this is relatively new. They [the whale-specific pinger] haven't been fully tested, but the quieter ones have been successful at deterring whales.*
 - *In Australia, they have shark nets to keep sharks out of surfing areas, and they had some whale entanglements as well. So, they put pingers on the nets to deter them and they have reduced whale entanglements (and that was not the whale-specific ones).*
- *At what decibel does that become noise pollution?*
 - *That would have to be tested.*
- We can talk about pingers. But NMFS has told us that they have concerns about pingers. And so that is why we don't believe it is ready for implementation in February and we want to try to go down a path (at this meeting) that is effective for February.
 - *So it is on us to prove otherwise (the pingers) to NMFS.*
- *Is it an option to think about the longlining pots in the spring?*
 - Longlining has potential, but not by February. Because there are a lot of reasons why longlining is currently illegal in the fishery. We can't dismiss enforcement concerns.
- *These guys might have ideas about mitigating the risk of whale entanglement, but anything that they have said is not going to work for the February deadline. So these (the three risk reduction measure "buckets") are the only options?*
- *If the fishery closes on April 1, I'm going to take chances that I don't normally take. This fishery is already really dangerous. People are going to take chances and it is going to be a safety issue. People are going to be trying to make a season in a couple of months. What if we open in February? That lease us with a two month season.*
 - That was a big weakness of the intermission option.
 - *It's an issue for all three.*
- So what we're trying to figure out: Which primary whale entanglement risk reduction measure do you support? And I know the following questions (e.g., month of implementation) matter for that question.
- *So are you saying a 30% is the minimum reduction that you feel is acceptable?*
 - We're trying to figure out where those levels are, so that we can still have a fishery.
- *So you're getting guidance from NMFS saying that the only acceptable option is reduction in gear?*
 - We are getting guidance that it has to have a meaningful impact on risk reduction.
 - *What about a depth restriction?*
 - That is what the whale distribution study is all about. Being able to show what will have a meaningful impact.
 - *Is there a time of year when a depth restriction would be more effective?*
 - That's what this study is trying to figure out.

- If we have the data from that research, and we can tell NMFS why we are choosing a certain depth at a certain time of year, and then we catch another whale, we don't know what will happen.
- *We are trying to think through other options and are just hearing [from ODFW] that it won't work.*
 - We aren't saying that. But we are telling you about options that have been thought through and what we have heard from NMFS.
- *Questions about the possibility of getting something back if we do a reduction and then come up with other options or we miss the mark in some way. Can we get the 30% back?*
 - It's something we can work on. It needs to be shown to be meaningful (or not).
- We are trying to work with the fleet, not pass out rules.
- *You can get something done in Oregon. In California, it's a two year deal.*
- *The sooner that we produce something they can take to NMFS, the sooner we're in compliance so they don't have a lawsuit.*
- *[In reference to the question about the month for implementing risk reduction] OWEWG was discussing June, not earlier.*
 - We believe entanglement risk is higher in April/May, and NMFS believes that. So if you wait until June, we have missed that time.
- *Derelict gear clean-up throughout the season? Maybe it's not active gear, its derelict gear. It could be done just like the post-season, where the retriever gets to keep the gear. Then more people will pick it up.*
 - We have that as a draft recommendation for implementation in December 2020.
- *I don't think the intermission should be thrown out.*
 - We've heard a lot of safety concerns.
 - *If we had three weeks of truly bad weather, would you come down and write tickets if we couldn't get our gear out? [to OSP officer]*
 - [OSP] Have any of you gotten tickets for that? *No.* There's your answer.

Target implementation Dec 2020

4. **Initiate "late season" derelict gear removal program, incentivized by allowing ownership of retrieved pots**
5. **Eliminate replacement tags**
 - Showed graphs of replacement tags issues by month over the last three years.
6. **Require line marking** – showed WA's proposal – intended to differentiate between fisheries
 - *What does the mark have to be made with?*
 - It can be marked in any way, they are just specifying mark length and color (and location).
 - **Marks per line?**
 - **Minimum size of marks?**
 - **Color of marks?**
 - **Location of marks?**
 - **Other considerations?**
7. **Define Best Practices**
 - Define maximum line length and number of trailer buoys allowed for use in surface gear (new CA reg)
 - Requires lines to be taut (new WA reg under consideration)
 - *We yell at people all the time about these.*
 - This would make it enforceable.
 - *We would need numbers assigned to it.*

- That's great input.
- Others?
 - *Has NMFS said they support these?*
 - They think these will help, but they will not be enough as risk reduction measures.
 - *What about a Tri-state buyback and permit stacking?*
 - It's on the list for long-term consideration. It would be able to have a reduction on it, so if you have two 500 pot tier permits, you get 700.
 - *I've heard of other fisheries where you retain 50% of the second permit if they're stacked.*
 - If we were to design a permit stacking program, we would think about all of that – what's reasonable? What's done in other fisheries? Etc. There is no constraint on that.

E. Long term measures to reduce risk of whale entanglements

- *Why [on the longlining] did you limit it to 2 pots?*
 - It's a question of the severity of the entanglement. Which is worse for the whale, an entanglement with two pots or with 40?
 - *What's the effect when you put a line between two pots? Does that entangle whales?*
 - That's a big question.
 - *I don't see it as an enforcement issue, but it's the entanglement question.*
 - How much line do you need between pots to effectively fish?
 - *30 fathoms (with black cod)*
 - *300-500 feet?*
 - *You would look at the space between crab pots today, and figure out how much line you need to string them together.*
 - NMFS firmly believes that it's vertical lines that are the problem. But on the East Coast they've had problems with groundlines too. It's probably less of an issue (for humpbacks), but how much less? And it also could be an issue for gray whales that feed near the floor.

Astoria – Holiday Inn Express

Oct. 22, 1PM-4PM

Attendance (from sign-in sheet): Dale Adams, Mike Allen, Matt Batier, Brian Boudreau, Richard Brown, Robert Browning, Jeff Burns, Chester Bushnell, Kei Buxley, Neil Carlson, Joseph Conchelos, Nick Diede, Emily Dunn, Paul Duvall, Jon Englund, Jake Erickson, Clint Funderburg, Curtis Gann, Al Gann, Sheila Garber, Jon Gonzalez, Lance Gray, Heather Hall, John W. Hankins, Doug Heater, Cary Johnson, Robert Johnson, Sam Juliussen, John King, Victoria Knorr, Hugh Link, Bryan McHale, Darrin Mosley, Gary Motsinger, Tim Novotny, Melissa Ora, Brian Petersen, Shane Reeves, Rob Seitz, James Seitz, Mike Shilley, Hank Slavens, Christa Svensson, Kaleb Thoreson, Karl Travenshek, Seth Whitsett

F. Welcome

- Opens meeting with introductions (name and affiliation); defines issue and purpose of the meeting
- We want whales and fisheries to co-exist. We may have different motivations for doing this (e.g., it's the right thing to do, ESA mandate, public perception/marketing of product), but we all collectively want to address this issue.
- Overview of CA settlement as legal precedent for what the states are responsible for addressing
 - 2019: Season closed April 15 (statewide)
 - 2020: Season closed April 1 (south of Tri-state area); RAMP risk assessment (bi-monthly meetings of Whale Working Group), district-wide closure is 1 ESA-listed whale entanglement in CA crab gear or 2 ESA-listed entanglements in unidentified gear, or an aggregation of 20 ESA-listed whales.
 - 2021: Season closed April 1 (south of Tri-state area), except for to ropeless gear

G. Whale Entanglement Background Information

- Outlook on whale entanglements along the U.S. West Coast (NMFS)
 - Echo sentiments that Caren expressed; hoping to serve as an advisor in a collaborative process that works for everyone
 - New territory for us and we're all figuring out how we're going to work through this; we may not have all the answers today
 - West Coast whale entanglements – dramatic increase in reports since 2014; thought to be the result of a complex interaction of factors (e.g., whale behavior, environmental conditions, public awareness); driven by humpbacks and recent addition of blue whales
 - Detection/reporting rate is going up, but we are also confident that more whales are being entangled.
 - Until 2015, whale entanglement data would go through the assessment process and then show up several years later in a stock assessment. Now, the dissemination of information is changing with more demand for the entanglement data. Also, there has been an increase in NMFS collaboration with others (including industry) to collect data.
 - Entanglements have been confirmed in Oregon Dungeness crab gear.
 - We are able to identify the origin of the gear in roughly half of all observed entanglements.
 - It's a difficult problem to put boundaries around because whales span state and national borders.
 - NMFS assessment process is a rigorous process; reports are really preliminary until they have gone through a review (and re-review) process; they remain "live" until no new information is available.
 - Vast majority of entanglement cases now come with photo/video documentation (due to the prevalence of technology).
 - If there is any question about the origin of the gear (i.e., fishery), it is considered "unidentified". It is only attributed to a fishery if there is no question about it.

- NMFS provides information periodically (e.g., bi-monthly, quarterly) because there is high demand for it, but they prefer to wait until it has been thoroughly evaluated because those numbers can change.
- Management under the MMPA – “Serious injury” means that there is a > 50% chance of death; in the last ~10 years, the estimated SI/M rate is ~70% (generally from constricting wraps); PBR for CA/OR/WA humpback whales is 16.7 seriously injured or killed per year. CA/OR/WA humpback entanglements alone are in excess of PBR.
- Management under the ESA – All entanglements (i.e., take) is prohibited without authorization.
- A permit under ESA Section 10 permits a low level of incidental take of ESA-listed species during state/private actions. The application process involves development of a [Habitat] Conservation Plan.
 - While there is a somewhat extensive section 10 permit history for salmon, NMFS has never issued (or been approached to issue) a section 10 permit for marine mammals.
 - Not only are we dealing with the ESA, there are tiebacks to the MMPA. So this is new territory for everyone.
 - This is not a quick process. The applicant (i.e., the state) has control of what they want to do and when they want to do it.
 - Fundamental Conservation Plan elements/permitting steps: measure to minimize impacts to the extent practicable, monitoring, NEPA (evaluate alternative actions the applicant considered and why they are not being utilized), compliance with ESA jeopardy standard (i.e., are we going to decrease the likelihood of survival/recovery of the species?) including a Biological Opinion, MMPA compliance (Negligible Impact Determination, current guidance is 10% PBR for individual fishery, MMPA tends to be very specific about this unlike the “measures to minimize impacts to the extent practicable” which is not clearly defined), stakeholder and public engagement.
 - PBR is a very live process. Last PBR was 11, now it is 16.7.
 - NID will also change through a re-evaluation process, but hopefully the permit will be able to stay intact as that piece (i.e., the NID) changes.
 - Key challenges and needs
 - The state will need resources for their piece, but NMFS will also need resources to accommodate the 3 ITP applications that they will be receiving around the same time.
 - The three states don’t have to all include the same measures, but we want to be consistent and equitable so similarities will ease the evaluation process. NMFS recognizes that the issue and needs are different across states.
 - Evaluation of the effectiveness of the measures will be difficult, and so flexibility will need to be an element of everyone’s plans.
 - Scientific support needed (from the NMFS perspective) – dynamics of whales/fishing/environment and how that is all interacting to contribute to entanglements, risk assessment, socioeconomics, forensic analysis, photo ID/scarring, population assessment.
- *In the event that we entangle a whale and it is released alive, it counts as 0.7 of one whale if an ITP is in place?*
 - Not necessarily. The SI/M evaluation will not happen until two years (very formal process) after. It will count as an entanglement against your permit, but your permit will also have some SI/M level. I don’t know how we will deal with that in real time. It may be zero (it may count as nothing), but we won’t know that in real time. I imagine the permits will keep track of both in some way (total entanglements and what it’s expecting in terms of SI/M). That is an issue that we haven’t figured out how it will work.
- *Who is doing the evaluation for the SI/M?*
 - Southwest Fisheries Science Center. There are national guidelines/criteria that are established by marine mammal scientists and updated over time as data comes in to support

what that score should be. Those criteria are all available. There is an annual report that is an update for the most recent five years of all the SI/M determinations for all marine mammals. By nature, they are conservative.

- *There has been a lot of emphasis (time and money) on these take permits. From a fishermen's level, what is going to change with a permit from what we have today?*
 - Obviously whatever measures are implemented as a part of that plan, so we don't know the shape of those. But other than that, you'll go fishing,
 - One is that we will be ESA-compliant, which we aren't now. The plan will lay out a roadmap for what we will do if we run into trouble (i.e., if something doesn't work, this is what we will try next). So it will give ODFW and industry a roadmap for problem solving. Which means, that it will be more black and white on what we have to do, but at least we will all be working from the same playbook.
 - Closing the door for litigation (like CA) will be the ultimate benefit. You will have control over those things.
- *What happens to a permit holder if a whale is entangled in their gear?*
 - First, the permit holder will be the state of Oregon. So presumably, if you are doing things that are allowed under the permit, you aren't personally liable. The whole point of the permit is to allow for some level specified by the permit, so as long as the state is under that level it is permitted.
- *So how is it different from the MMPA permit?*
 - That is specific just to the MMPA and comes from the whole category 1, 2, 3 thing... All that does is cover the fishery under the MMPA which is all null and void relative to ESA or overlap between MMPA/ESA.
- *So this is similar to the Forest Practices Act?*
 - Exactly.
- *So, it seems like it should be fairly easy to get a permit with relatively few whale entanglements here in Oregon?*
 - We have one per year if you average it all out for ESA-listed entanglements in recent years. That is really close to the NID, and we have to take into consideration all of the ones that are unidentified as well.
- *Similarities to incidental take of ESA listed salmonids on the Columbia River?*
 - *I think public perception of the incidental take of salmon species is totally different than public perception of the incidental take of whales.*
- *How do we compare with cruise ships and cargo ships? Don't they take more whales than we do?*
 - First, ship strikes are important. But second, it doesn't matter for addressing the fishery's role in contributing to the problem.
 - We have more entanglements reported each year, by a fair amount, than ship strikes. We have had scientists make estimates of total ship strikes that would leap frog them in front of entanglements, but similar estimates haven't been made for entanglements. But I don't think that's an estimate that you want to be made, because the answer may not be good for you.
- *At what point, would the Mexican DPS be de-listed? I've heard the humpback recovery plan is dated (from 2015) and that a recovery number isn't available. Is there an ETA for that?*
 - I don't have that number. Critical habitat proposals were just released. I would anticipate that recovery plans will be next, but it won't be next year. However, there will be a status review (without a recovery plan being issued). It should happen fairly regularly (about every 5 years). If we continue to see the humpback population improve and we see steps to minimize threats, it will be a factor in determining that we can pull back on that listing.
 - *The last five year status review was in 2015, so you're coming right up on that five year update, right?*
 - Yes.

- *Do we know that all of the entanglements in Oregon gear are not from that Hawaiian DPS?*
 - At the time that the DPS were determined, there were very few whales from the Hawaiian DPS south of the Columbia River (maybe not absolutely none). If there were any, it would be a very, very small number. However, there has been a huge increase in the [genetic] data collected on who is who, and where they go. It should be coming out soon (maybe in the next year or so).
- [Clarification] As part of the ITP process, even if we are under the NID, we are going to have to do something to demonstrate measures to mitigate risk.
- Oregon's response – timeframe and actions (2:20 pm)
 - Risk assessment – present day and future
 - Conservation plan
 - Conservation measures implemented before and during the process (including the work done today) are part of the plan.
 - *One of the biggest reasons that we implemented logbooks, was anticipating the whale entanglement issue. The logbooks are an important factor in determining how much gear is at, and at what time.*
 - *Has ODFW begun looking at triggers and consequences of one, two, or three interactions as you develop the HCP? Is that part of your thinking now or is it more down the road?*
 - All of the information we're gathering today is to help inform us of what consequences we want to put in the plan. So yes, all the information today will help us inform that and determine which measures will be effective for whales and acceptable to industry.
 - All of the management measures (and other forms of those measures) are being thought of in terms of how it could be used in an adaptive way (as a primary measure, or adaptively).

H. Oregon Whale Distribution Study (Sea Grant, 2:45 pm)

- Purpose, objectives, funding, methods, future plans
- Project started in February 2019, conducted 29 surveys, observed 11 different species of marine mammals, recorded 125 sightings of 410 individual animals
 - Humpbacks were the most commonly seen whale
 - Relatively short-term dataset
- Citizen science component to ground truth the predicative models (developed from aerial surveys)
 - Account for variation in observer skill level by collecting a lot of data because then patterns will still emerge.
 - Other fishermen felt this research was important (OWEWG identified this information gap, ODCC helped to fund it), fishermen have unique access to a range of habitats
- Overview of potential concerns

I. Short term measures to reduce risk of whale entanglements in Dungeness crab gear

- Overview of phase II management measures

Target implementation Apr/May 2020

- 2. Which primary whale entanglement risk reduction measure do you support? Why?**
- 8. What month do you support implementing risk reduction measures? Why?**
- 9. What % reduction of pots do you support? Why?**

- Estimated pots and ex-vessel value by month (2014-15 through 2018-19)
- Estimated pots by month under the current pot limits vs. 30% reduction vs. flat 200 pot reduction
- Estimated pots by month by pot tier (average over the last 3 seasons)

- *If all the pot limits were reduced to 200 (though a lot of people will tell you that's not fair), would there be a consideration to be able to temporarily transfer permits to a smaller vessel to make it economically viable for people with 500 pot permits?*
 - We don't have that ability now, but it is something that could be considered.
 - *As it is now, it is definitely not fair to people that have a greater capital investment. If you have a larger boat, you can't afford to fish 200 pots.*
- *The aerial survey shows that the whales weren't at shallow depths, so why should the fishermen that are fishing in shallow water be affected. Wouldn't it be more effective to move the gear in?*
 - We don't want to concentrate the gear in an area where, if the whales change their behavior, the whales may be feeding closer to shore. That is a common question.
 - *Historically, the whales don't go there so we would be having the biggest effect by moving the gear in.*
 - One more factor to consider is that we do see entanglements with gray whales, and while it doesn't have the same legal implications, if we concentrate gear in shallower waters where the gray whales are, it could contribute to the public perception issue.
 - We hope that depth can become a part of our solution moving forward, but we don't know how to design it at this time.
- *I urge that we consider gear modification and training for fishermen as mitigation measures, because these other options do create safety issues. We're in a derby fishery and any of these scenarios will push fishermen to do stupid stuff.*
 - *You're taking away the option for a fisherman to not take a risk.*
- *Discussion of pingers. I think these [gear reduction measures] are blunt and their ability to reduce risk is speculative. Reducing lines in the water doesn't necessarily reduce risk if that gear is not being fished effectively/responsibly. Taut lines is an effective first step. California was locked into an early closure because of a settlement, and Oregon is not in the same boat as California. It [reduced gear/season] could have a lot of impact (economic and safety). Ropeless gear is being called "hopeless gear". The point of these meeting is to think outside of the box while this HCP is being put together. We have time to get this right. A reduction in pots sets us down a serious road where the only option if we have an entanglement is to further reduce pots. Pingers are being used in shark nets in Queensland, Australia. Not only does it reduce whale interactions, it has a green LED light to reduce interactions with sea turtles. Also, it could provide GPS information to verify fishing effort (logbook) data. Hopefully, it will still allow you to fish while reducing risk. Full disclosure - there is some fear/apprehension about this creating a wall of sound that could harass the whales by creating a barrier to migration. I'd like to see the industry/management work towards a pilot program to test pingers in the fishery. That, coupled with pragmatic gear requirements, could work to reduce risk without setting a dangerous precedent.*
 - *3 sea turtles entangled (20 years ago) in Washington*
 - *They've tried a lot of pingers in Alaska (gillnet fishery) and it was seemingly ineffective. They were expensive, but a grant was available for testing. There may have been an issue with them being harmful. It's a cautionary tale.*
 - *It's very complicated. I do think it is well within the boundaries of reason to think about applying for a scientific permit to test these things out. It would be the most appropriate thing to do, actually learn whether or not it is effective. And try to document what our collateral impact is to other species. What I know about pingers, with respect to whales, is that they have been seen to be relatively ineffective with whales. It's unproven, at this time. Even if it's successful, scaling it up (and not just in Oregon, but coastwide) would be a challenge from the NMFS-perspective. The problem here warrants out-of-the-box thinking, but we have to think about the (unknown) collateral impact.*
 - *If the path is an experimental permit, we can come up with an experimental design. We'd want to pull in people like Leigh Torres and come up with methods. That is something we can do.*

- *It seems like we have an obligation to at least test it, with so much on the line.*
- Fran Recht may be a resource. She had funding for two years for gear innovation testing and no one took her up on it. First hurdle is coming up with a design to test it, and then money will be the second hurdle.
- Even if you don't use the pinger, you have the locator which can show that the gear is moving [on a whale] and maybe there's an issue that we need to look into.
- *California did not set a legal precedent. It was a settlement between the state of California, the Center for Biological Diversity, and a representative for the fishermen (who was not the best person for the job). We [the Oregon Coast Crab Association] are adamantly opposed to gear out of the water, and to season closures or intermissions. We believe we can mitigate this issue through gear modifications, given that we have such a small number of entanglements. We can bring that risk down even more through gear modification, self-policing, and fishermen education.*
 - *That being said, a large concern of ours, with setting a precedent for pot reduction (maybe that is a trigger in the ITP), is having that twisted and used against us.*
- We haven't really focused on where the other states are. Brad Pettinger was at the Brookings meeting and made a strong statement about where we want to be relative to the other state's fisheries. The point is, that we don't want to get the intent to sue letter from CBD. We don't want to get in a situation where the end is not in our control. We have the common ground, and need to figure out how to make a meaningful difference to make it better for the whales and have a future for the fishery.
- *Why are these the only three options? [the risk reduction measures]*
 - These are the three things that we have confidence will make a meaningful difference. These are up here because the agency firmly believes that the more lines we have in the water, the more risk of entanglement we have.
 - *Oregon needs to get in gear and get the ITP in place. The state needs to get a move on, and not take it out on the fishermen.*
 - We have committed to that process and we have been met with a lot of resistance. The only way we will be successful with our application is if we put measures in place to reduce risk and these are the measures we want feedback on today.
- *You feel that it's necessary to show implementation of something to potentially reduce entanglement risk to get that permit?*
 - Yes. If we don't show that, we don't have a chance of applying for the permit. We won't be successful.
- *It seems like there should be more research involved. Maybe a colored line based on where (i.e., what depth) you are fishing at. We need to pinpoint where the issue lies, and then we can figuring out where the problem is mostly happening. I would feel a lot better moving forward with something, knowing where the problem lies.*
- *The problem is that we are feeling a sense of urgency because of what happened in California. We feel like we need to do something, or appear to do something, because there is a chance that we could face a lawsuit and end up with something like them (or worse).*
- *If we do something, how do we ensure CBD won't still come after us?*
 - Our only goal is not to get CBD off of us. Our goal is to solve this for our kids, for the public who buys/eats the crab, etc.
 - CBD sued California over not having the ITP in place. Part of the permit application has to be mitigation measures to reduce impacts to the maximum extent practicable.
- *We should clarify that they didn't lose, they settled.*
 - They settled because they were going to lose.
 - *That's speculative.*
- The only way we are going to get the ITP, is to make a meaningful reduction in risk. If we make that reduction, the news story will come up less often and public perception will not be affected by this.

- *We would like to see risk mitigation by changing the way we fish (i.e., gear modification), not by losing gear/season.*
- *Gear modification doesn't have to be long-term. We can do things that can be implemented this season, and we deserve a chance to try.*
 - *We should all remember that generally when there is a pot reduction, your crab per pot average will go up because you have less competition for bait, etc. Unless you're in a situation that I haven't been in in years, where your pots are so stuffed, another one can't climb in.*
- *How fast is the whale population growing?*
 - *The trend in the Central American and Mexican populations is undetermined. Their populations are not big enough. They may be stable or may be growing a little bit, but for them to not be an ESA issue, that is decades down the line.*
 - *We keep track of the whales that we can count off the coast. We don't have surveys on the breeding grounds to track DPSs (Mexico and Central America) so it makes it hard to give a specific answer on that.*
- *If other countries aren't doing anything, why should we?*
 - *We don't have that in our control. We can only work on our piece of the problem. You'll have to talk to congressional representatives about international fisheries management diplomacy for that.*
- *When was the humpback population broken into DPSs?*
 - 2016
 - *Do we have a baseline number for when they were at healthy levels?*
 - *My recollection is that we didn't have historical information about when they were at healthy levels. We have more recent information. I expect that to change, it's such a critical piece of information. I would anticipate our agency working to get more information.*
 - *The aerial study will contribute a lot of good information, maybe not answer every question, but help inform DPSs.*
- *What tangible measures can we give them [ODFW] to take to the Commission? We can't just tell them what we hope to do. If we want them to get going, we have to give them something.*
 - *We [the Association] are putting a proposal together, but we need to run that by other members before its ready. We'll be giving it to you tomorrow, before the Newport meeting. It will touch on a taut line (maybe with a sinking/neutral line of the top 15 fathoms), number of buoys inside and outside of certain depths, lengths of trailer lines, an education program (similar to the one put into effect in the Hawaii longline fishery), some pinger stuff, etc.*
 - *We have faced this scenario before in pelagic longline fisheries and we were able to use a gear modification package to do this.*

Target implementation Dec 2020

10. Initiate “late season” derelict gear removal program, incentivized by allowing ownership of retrieved pots

- *I like the idea [derelict gear program] during the intermission, but I don't like it while fishing is going on. There would be too much temptation for people to remove tags and steal gear.*
 - *In our current post-season program, we have the potential for guys with “undue hardship” to have a process for getting their gear back. We could potentially have a broader exemption for people applying for summer tags. And only people who don't have a late season tag, could have their gear retrieved.*
 - *Once you declare out, your pots would be subject to recovery under this kind of program. That's the idea that we're thinking about to address that.*

- *On your late season tags, will they have the boat name? And how will you decide how many tags to print? Do people need to declare intent?*
 - We don't think it would have the boat name, it would have the season attached to it and you would be assigned a series (you would get 0 to 210, the next boat would get 211 to ____).
- *[Discussion of lag time in getting tags printed]*
- *How do we deal with someone who has a small boat and can only stack out 10-20 pots at a time?*
 - Right now we have one time retrieval waivers. We could potentially think about a similar measure with an allowance for a one time retrieval waiver to get assistance if you can't get them out on your own.
- The question here, do you want us to try and incentivize an in-season derelict gear program so that you can keep the pot?
 - *[Lots of NO's]*
 - There is more incentive than there has ever been to get derelict gear out of the water. Because every piece of derelict gear has the potential to entangle a whale.

11. Eliminate replacement tags

- *Is there a comparison to see how much gear would be removed if we stopped dual permitting?*
 - We haven't done analysis to see what that would look like. We have a coastwide pot limit listed as a measure for long-term consideration.
 - We also have to consider that if we eliminate the option to be dual permitted, that person will sell that permit and someone else will fish it so it won't necessarily result in less gear being fished.
- *You have pretty high numbers there [replacement tags], but a lot of those are probably not even being fished.*
- *In the past there have been issues regarding some ODFW licensing staff encouraging applying for 10% regardless if that many pots were lost*
 - This has been addressed and is no longer the case.
- *If we choose one of these choices, and then down the road we find another option or there is information on changing whale behavior, what options do we have to change things?*
 - One of the advantages to acting now is that we have the ability to build in adaptive measures that have a meaning impact. But if we don't use that flexibility, then we lose that ability.
- *There is potentially an issue with derelict gear pot retrieval OAR language regarding where that information is required, either in vessel logbook vs. crab logbook. The rule specifically states "vessel logbook".*
 - We do have a place in the crab logbook. The intent is for that information to be in the crab logbook.
 - *[Discussed with Todd Thompson (OSP) after meeting]*

12. Require line marking

- **Marks per line?**
 - **Minimum size of marks?**
 - **Color of marks?**
 - **Location of marks?**
 - **Other considerations?**
- [WDFW] Line-marking has received the most comments out of any of our rule changes. This rule would get us out of the gate, and then we can refine the language. We don't specify how the line would have to be marked. Initially, in our proposed rules, we said it would be in place as soon as the rule is effective (recommended May 1, aligned with summer tags and reduce pot limits), but there has been some public comment to delay line marking until next season.

- [Summary of WA 2020 package] Reduced pot limits from 500 to 330 and 300 to 200; summer buoy tags required (ordered with consecutive numbers and ‘WDFW’ so they can be used even if rule isn’t adopted), eliminated one replacement tag period (so it’s reduced, but not completely eliminated), taut lines best practice specified in rule (not specifying length, just “amount of line necessary to keep your line taut and vertical”), and a couple of other housekeeping measures.
- *What’s the purpose of the colored line?*
 - Speaks to the gear marking issue and the unattributed entanglements.
- *From a gear vendor perspective, the marking of the line is probably the easiest thing you will have to deal with. We can get pretty much any color rope you want, twine, etc. and the cost isn’t really that much compared to the other costs. The labor will be intensive, but the gear marking part won’t be a big deal compared to the other issues. That being said, it has to be more specific (based on numerous conversations with WA fishermen). It needs to be definite and specific to accomplish that goal.*
- *Many of us already put a tracer in our line to tell us when the lines coming up. That is something that could be implemented in-season. I don’t understand why simple things like this are considered “long-term” measures.*
 - *[Disagreement about the amount of time/difficulty of weaving a tracer into lines]*
- *I’m a dual permit holder. If you’re going to implement a gear marking requirement, I would ask that you make it consistent with WA. A different color is fine, but keep it at the same place on the line (within one fathom of top/bottom). I’m leaning towards the twine, so it can be pulled out and re-threaded between states.*
- *I’ve heard concerns [from WA fishermen] about whether or not spray paint would work. Other folks preferred twine but it was labor-intensive. If it does go the route of twine, whatever colors are more readily available at supply houses will be more cost-effective, and so it doesn’t have to be special ordered. So it’s not as simple as folks might think and may take some time to determine and implement.*
- *I’d like to caution everyone about adopting rules before anything has been tested.*
 - If we wait three years, where are we going to be?
 - Part of the aerial survey research, is to make more targeted management measures that are effective where the whales actually are.
- *I disagree that these particular measures are the only options that can get us an ITP.*
 - Approval authority sits with NMFS.
- *The whale population is growing and so our entanglements are growing, and social media is allowing everyone to take a picture (changing observation rates). There is no possible way to keep up with that. You’re saying that we have to take these great steps to apply for a permit that no one has ever applied for before.*
 - We can wait and something will happen (in CA that was a lawsuit), or we can take steps now.
- *Isn’t there some back and forth (between NMFS and the state/applicant) built into the ITP process?*
 - Yes, but that roadmap (plan B and C) will be built into the plan and it will include triggers. But we need to have something to start with.
- *Just because you don’t think that something is meaningful, doesn’t mean it won’t work. [Description of fishermen-led bird mitigation in the longline fishery – “bird lines” move gear 9 feet off the stern, instead of dropping off the back of the boat]. Little things like that can make a huge difference.*
 - Those measures had to be tested and proven effective. Also, another factor is that those fisheries are federally-managed fisheries and this is a state-managed fishery.
 - [Discussion of East Coast issues – talking and had tentative agreements to implement some substantial changes in the amount of lines]. They have been working on gear innovation for 20 years and haven’t come up with anything. It doesn’t mean that it won’t work at some point, but it hasn’t worked. All of these best practices help a little bit.
- *Is data on the amount of line from the confirmed entanglements available?*
 - For very few, but sometimes.

- [Description of forensic workshop] The NMFS team put together an evaluation (~50 different questions – amount of line, type of line, color of line, etc.), scored it all (most of it we couldn't answer), convened a workshop with fishermen, gear experts, disentanglement experts, state managers, etc. We discussed what we knew and didn't know about the forensics of disentanglements. So that is where we left off, a report is available summarizing that workshop (PSMFC has that). We would like to do more of this stuff.
- *What constitutes a confirmed entanglement? Is NMFS relying on citizen science if someone calls and it's explained in enough detail?*
 - It is possible for us to get enough information from anyone, but it would have to be very convincing that they knew what they were talking about and what they saw. But that isn't a big part of how we get confirmed entanglements now. Historically, that is what we got. But now we have a lot of photo/video documentation coming our way.
 - *What's to stop someone from calling in and giving enough detail to confirm an entanglement?*
 - That would not be attributable to a specific fishery.

Newport – Shilo Inn

Oct. 23, 1PM-4PM

<https://global.gotomeeting.com/join/674224637>

For phone audio call 1-408-650-3123 and access code 674-224-637

Attendance (from sign-in sheet): Laura Anderson, Sandra Anderson, Robert Anthony, Clay Archambault, Orion Ashdown, Bob Aue, Matt Baker, Ryan Barrett, Dan Barrett, Clint Beasley, David Berry, Jerry Biddinger, Cari Brandberg, Aaron Bretz, Charles Busby, Shane Chambers, Cody Chase, Brandon Chestnut, Jeff Chestnut, Joseph Conchelos, Lindsay Davis, David Day, Henry deRonden-Pos, Terry Dillman, Brian Dillo, Robert Eder, Dean Fleck, Clint Funderburg, Rob Gabel, Kent Gibson, Jon Gonzalez, Jim Greenawald, Brett Hearn, Nathan Hoover, Larry Jinks, Mark Kemmish, Brian LaBorde, Kathy Latimer, Jon Law, Gene Law, Jeff Lerch, Tyler Long, Zack Lynch, Kirk Maag, Tina McAlpine, Montana McLeod, Geoffrey M. Molfino, Sterling Morris, Jeff Mulkey, Al Pazar, James Pearce, Michael D. Pettis, Tony Pettis, Quinn Philips, Glenn Phillips, Joy Primrose, Bobby Qweenin, Mike Retherford, Mike Retherford Jr., Gary Ripka, Angela Roman, Chris R. Sample, Sara Skamser, Hank Slavens, Charles Smith, Mike Sorenson, Bob Spelbrink, Amber Taunton, Wiley Thompson, Colleen Weiler, Craig Wenrick, Todd Whaley, Brent Winfield, Michelle Winfield, Richard Wood, Justin Yager

J. Welcome

- Opens meeting
- Overview of past three meetings
- All three have gone over by an hour; Caren will try to officially adjourn today at 5, but will be available as long as there are comments to be made.
- Described Polycom system process
- Introductions (name and affiliation) in the room, and then on the phone
- Acknowledged concerns about where ODFW is at and what it means for the fishery. We're in this room to shape the future of the fishery, not to shut it down.
- Need to design whale entanglement management measures
 - We've experienced 5 years in a row (2014 – 2019) of increased whale entanglements on West Coast
 - Includes Oregon crab gear
 - Includes ESA-listed species
 - The “blob” may be re-forming – it's not the same ocean – species are foraging in different places and at different times of the year, etc.
 - We want whales and fisheries to co-exist – regardless of your frame of reference
 - It's the right thing to do
 - ESA mandate
 - Public perception/marketing of product – as long as we are outside of the law and involved in entanglements
 - “Successful” = protecting the whale and having an economically viable fishery
- Overview of CBD vs. CDFW settlement (March 2019) so that we can understand how this is shaping up in California and so that we can envision a path forward that looks better and has more flexibility for the fleet. The basis of the lawsuit is that CDFW was allowing the fishery to continue out of compliance with the ESA and not taking measures to address it.
 - 2019: Season closed April 15 (statewide)
 - 2020 (or until CP drafted): Season closed April 1 (south of the Tri-state area); RAMP risk assessment (bi-monthly meeting with Whale Working Group); District-wide closure if 1 ESA-listed whale entanglement in CA crab gear or 2 ESA-listed whale entanglements in unidentified gear or an aggregation of 20 ESA-listed whales
 - 2021 (or until ITP issued): Season closed April 1 (south of the Tri-state area), except for to ropeless gear

- This is not meant to fear monger but to show one potential future for Oregon. This is not the future that I want.
- It is up to us to design a fishery that:
 - We can live with economically
 - We can implement effectively on the water (i.e., enforcement, your [crab industry] operations, etc.) – ropeless gear isn't ready to implement
 - We believe makes a difference for whales
 - We can adjust if we learn that we need to make changes
- Problem: We need to remove lines from the water that are getting entangled around whales. There may be questions about how to do that. I believe that as we figure out ways to remove lines from the water where whales occur, we will reduce risk. It may not be a one-to-one relationship, but it will reduce risk. We put out three proposals: % pot reduction, early season closure, season intermission. Those are measures that I believe will reduce the risk of whale entanglements. Other ideas that have real, short-term potential of reducing risk are the things that we want to talk about today. We have a running list of things that we want to talk about for the longer term – things that need more information, more consideration for how it will be implemented or enforced, etc. We can talk about why we think some ideas are ready to go, and why we think some ideas aren't.

K. Whale Entanglement Background Information

- Outlook on whale entanglements along the U.S. West Coast (NMFS, 1:35 pm)
- You can reach out to Dan to talk or to get some answers at any point moving forward.
- This is new territory for NMFS, so I may not have all the answers today. I am trying to figure out the best way to address this, along with all of you, but there has been some great progress so far working with the states and all of you.
- West Coast whale entanglements
 - Dramatic increase in the number of entanglements reported to NMFS
 - There are a number of factors at play. Ultimately, two of the biggest factors are (1) the whales are doing different things which changes the nature of interactions (particularly humpbacks) and (2) the relative rate of detection and reporting has also increased. I am hopeful that some of what we always believed was going on (which was that more entanglements were occurring than were being reported) is now being reflected in better reporting.
 - The state of the issue from a coastwide perspective: Humpback whale entanglements are driving the observed increase, along with a recent emergence of blue whale entanglements. Five years ago or so, we weren't ready from a response point-of-view (i.e., being able to evaluate, collect forensic info, etc.). We have had to reorient the way that we keep up with the situation. Unfortunately, we've gotten a lot of practice in the last few years.
 - The way that we report this back out has also changed. It used to just come out several years later in stock assessment reports, but now there is a lot of demand for this information (largely driven by industry, and now public interest as well).
 - We spend a lot of time re-evaluating and re-examining incoming data. We report it as quickly as NMFS is able to.
- Entanglements confirmed in Oregon Dungeness crab gear
 - Prior to implementation of buoy tags, it was rare that an entanglement could be attributed to a specific fishery. CA began requiring buoy tags in 2013 and that had a big impact on entanglement source identification.
 - We're doing pretty well compared to other areas at identification (of gear/fishery origin), but it's still roughly half of all entanglement. We are hoping to improve that rate.
 - It's worth thinking about the number of entanglements in unidentified gear that are reported in Oregon. We don't have the numbers for that. **{Post-meeting: We didn't have this information as part of the PowerPoint, but the number is available.}**
- NMFS assessment process

- A lot of questions come up about confirmed vs. unconfirmed entanglements. Criteria are established at the national NMFS level and every region uses the same.
 - Photo/video evidence (available for most entanglements today, but not ten years ago)
 - NOAA observation
 - Trusted/professional source
 - Multiple independent reports
 - Detailed/specific information from expert review
- It is possible that a report could come in [from a member of the public] and be specific enough to be confirmed, but we are extremely conservative in attributing to a specific fishery unless we are really certain that is where it's from. If there is any question, it remains unidentified.
- Numbers are subject to change because it is a live process. As we get more information, we may connect the dots (e.g., verify that multiple reports are for the same entanglement) and the numbers will be updated. We're doing that throughout the year and then we produce an annual summary with our accounting of entanglements from the previous year.
 - From there, this information gets evaluated at regional Fishery Science Centers and goes into stock assessment reports (based on national guidelines that are continually modified if new information comes available).
- Management under MMPA
 - "Serious injury" is injury with >50% chance of dying. It is a conservative estimate, informed from previous entanglement data. It will be re-evaluated in the near future. {**Post-meeting:** Since the 70% SI/M rate is an average of recent years, it can be updated and may need to be re-evaluated if something changes in the fishery that would affect the SI/M rate (e.g., weak links).}
 - SI/M rate from recent entanglements is estimated to be ~70%
 - Potential Biological Removal (PBR) tells us where we might be in terms of unacceptable stock-level impacts. For CA/OR/WA humpback whales, the most recent PBR is 16.7 seriously injured or killed per year. At the last assessment, entanglements alone were in excess of PBR.
- Management under ESA
 - Three humpback DPSs on west coast. One is endangered, one is threatened, and one is no longer listed. There is no take (i.e., all entanglements) of ESA-listed species allowed without authorization.
 - Off Oregon, all humpbacks are endangered (Central American DPS) or threatened (Mexican DPS)
- ESA Section 10 permit
 - CA is pursuing an ITP as part of the settlement
 - All three states have made some commitment to pursuing a section 10 permit to authorize a low level of incidental take
 - Any applicant (i.e., the states) must develop a [Habitat] Conservation Plan outlining how they propose to minimize and mitigate impacts to the species
 - It is reminiscent of an FMP, but tailored to how it impacts the ESA-listed species
 - There has never been one granted (or applied for) for a marine mammal.
 - Interactions between the ESA and MMPA make this even more complicated.
- Conservation Plan elements/permitting steps
 - Measures to mitigate impacts to the extent practicable
 - The CP must do this. There is no definition of "the extent practicable" so this is where applicants and NMFS spend a lot of time determining/evaluating. This is the heart and soul of the plan.
 - Monitoring
 - Currently there is no monitoring for entanglements (i.e., it is opportunistic)
 - This will be a new aspect
 - NEPA process
 - Sets the stage for alternative measures (and why they were not selected for implementation)

- This process considers impacts across the board (i.e., to the species, but also to the fishery/economy/etc.)
- Compliance with ESA jeopardy standard
 - NMFS will write a Biological Opinion
 - Intended to ensure that it doesn't decrease the likely existence and recovery of any ESA-listed species
- MMPA compliance – Negligible Impact Determination
 - Any permit that we issue for an ESA-listed species must also comply with MMPA
 - It is difficult because population delineations (between ESA and MMPA) don't necessarily line up
 - Current guidance: 10% PBR for individual fishery (i.e., 1.67)
 - *Is that fishery by state, or west coast?*
 - Our interpretation is by state. Conceptually, it kind of makes sense. We don't have other ways that we would allocate take. Some small chunk of PBR level can be equitable across the board.
- Stakeholder and public engagement
 - Public engagement is good, but is also part of why this process takes a long time.
- Key challenges and needs (from the NMFS perspective)
 - Resources for the states and NMFS to complete ITP
 - NMFS will likely have three applications coming in
 - Coordination across the 3 states (is a challenge, but also an opportunity)
 - Gear marking
 - We have that whole half of entanglements that can't be attributed to a fishery/origin so we have a lot of good ideas/opportunities to better understand that chunk of the problem.
 - *When was the last humpback stock assessment?*
 - Last year. Given the significance of it, I would expect to see an annual (or at least bi-annual) update to the stock assessment reports.
 - *Do you have any theories for why Oregon has had less entanglements than CA and WA?*
 - I would love to know what you're doing that is different. We haven't really identified that yet. There are probably more entanglements that are happening in Oregon and in Washington that aren't detected (because there are less people on the water than in California).
 - *In 2015, two humpbacks were in entangled in Oregon in October. In October, the gear had been out of the water for a few months.*
 - They were reported in October. It's hard to know when the entanglement actually occurred.
 - In 2015, entangled whales were sighted in October and July. In 2018, on was sighted in October. The date it is observed is different than the date it is entangled.
 - *Who did the stock assessment?*
 - NMFS issues stock assessment reports every year. It is publicly available.
 - *You hear from the fleet that there are more whales than we've ever seen before. Does that correlate with the entanglement reports?*
 - The whales are doing different things so there would be more entanglements than we've seen historically. But there isn't a four-fold increase in the population that correlates with the increase in reports. We've just completed the biggest survey that we've ever done, so we should have some more estimates soon. But again, it doesn't correlate with the increase in entanglements that we're seeing.
 - Data collection/sharing
 - *So under the ESA, any entangled whale is considered a take whether it disentangles itself, dies, is injured, etc.?*

- Correct. Any entanglements is considered take. Under MMPA, the injury to the whale is considered more exactly with the SI/M criteria.
 - *We have the three DPS. How close are we to the Mexican population being de-listed? Or [conversely] moving them from threatened to endangered?*
 - We expect to see, at some point in time, a formal recovery plan establishing NMFS criteria for each DPS. Currently, there is a recovery plan for the global humpback population that is almost thirty years old, but the agency will be working to develop a plan for each DPS. If we continue to see growth in the Mexican DPS consistent with the growth we've seen in the west coast stock, along with entanglement mitigation actions, it seems like a reasonable indicator that the stock is improving. We are missing information on the abundance of the DPSs, because it is based on the breeding grounds. And we will have to go down there, to figure that out.
 - It's not an easy answer. I think the Central American endangered population will be protected longer than the Mexican DPS. Being recognized as threatened [rather than endangered], is an indicator that it's doing better, even in that most recent assessment.
 - *The PBR is one number for the west coast. It's a really blunt instrument for the entire west coast without information on each DPS.*
 - The discord among the stocks matching up (MMPA and ESA) makes it difficult. I am hopeful that these things will come together. I think we will get there, but when, I don't know.
 - *Clarification on the 70% SI/M factor.*
 - One entanglement would count as 0.7 whales seriously injured or killed.
 - So Oregon has entangled six in ten years, so we'd estimate four of those have been seriously injured or killed in that time.
 - *Why didn't we get an ITP ten years ago?*
 - Good question and a good segway into what Oregon is doing.
 - The quick answer is that this has never been done before (i.e., an ITP for a marine mammal). Initially, this is not something that we were even sure that we could do or that NMFS would be able to accept an application for.
 - *Not all of the fishermen are convinced that we have a problem.*
 - The agency is convinced that we have a problem. We can disagree on our vulnerability/risk and what we should do about it.
 - *I've been crabbing for 30+ years and haven't seen an entangled whales yet.*
 - [Show of hands for who has seen an entangled whales – some in the room have]
 - *You said that there has never been a permit for a marine mammal. What about the NAVY?*
 - It's different for a federal entity. Federal entities apply under Section 7, which is a different process. We are applying under Section 10, which has not been done for a marine mammal.
- Oregon's response (2:30 pm)
 - Timeframe and actions
 - Phase 1 measures, adopted September 2019
 - *[Referencing the late season LE control date] What is the number on that? How many boats qualified based on that control date?*
 - That is all based on the criteria which haven't been developed yet.
 - Risk assessment – present day
 - West coast Dungeness crab gear entanglements by observation month (2003 – 2017)
 - Oregon Dungeness crab gear entanglements by observation month (2003 – 2019)
 - Risk assessment – future
 - Conservation plan
 - Process (~ 5 years): first draft by end of 2020, negotiation and refinement (NMFS/ODFW), NEPA review, Biological Opinion, public comment period, final approval, implementation, adaptive management

- We've had a lot of questions about, "if we do something now, can we get it back down the line" and the answer is yes, but it has to prove up to be as (or more) effective.
- Resources: \$100,000 committed by ODCC, one ODFW staff position, contractor
- Conservation measures implemented before and during the process (e.g., measures discussed at this meeting) are part of the plan
- *Is that \$100,000 for that one staff position?*
 - It would be for a position and possibly a contractor, with the timeframe not yet determined.
- *So if they take a percentage of pots away, and it does nothing to help, we then have to put something else up to trade that out? What's the point of having to trade up to get that back? It seems unfair. If the idea of reducing pots doesn't work, then we have to barter to get it back?*
 - That's part of the plan formulation. To get feedback on this long list of ideas. But again, if you have tried and failed, you have to try something that you think will be more effective. That may be something additional to what we have done, or it may be a switch/change to something else.
 - In order to apply for the ITP, we have to show something, in addition to what we're doing now, that will reduce risk.
 - *It just seems like a slippery slope. That is a fear of a lot of people.*
- *You say that we have to do that in order to get the ITP, but how do you know that we have to do that?*
 - NMFS has told us that we have to do that and it's part of the process for getting an ITP under ESA. So even if we are under the criteria for allowable take, we still have to have some mitigation measures that will reduce risk to the extent practicable.
- *We keep talking about reducing risk. I am adamantly opposed to gear out of the water, as a risk reduction measure. If we take gear out of the water, we are still leaving a percentage in that is known to entangle whales. We keep getting told that lines out of the water is the only thing that will reduce risk. Two of our confirmed entanglements in Oregon were observed at a time when there was no gear in the water. Some breaking news for some of you – there is a humpback on the beach in CA right now that has CA crab gear on it. A friend [in CA] asked the disentanglement team how long the whale has been entangled, and they said it was freshly entangled. Obviously the risk is still there, but there are not [actively fishing] pots in the water in CA. There are however many lost pots in the water. I do not see reducing pots in the water as an effective way of reducing risk. I think we need to think about modifying gear.*
 - *The team confirmed that it was a pot that was lost in the spring time.*
 - Lost pots are part of the issue. Actively fishing gear is a part of the problem. And derelict gear is something that we are thinking about addressing. Frankly, the ideas for addressing derelict gear that we have so far, have not been very popular at these meetings.
- *Do you guys truly believe that those are the best and only options in the short-term?*
 - We believe that those are the options that can pass the red face test, saying they will reduce risk in the short-term.
- *So why not take other ideas from the people, instead of shoving them down our throats?*
 - We have been talking about other options. For most of them, we either don't have enough information to show that they will reduce risk or they need more development before they're able to implement.
 - An alternative that was proposed offline after [one of] the meeting[s], was a 10% reduction across the board from December to August.
 - *You could set up a class to train fishermen to disentangle whales instead of taking away our way to make money.*

- We have convened lots of trainings and some specifically for fishermen. There is a wide open door to participate in the program. It is a program with a conservative response. Mainly, it is super dangerous. There was a guy killed a few years ago in Canada even with many years of disentanglement experience. The program starts with class work and then building experience within the program through additional training and disentanglement experience. You guys would be fantastic with your experience working with lines under stress. It is a wide open opportunity, but it isn't just a simple class and certification. It is an organized program. Responses are still going to be coordinated by NOAA folks (we would miss out on a lot of information if people could just go out and do it on their own), but it is mostly not NOAA folks doing the disentangling. It is people with a wide range of skills and expertise.
- *You said that a lot of the other ideas don't have data to show that they will work. I'd love to see the data that pot reduction will work.*
 - We have data on the number of pots that it will take out of the ocean. I can't connect that to how many whale entanglements will be avoided. But it is a logical connection that gear out of the water won't entangle a whale.
- *You've thought about the danger of people endangering whales. Have you thought about the danger to people when you take away their pots and they have to take chances?*
 - We have heard concerns about safety with each option.
- *[Confirming that there is a program for training fishermen on whale disentanglement] which I believe is viewed by multiple groups as a success.*
- *What about a voluntary buyback?*
 - It is something that we heard and are thinking about. It will require some funding, in the past this has often been industry-funded. We do have an issue of potential latent permits. So if all we do is take away permits that don't fish anyways, it won't be effective. But it is on the list for long-term consideration.
- *You have long-term and short-term measures listed, and what I'm hearing is that we will have to give up something at some time. It sounds like once it is taken, unless we have a silver bullet, we're not getting it back. If we [have a pot reduction and then] find out that a buyback will work long-term, what is the chance of us getting that back?*
 - We have heard that concern. It is a good question, without a simple answer.

L. Oregon Whale Distribution Study (3:20 pm)

- Introduction and experience
 - OWEWG identified the lack of knowledge on whale distribution in Oregon to be a major limitation to reducing entanglements.
 - There have been a lot of whale surveys off of California, but not in Oregon.
 - The study is a collaborative process, funded by ODCC initially and now by NOAA (Section 6 grant)
 - Objectives
 - (1) Gain an understanding of whale distribution patterns in Oregon waters
 - (2) Generate predictions of whale occurrence at different times and areas
 - (3) Assess overlap between whales and fishing gear to determine entanglement risk
 - Methods
 - Survey for whales along 4 track lines once each month for 2 years; onboard USCG helicopters
 - Collect replicate data in the same areas under different ocean conditions
 - Record species and number of animals – presence and absence data, which is critical.

- Build predictive models for whole coast based on these data, and relate to distribution of fishing effort.
 - Presence and absence data + oceanographic data
- Results to date: project started in February 2019, conducted 32 surveys, observed 11 different species of marine mammals, recorded 125 sightings of 410 individual animals
 - Most frequent observation is of a humpback whale, to date
 - Primarily observed in water depths between 100 and 200 m, but were also recorded in depths out to 1000 m.
 - [Clarification] There is one population of humpbacks with three DPS based on where they breed. When they come to Oregon, they mix, so we don't know which DPS they are from when we see them here. So part of this study is responding to the whale via boat to get genetic information. A picture of a fluke (which is individual like a fingerprint) or genetic information can be used to get at which DPS they belong to. We are trying to get to those answers. We haven't been able to get there before, but we're working on it.
 - We've also seen blue whales, gray whales, and fin whales.
- Future plans: continue USCG helicopter surveys until March 2021, begin analyzing data in April 2020, estimated project completion in December 2021.
 - Whales are long-lived animals with dynamic movement and behavior patterns, so we need time to collect the data to build reliable models.
- Our surveys are only four times per month, so there are spatial and temporal gaps in our ability to collect data. We want to fill those gaps, by asking you all to help us collect data to validate our models.
- *Have you been able to break down how many of your sightings (i.e., a percentage) are inside and outside of ~50 fathoms each month?*
 - Data, so far, suggests that there is a big peak in humpback sightings in May, not as many in February or March. Most have been within 100 m (50 fathoms), but some out to 200 m, and then it drops off dramatically. Feeding aggregations (not including sightings of single whales) tend to be around 100 m.
 - *[Request] to see the percentage of whales shallower than 50 fathoms, by month.*
 - Leigh will work on getting that.
- Whale Alert Mobile App
 - Why should you contribute?
 - Potential concerns
 - How the app works
 - *It seems like if you get that data from nearshore fishery participants, you will get info on where the fishermen are at, but not where the whales may be farther out.*
 - That's true this is opportunistic and why it is being combined with the aerial surveys which are standardized.
 - The real power of citizen science efforts is when we get lots of data. We have ways to account for that bias. We aren't actually building models off of the citizen science data – those are built off of the standardized survey.
 - *Do you just want humpback whales? Or do you want any whale sightings?*
 - The more sightings the better. All whales. Especially when you go offshore, it's very valuable.
 - *The other thing that will throw you off, is cell service availability offshore?*
 - You can use the app and it will still pull GPS data when you don't have service and it just won't send the data until you get back.
 - *I wondered about the use of drones to extend ranges? Possibly an underutilized data collection tool?*
 - I use drones a lot in my research. They are a powerful tool but still have limitations (e.g., line of sight, battery life, license). My bigger concern is about you guys. You're fishing and

we don't want this to become a burden for you. We want something simple like the app. If that's something that you want to get into, I'm happy to.

- *What if you get a bunch of people reporting the same whale with the app? How can you differentiate that?*
 - Part of that is distinguishing patterns of where they are and where they aren't. The scale at which we will be able to produce these models and make predictions is not at a day, at best it will be monthly predictions. So, if a bunch of people report a whale in one day, we'll be able to take that and just say that there was a whale in this particular area on that day. Coming back to presence and absence information.
 - We're not trying to predict numbers. We're trying to say where they are and when.
 - The flipside of knowing where there are whales, is knowing where they are not occurring.

M.Short term measures to reduce risk of whale entanglements in Dungeness crab gear

- Overview of phase II management measures timeline (3:45 pm)

Target implementation Apr/May 2020

3. Which primary whale entanglement risk reduction measure do you support? Why?

13. What month do you support implementing risk reduction measures? Why?

14. What % reduction of pots do you support? Why?

- Estimated pots and ex-vessel value by month (2014-15 through 2018-19)
 - *So you've estimated pots for the 30 days, does that include people that are going and getting replacement buoy tags?*
 - I do have another plot that shows replacement tags, but this does not.
 - *Are there any numbers showing the size of the boats making up those summer values?*
 - I have estimated pots by tier and by vessel size as well.
 - *The 200 pot guys pretty much fish all year, so they will take the biggest hit in all of this.*
- Estimated pots by month by pot tier (average over the last 3 seasons)
 - *So the smaller fleet will be hit hardest if we close in April?*
 - This shows that vessels at all pot tiers will be affected by a closure, reduction, or intermission.
- Estimated pots by month under the current pot limits vs. 30% reduction vs. flat 200 pot reduction
- *Can you provide data on ex-vessel value by month by pot tier?*
 - Yes, we can provide that. We can provide summaries of that information.
 - ODCC is supporting a study looking at economic impacts of various entanglement mitigation measures. Specifically, closures and line reduction. And using the current bioeconomic model to evaluate those measures.
- *For the flat 200 pot reduction, did you take into consideration that some of the big boats will just pull their gear because it's not worth going out?*
 - That is not in this figure.

Target implementation Dec 2020

15. Initiate "late season" derelict gear removal program, incentivized by allowing ownership of retrieved pots

- *What do you think the estimated amount of derelict gear left in the ocean at the end of all this [in-season and post-season retrieval] is?*
 - About 4000 pots left in the ocean is our best estimate. The difference between the estimated total pots and the estimated retrieved (from logbook information).

- *If you looked at how many pots are left in the ocean in April and you took the derelict gear retrieval, and put it at an earlier date so that it gets retrieved. How much gear would that get out of the ocean? If there was a way to incentivize (e.g., financial) guys to get more gear out of the water.*
 - *We've heard a lot about incentivizing in-season gear retrieval. We would need legislative changes to make changes to our current program. With a gear reduction and a seasonal buoy tag, a potential earlier season derelict gear program with similar personal property exemptions is an option.*
 - *I think we should come up with another way to incentivize people without having them take your trap. If a small boat finds a damaged pot that he can't fish or sell, he won't bring it in.*
- *I'm running for Congress. Came out here to find out what is going on. I encourage you all to hound your senators. Stay on top of the capitol, the short session is coming. This is a [dog and] pony show and they are going to force down your throats what they want.*
- *Legally you can't pull a commercial pot on a recreational [charter] boat. It doesn't have to be [an incentive] that I am going to get to keep a retrieved pot or sell it. It should just be about getting it out of the water, and every crabber should think about that. Because a 30% reduction would be a lot worse than bringing a pot back and giving it to someone.*
 - *I don't think there needs to be a monetary incentive, knowing where we're at. I believe the fleet will retrieve more gear by knowing that we need to bring in pots that may pose an entanglement risk.*
- *I'm concerned with disincentivizing gear innovation as a long-term goal. I'm intrigued by the idea of longlining pots. There is a lot of room for gear technology and testing is relatively easy. I'm afraid that people will lose the impetus for continuing to work towards the long-term goals.*
 - *A lot of ideas and willingness within the fleet to work in the near term on gear innovation.*
- *The CP will be a 5-6 year process so we have time to get it right. CP is a management measures toolbox with two categories: (1) restricting fishing and (2) gear modification. I worry that closures/reductions are a blunt tool without flexibility for the fishery. It takes away the ability to act adaptively and maintain the viability of the fishery. It doesn't achieve the secondary goal of maintaining an economically viable fishery. Ropeless gear is not a viable option (e.g., price, feasibility). Acoustic pingers have been used all over the world with promising results (e.g., cod trap fisheries in Alaska and B.C., sharks in Australia). Green LED light to deter sea turtles (important for the HCP). Pings location which could help ground truth fish tickets [log books]. This is a logical first step. Full disclosure – it hasn't been tested in this fishery. Any significant test will require a research permit from NMFS. Worth looking into to begin testing sooner rather than later.*
 - *Cost?*
 - *\$45 each. Alkaline or lithium batteries – one lasts one year, one lasts two years.*
 - *Designed to emit sound to 50 fathoms (300 ft).*
 - *We've talked about getting a group together to discuss setting up a research project to test these in Oregon.*
 - *Does it just scare off a certain type of whale or all whales?*
 - *Needs to be tested.*
 - *I'm optimistic, but have concerns/skepticism about whether it will work. The situations where it has been effective have involved sound-sensitive smaller cetaceans. Baleen whales don't have the same sensitivities/capabilities. There have been no studies establishing effectiveness yet, but we shouldn't close door on it. From a NMFS perspective, the questions about collateral impacts are the biggest. What will it do to whales, landscape, other marine life? It will be an uphill battle due to the uncertainty surrounding it. There is a process to get this research done, but there may be some application where it makes sense.*
- *There are existing studies on sound pollution looking at what decibel level whales are harassed and what distance is acceptable for sound impacts. Instead of an entirely new study, we can use things that have already been done.*

- Pulling from the information to justify testing would be a way to go. To establish that it is effective for the job at hand, you might as well do the additional work to measure and demonstrate collateral impacts (i.e., here is what it will look like across the shelf and what that means).
- *It sounds like something has to be taken from the fishermen, but where is the compensation for the fishermen? Small boats won't have a chance to make money with a gear reduction combined with [1200 lb] trip limits, especially with market effects.*
 - Encourages that to be a conversation with the state in considering mitigation measures. Conservation plans present an opportunity to bring the socioeconomic impacts into the discussion.
 - The crux of the issue is that we can do nothing now and hope that nothing comes down on us, or pursue an ITP and we have to put something in the plan to demonstrate that we're changing what we're doing now (and during the past decade) to make it better for the whales.
 - *Why start with 30%? Start with 5%.*
 - 30% was a starting point for real risk reduction, put in place July 1 in Washington and being considered in California. It does not necessarily have to be implemented in Oregon. It is being tested in Washington where they have a slightly higher number of entanglements, but not that much more.
 - *We should have a study to determine a ratio of what our depth is and what our line should be and come up with a way to take line out of the water. We can show how much rope has been taken out, just by keeping lines vertical. It will cost us labor, but won't cost us economically. It will show that we are doing something.*
 - *[This would be a way of] making taut lines enforceable.*
 - That is something we're considering and which is being considered in Washington as well.
 - *Concerned about the safety factor – we already take a lot of chances/risk in this fishery. A pot reduction will mean that I have to take more chances. If we take away pots or close the season, this will kill people. The vast majority of people in this room know someone lost at sea. [What is] the PBR of fishermen? It's putting extra pressure on fishermen to make bad decisions.*
 - *Instead of offering up all this stuff that we won't get back, why can't we work with science. Get the data in a couple years and then eliminate pressure in those areas.*
 - The question we've heard is “why does it have to be next year?” If we get sued, we're in a box.
 - *Have you done economic studies of what it will do to coastal communities?*
 - We are here to discuss what you can live with, and then we can put a price tag on it.
 - *At some point between now and April/May, you're going to make a decision. We'll be crabbing, and you'll be deciding what you need to do to get an ITP. It's a relatively short time frame. When will the decision be made?*
 - That discussion with the fleet starts tonight and over the next month and a half. Now is the time. We put these measures in the industry notice to get you in the room so we can talk about alternatives. These are the alternatives that are being considered in Washington and that we've heard from the fleet.
 - The East Coast lobster fishery has been working on gear innovations for 20 years and haven't found anything that works. We don't have that in hand.
 - The commission meeting in our proposal is in February 2020. To meet that date, we have to have a proposal in the middle of December.
 - *How can you come up with the proposal, if you don't have the information?*
 - Leigh's distribution survey is 2-3 years away.
 - *[Comment about requiring break-aways]*

- *You said gear removal has been tested. Where is information on that test to convince us that we need to do this?*
 - Same logic as scope on lines.
- *We are not in-a-box. We have not had a letter of intent to sue. We have had [four] entanglements in 10 years. California got sued because they weren't in the process of doing any of this.*
 - *Yes they were [from a number of industry participants].*
 - We can agree to disagree.
 - *Where is the science that supports the 30% reduction? We don't know what the percentage should be.*
 - *That only sets the precedent for us to lose more gear. If we go down this path, we will be fishing 30% at the beginning of the season.*
- *I'm proud of Oregon as a leader (e.g., we can fish with evisceration when others can't), but we are talking about following California or Washington. To react out of fear from environmental organizations is a scary step, or for Oregon to follow these other states when there are options for change. Have people supported these reductions at these meetings?*
 - They won't say that out of fear of your reactions at these meetings. The people who want to tell me this, tell me when you guys aren't listening.
 - *One consideration should be this silent group that wants a different thing. What are their interests if they're afraid or unwilling to speak up.*
- *I see this as an opportunity for us [Oregon] to still be a leader. We fund these things [through the ODCC] to be proactive. So give us a chance to get this science together (e.g., Leigh Torres work). You're never going to satisfy the environmental groups.*
 - Leading means that we need to do something.
 - *What about elimination of buoy tag replacements?*
 - That's on our list, thanks for bringing that back into the conversation.
- *Is there even a chance that a gear innovation idea would get into the proposal if we started working on it today. Would that even be a viable option for the plan? What are you willing to accept?*
 - *Running from a lawsuit is not the place where Oregon fishermen belong. Fishermen are putting money into trying to solve this (e.g., paying for distribution study), and we're being told it's not enough.*
- *These meetings are an important way to start the conversation. We've digested a lot of information, but there isn't a lot of time to provide thoughtful, complete solutions. Need a space to provide written comments (not on a form with three options that guide us towards supporting a specific option) with all ideas. Ideas are being batted down prematurely. To have a productive dialogue, we need to be able to get all of the ideas on the table.*
 - We've had two years of the OWEWG talking about gear innovation and there isn't a viable option. I understand why it's perceived that way. Any of you can give us written comments at any time. We have had questions about putting the OWEWG best practices into rule next season? We thought industry wouldn't want to put it into practice during the season, but that is something that we can do and that we will talk about.
- *We have to give something up to attain an ITP, and then a trigger point might mean additional action. Will those triggers be decided as part of this process? It makes people nervous to [give something up] without knowing what additional actions may be triggered.*
 - State rules that are implemented will be in the HCP. It should have triggers to allow for flexibility. If we give up something, are we going to get it back if it didn't work? That is a key question which we acknowledge. We don't want to take something and not give it back if it isn't working. We have to be thinking about a multi-pronged approach.
 - *I personally think there is room, especially in the late fishery (June). But no one wants to lay their cards on the table when they don't know what the end will look like. You can't eliminate risk, but you can lessen it. It would be nice to have some kind of assurance that we will look at long-term changes.*

- There should, and will be, a longer term determination. The shorter time horizon will be the three-year NID determination. Performance over time is a more important metric, and certainly more important to me, than any one bad year.
- *[As an OWEWG member] I've had my attitude changed. We've gone from being proactive to reactive, and it feels different. Big changes (time and trap reductions) are a big deal. Most of us also fish in federally managed fisheries and you would never see this big of a change come about through the PFMC without adequate analysis. We built a tool (i.e., the bioeconomic model) and, at the very least, that should be applied to big decisions before they're cemented. The research is in its infancy, and yet we're talking about big changes which makes me more cautious.*
 - *I don't think replacement tags should be eliminated. Maybe change to 5%, but there are unforeseen circumstances and it's pretty critical [to have that option] to stay competitive.*
 - *It might be time to look once again at longlining pots – two buoys with a given number of pots – which would eliminate a lot of lines in the water. It could be implemented April 1 (with zero longlining before then). We would have to be really cooperative to not tangle each other. It may be a good way to address spring fishing without taking away gear right now. In the long-term, the buyback is a good thought. Simply buying up permits, without redistribution, is a way to reduce gear through choice. That is a way that the environmental organizations can help solve what they think is a problem, and put their money where their policies are by helping purchase permits. It would allow remaining fishermen to remain viable. Most of us realize that this fishery is going to change, we will probably have less crab [changing ocean conditions], and less gear will make it much harder.*
- *It takes me weeks to get my gear in and months to take my gear out. A season intermission would mean that I'm done. Along the same lines, eliminating the two-week grace period, takes two weeks off our season. A possible exemption for Pacific City [may be needed] on some of this stuff, for either a type of landing/launching, a size of boat, or a geographic area. It's devastating to our fleet.*
- *[Recap of action items from this room]*
 - Experimental design around pingers.
 - Offers to work on gear innovation.
 - We haven't resolved the issue of what you can live with if you want to move forward with putting something in the CP that will reduce risk or whether the choice is to wait for something to come. The easy path would be a closure, but we are looking for a solution. I hope that, walking out of this room, you guys talk to each other and decide what you can live with to put on the table.
- *Is it legal to make a couple of experimental pots and give it to a fisherman to try?*
 - I don't know what aspects it would need to meet, but I will get back to you.
- *Lots of talk about a two pot per line option. I just want to put on the table, that a summer tag could be a two-pot tag, so voluntarily fishermen could keep however many pots they need while eliminating lines?*
 - The idea for implementation would be: if you have 200 pots to fish for the late season and you put them in duplexes, you put the summer buoy tag on the same line. We have concerns from enforcement about longlining. We have a long history of saying we aren't going to longline pots in Oregon. There is a reason it is illegal now, so we need to get over those barriers. It's not an implementation problem, it's just a question of how to do it right.
 - *[OSP] We're not going to comment yet on enforcement concerns because we want to be supportive of fleet innovation.*
- *There is a lot of referencing the OWEWG, but [fleet] views have changed a lot in the last few months. We all need to digest this, and shouldn't dismiss ideas based on the OWEWG dismissing them. We are coming around to the idea that there will be some necessary change. Don't forget*

what's been discussed, but don't hold it as gospel. Personally, I was pretty bummed that the OWEWG was put on hiatus.

- The OWEWG was convened by Oregon Sea Grant. As we've entered into serious discussions about management changes, it needs to be this formal process convened by ODFW. It doesn't mean the end of collaborative efforts.
- *[Encouragement to really look into buyback options]*
- *If we do all this stuff (30% reduction, shut the season down, etc) and then entangle a whale in January, we're done. We're reacting in fear with no promise of it doing anything.*
- The February 2020 timeline is our timeline.
 - *So that timeline can change?*
 - Right. I want to have a coordinated response across the West Coast - of us submitting plans that have real intent to NMFS. I want Oregon to be part of this.
- *How is it even legal for you to do this [the options presented] without knowing what is going to happen?*
 - I want to keep you in business. By you, working with me, to figure out what we want to put in the CP. ODFW is the conduit to getting this CP done.
- *Oregon has a history of using gear innovation to solve these problems. We [the fishermen] spend more time on the water and we really need to look at innovation.*
 - It's the timeline [that is an issue]. Is the agency ready to wait for that period of time for that to come to fruition?
 - *We have things that we can do this season. They may slow us down by a week or two, but they're worth it in the long run.*
- *There is no scientific data to back up a 30% reduction. You would never see this at the federal level without something to back it up.*
 - If lines are in the water, whales are going to get entangled. By the same logic, if you take lines out, [there is a lower risk of entangling whales]. The question is how much?
- I'm going to put OWEWG members (e.g., Bob, Tony) on the spot – this concept that taking lines out won't reduce risk is a new concept. That didn't come up, it was just recognized as a common sense logic.
 - *We're looking more for what is the goal, what is realistic?*
 - *The goal is to get a take permit. NOAA came to us and said, we need to fix this problem. No one was listening then, but we tried to get people to, and the only thing that we heard was that "the only thing that we know for sure [that is the most logical] is lines out of the water."*
- *The problem with the presented options, is that it doesn't guarantee us anything. It's giving them something, without any guarantee.*
- *In California, they're struggling to even have a fishery. They kicked the can down the road and weren't able to get changes made and are struggling to have any control over the fishery. And they are breaking the same laws that we are breaking.*
 - *California got to where they are because of a bad settlement.*
- *What if we were to say, "we're working on this gear, give us two years to make it work". The problem here is so much less than in CA. Is that even an option?*
 - It is. I know you think I'm scared of a lawsuit. And I am, but the reason is because exactly what we're talking about right now is our choice. Now, we have that flexibility to say what we can withstand as an industry and how we are going to phase this in and make decisions ahead of when we run up against a brick wall.
 - *When people talk about gear, your answer has been that we can't prove that in time. Can it be part of our presentation to give them a timeline about our plan?*
 - *We could have a collaborative group committing to working on gear innovation. We're not dealing with the same situation as the East Coast.*

- *The math equation doesn't work when we say "reduce lines in the water, reduce opportunities for occurrence and reduce risk." It doesn't get into the fact that it's such a rare occurrence. Reducing lines doesn't necessarily reduce chance of occurrence. Our only silver bullet is gear modification that we work together on.*
 - *It's the OFWC that has the regulatory authority and has the rules. Our Fish and Wildlife Commission wants this fishery to succeed. They are not even the ones that we need to prove up with, it's the ESA and MMPA.*
- *[Talking about the rulemaking process as a former OFWC commissioner] Caren comes to the commission with a staff recommendation. If she comes with a 30% reduction, there will be [200] fishermen that say no. The commission will throw it back and say that Caren needs to work on it. Nobody wants that. The best case scenario is that Caren can come forward with something that she has a fairly good chance of getting through. Sometimes the Commission moves forward with something that is unpopular, and governors, etc. get involved. It's not a done deal. Caren doesn't get to decide your future. She gets to make a staff recommendation. And it's in her best interest to bring one forward [that has some support]. The Department does a great job of working with industry. I hope that there is an opportunity to get it aligned before then and further workshop this with the working group or others.*
 - *Biotoxin work wasn't easy at the time, but now we're standing up as Oregon being thankful [that we can fish when others can't]. This one is harder, likened to pot limits when that was put in place. That's probably what we're talking about here. It's not going to be consensus probably. I'm in front of you, telling you that I think we need to make that decision.*
 - *Putting up that extreme proposal is going to get you a reaction. I can't stand behind this proposal (30%). But I'm going to follow up on this. A lot of the things being talked about could be good measures for a lot of reasons, not just for entanglements and there may be ways to bring them into a single package but it will take a lot more work.*
- *I'm with you [NMFS] on doing the best that we can to reduce risk, but being a fisherman and listening to numbers like the CA ones or the weather buoy entanglement, it throws your on-paper numbers out the door. This [gear reduction] is by no means the answer. Let's work on something together. Fishermen have led a lot of solutions (e.g., escape rings, rotten cotton). Let's try it that way.*
 - *The shrimp fishery is excellent at this, in retrospect. But at the time there was a lot of fear. It's a win-win-win, we need to get that for this.*
 - *I think there are some ideas out there that you don't want to deal with.*
 - *I think there is a compromise within this season (or before the season starts). We need a chance to do that stuff, like we've historically done.*
 - *[Referencing bycatch reduction in the shrimp fishery] We did that with science. Not with nothing to back it up.*
 - *This is where we disagree [the dismissal of the idea that less lines means less risk].*
- *Maybe we need to think about moving the gear inside.*
- *No one is saying that gear isn't on whales. We are saying that gear reduction [is not the solution].*
- *We do hotspots now with biotoxins. We can do that with this [with Leigh's monitoring]. We should be able to monitor them.*
 - *Leigh would say don't take my first nine months of data as evidence. She wants to put in the two/three years to come to you and say we've figured it out.*
 - *For the ITP, we can say that we are working towards this with this study.*
- *If we concentrate gear inside and start entangling gray whales, we haven't solved the problem.*
- *We have to think long term. We can't take one or two years of research and think we have an answer.*