



Meeting Summary

Oregon Entanglement Advisory Committee

April 14, 2026, 9:00am – 2:00pm

Attendance

ODFW facilitators: Brittany Harrington, Jessica Watson, Cathleen Vestfals, Troy Buell, Justin Ainsworth

Present members: Aaron Ashdown, Cari Brandberg, John Calambokidis, Susan Chambers, Edward Chin, Bob Eder, Ben Enticknap, Amanda Gladics, Scott Hartzell, Michael Jasny (alternate for Francine Kershaw), Shon Landon, Joy Primrose, Jim Rice, Gary Ripka, Leigh Torres, Heather VanMeter, Justin Yager

NMFS advisor: Dan Lawson

PSMFC advisor: Caren Braby

Welcome and Agenda Overview

(slides 1-3 of the [meeting presentation](#))

The Oregon Department of Fish and Wildlife (ODFW) convened the fifth meeting of the Oregon Entanglement Advisory Committee (OEAC) on April 14, 2026. ODFW welcomed both in-person and virtual participants and noted that, while the meeting was open to the public, discussion would be prioritized for OEAC advisors.

ODFW provided an update on upcoming recruitment needs. The gear expert seat on OEAC is currently vacant, and recruitment for this position will begin in early summer. In addition, many members have now served beyond the original three-year term. Members interested in stepping down were asked to notify ODFW so this can be incorporated into recruitment planning.

ODFW Updates: Sablefish Pot Take Reduction Team

(slides 4 of the [meeting presentation](#))

ODFW provided an update on the recent West Coast Take Reduction Team (TRT) meeting. Jessica Watson, ODFW's Marine Policy Project Leader and agency representative on the TRT, summarized the in-person meeting held March 30–April 2 in Vancouver, Washington. This six-month TRT process focused on developing mitigation measures for sablefish pot gear to reduce entanglement risk for the Central America (CAM) and mainland Mexico (MX) humpback whale stocks.

The TRT had two primary goals:

- Reduce total fishery impacts (Mortality (M)/Serious Injury (SI)) below PBR within six months.
- Reduce impacts to 10% of Potential Biological Removal (PBR) within five years.

Updated abundance estimates showed strong annual growth in the MX stock (7.9%) but no growth in the CAM stock. With this new information, sablefish pot gear was determined to already meet both TRT goals.

The TRT reached near consensus on a mitigation package, based on a sablefish-related regulatory package that has already been adopted through the Pacific Fishery Management Council (PFMC). TRT mitigation measures include mandatory buoy and line marking and a limit on surface line, allowance for fishermen to voluntarily use one vertical buoy line, development of best practice guidance, improved data and reporting, removal of unnecessary regulatory burdens, development of fleet advisories, and establishment of triggers for reconvening the TRT if risk increases. The TRT also identified research and data needs to support future whale population assessments and management decisions. More information on recommendations and research priorities can be found in the posted [meeting summary](#).

The TRT additionally outlined that updated information on population abundance, entanglement, and voluntary measure adoption should be provided before convening any future TRTs. It remains unclear when the Oregon, Washington, and California commercial Dungeness crab fisheries may be brought into the TRT process. ODFW will continue coordinating with NMFS to understand how these developments may affect the conservation plan (CP) and incidental take permit (ITP) application processes.

Questions were raised about when both of the PFMC regulations would take effect. Given the current situation at the federal level, the timeline for advancing and approving regulatory packages is uncertain, and no timelines have been provided.

ODFW Updates: Recent Entanglement Record (slides 5-7 of the [meeting presentation](#))

ODFW reviewed all entanglements that occurred on the West Coast in 2025, and provided additional details for those attributed by NMFS to Oregon crab gear. A total of 34 entanglements were confirmed coastwide, which is consistent with recent years. Of these, 31 involved humpback whales, which is an increase compared to the recent average, while the remaining cases involved gray whales. NMFS attributed humpback whale entanglements to several fisheries, including four each to the California and Oregon commercial Dungeness crab fisheries, two each to the California coonstripe shrimp and rock crab fisheries, and two to Canadian recreational gear. The Canadian cases appeared in the West Coast database for the first time due to improved coordination with Fisheries and Oceans Canada. Additional cases involved gillnet, monofilament, sablefish pot gear, netting, and hook-and-line. Only about one quarter of all cases involved unidentified gear, a lower proportion than usual and potentially a sign of improved gear marking and documentation.

ODFW also reviewed the four humpback whale entanglements attributed to Oregon commercial crab gear in 2025, which is the highest number recorded in a single year. Given elevated entanglement levels in both 2024 and 2025, ODFW opened the current season under a fleet advisory and temporarily advanced late season risk reduction measures from May 1 to April 1.

Looking to 2026, six humpback whale entanglements have been confirmed coastwide to date. These include one in Oregon commercial crab gear, one in California coonstripe shrimp gear, one in gillnet, and three involving unidentified gear. The Oregon attributed case occurred off Los Cabos, Mexico in early January but was not reported to NMFS until late March. Responders

in Mexico partially disentangled the whale, and the gear was identified as Oregon crab gear based on buoy markings. However, no buoy tag was recovered, so the season of origin remains unknown as NMFS continues to gather additional documentation.

ODFW and NMFS advisors addressed several clarifying questions about how buoy brands are used for gear identification, how hook-and-line gear is attributed to a specific fishery when involved in an entanglement, and how entanglements reported off Mexico are assessed and confirmed by NMFS.

ODFW Updates: Conservation Plan Development (slides 8 of the [meeting presentation](#))

ODFW provided an update on the status of its draft CP, which covers the Central America and Mexico distinct population segments of humpback whales, as well as blue and fin whales. Staff shared their current understanding of the key remaining steps in both the CP development process and the associated ITP application.

ODFW is actively incorporating feedback received from NMFS' Office of Protected Resources (OPR) at the end of January and continues to meet with the NMFS ITP team every two weeks to work through revisions. The agency is targeting mid-May for submission of the next full draft. That draft will undergo what ODFW anticipates will be a final round of NMFS review, which will include not only the ITP team but also NMFS general counsel and Section 7 biologists. This full team review is expected to take several months.

Following that review, ODFW will work with OPR to address any remaining issues, with the goal of submitting a formal ITP application by the end of the year. Once submitted, NMFS will conduct a formal sufficiency review to determine whether the plan is "adequate and complete," a process that may also take several months and may involve additional coordination with ODFW.

After sufficiency is confirmed, several major federal processes will begin simultaneously, including NEPA review, Section 7 consultation, and authorization under the Marine Mammal Protection Act (MMPA), each with its own public comment requirements. NMFS has indicated that these combined processes typically take 12–18 months, though they intend to streamline steps wherever possible.

ODFW noted ongoing uncertainty regarding the MMPA authorization pathway. To receive a Section 10 permit under the Endangered Species Act (ESA), the state must also obtain a Section 101(a)(5)(E) authorization under the MMPA. Based on current guidance, the only available pathway appears to require that a Take Reduction Plan be developed (or in development) that includes the commercial Dungeness crab fishery. Because it is not yet known if or when the crab fishery will be included in a Take Reduction Team process, this remains a significant unresolved issue in the overall timeline.

OEAC members asked when the CP would be shared with the committee. ODFW explained that the document cannot be released until it has been reviewed and approved by the Department

of Justice and the Director's Office. ODFW also noted that the CP will be available for public comment as part of the federal NMFS review process.

ODFW Updates: Oregon Fish and Wildlife Commission Petition (slides 9 of the [meeting presentation](#))

ODFW provided an update on a petition submitted by representatives from the Center for Biological Diversity, Oceana, the Natural Resources Defense Council, and the American Cetacean Society. The petition proposed a range of regulatory changes related to pop-up gear, late season vertical line restrictions, public notification of entanglements, and emergency closures following entanglement events. At the February 20 Oregon Fish and Wildlife Commission (OFWC) meeting, ODFW presented a review of the current entanglement record, existing risk reduction measures, ongoing conservation plan work, and planned rulemaking efforts. The petition generated substantial written comments and public testimony. After deliberation, the OFWC voted to deny the petition and directed ODFW staff to continue with their planned rulemaking processes and ongoing coordination with NMFS to secure ESA coverage.

ODFW Updates: Planned Future Rulemaking (slides 10 of the [meeting presentation](#))

ODFW provided an overview of the rulemaking efforts it plans to bring to the OFWC at their August 2026 meeting. This package will include the five-year evaluation of Oregon's existing risk reduction measures, proposed vessel monitoring requirements, and a proposal to establish a popup and longline experimental fishing gear permit program. In addition to these items, ODFW is also considering bringing forward a proposal to permanently move the implementation date for late season measures from May 1 to April 1. Beyond the August meeting, ODFW anticipates additional rulemaking may be needed, depending on the results of ongoing gear testing, continued engagement with stakeholders, and federal review of the state's CP.

OEAC members expressed significant concern about permanently moving the implementation date for late season measures earlier in the year, emphasizing that the approach felt reactive rather than adaptive. Several members noted that fishing conditions vary widely from year to year, and a fixed date may not reflect real time circumstances. Members highlighted the substantial effort required to remove gear, particularly given typical ocean conditions in March, and questioned whether an April 1 date was warranted in all years. Participants stressed the importance of incorporating real time whale observations and environmental conditions into management decisions, rather than relying solely on predetermined dates. They cautioned that the proposed change could have broad impacts on the fleet and encouraged ODFW to consider a more adaptive approach.

Pop-up and Longline Experimental Fishing Gear Permit Program Development

(slide 11-13 of the [meeting presentation](#))

ODFW provided an update on plans for an experimental fishing gear permit program to test popup and longline gear in Oregon waters. The goal of the program is to evaluate these gear types—individually and in combination—and collect data needed to determine whether broader authorization could be considered in specific times and areas. The testing will also help assess potential enforcement challenges, gear conflict issues, and operational considerations. Rulemaking to establish the program is planned for consideration at the August 2026 OFWC meeting, with experimental permit issuance anticipated for spring 2027.

Staff reviewed the basics of pop-up gear systems, which rely on either acoustic or timed releases. Acoustic systems are often paired with longline configurations, while timed release systems may be suitable for single pot use. All participating vessels would be required to use virtual gear marking, complete NMFS Level 1 whale entanglement response training, and complete gear use and location tracking training through either the manufacturer or a third-party provider.

ODFW outlined the types of information and data that would be collected during the trials, including gear efficiency and reliability, gear movement, and performance across different configurations—such as number of pots, strings, or vertical lines, and the use of sinking, floating, or neutral groundline. This information will help inform future management decisions and evaluate whether broader authorization of pop-up or longline gear is feasible.

ODFW also discussed proposed eligibility criteria for permit holders, including no civil or criminal fishery law violations within a specified number of years, no convictions for crab or pot theft within a similar timeframe, and no violations of experimental fishing permit terms and conditions.

The agency requested OEAC feedback on potential incentives to encourage participation, such as access to areas otherwise closed due to entanglement risk, restoration of reduced pot limits, or access to gear at no or reduced cost through a “gear library”. Funding for a gear library has not been identified but is something that ODFW could pursue if there was support for it.

OEAC members raised significant concerns about the practicality and readiness of pop-up and longline gear testing in Oregon. The most consistent theme was uncertainty about the virtual gear marking technology and how reliably it will function, whether gear locations can be displayed in real time on plotters, and whether offshore connectivity will support these systems. Members stressed that without dependable gear visibility, conflicts with other fisheries are likely, especially given Oregon’s more complex suite of fisheries with overlapping fishing grounds compared to California.

Members also questioned whether the technology for gear marking can be operational in time for testing, citing delays, dataflow issues, and the need for consistent, unified tracking systems for both fishermen and enforcement. They emphasized that chart plotter integration is essential before authorizing use beyond the EFGP testing program.

Operational and economic concerns were also raised. Popup and longline systems may not be feasible for all vessels due to safety (e.g. stability limitations), high gear conversion costs, and

limited opportunity in deeper water. Members noted that Oregon's other commercial fisheries are unlikely to give up fishing grounds, and deepwater crab grounds outside 40 fathoms are already heavily fished early in the season. They stressed the need for testing across a representative range of vessel sizes, ports, and bottom types to ensure results reflect Oregon's conditions.

Members supported issuing more than five permits to capture this diversity and asked about planning for full authorization, noting that regulatory processes take years. There were also suggestions to designate specific testing areas and times, providing advance notification to the fleet, and considering vessel safety and gear manufacturing constraints.

Questions were raised about whether depth restrictions could shift earlier to reduce risk and about potential interactions with gray whale feeding areas. ODFW acknowledged these concerns and reiterated that the purpose of the controlled test is to gather the data needed to evaluate feasibility and understand how the gear performs in Oregon's unique environment, with any future authorization requiring additional public process and rulemaking.

Efforts to Build Entanglement Response Capacity in Oregon – Doug Sandilands, Cascadia Research Collective

Doug Sandilands from Cascadia Research Collective gave a presentation on large whale entanglement response and research efforts, highlighting the Cascadia entanglement response program's structure and activities, including response operations, research initiatives, and training efforts. The presentation outlined Cascadia's goals for building Oregon's entanglement response capacity, which include increasing public reporting rates, expanding the network's capacity to respond effectively, improving the quality and quantity of documentation collected during entanglement events, strengthening gear forensics capabilities to better understand regional and fishery specific interactions, and conducting outreach to ocean users. Upcoming activities in support of these goals include a May training in Newport in collaboration with Oregon State University (OSU) and the Oregon Coast Aquarium, as well as the deployment of new disentanglement and documentation tools funded by the Oregon Wildlife Foundation. The presentation concluded with a review of recent documentation progress and continuing work to better understand gear sources and entanglement configurations.

OEAC members shared mixed perspectives on the scale and visibility of whale entanglements. Some pointed out that many events are cryptic with whales carrying gear that is not visible on the surface making increased reporting even more important. Others expressed skepticism that many entanglements in actively fished gear during the first months of the fishery are going unobserved given how many eyes are on the water when fishing effort is high. Members stressed the need for clearer communication about what fishermen should look for and how to report sightings.

Questions were raised about Oregon's current response capacity and long-term staffing needs. Cascadia explained that the state has one Level 3 responder and several individuals with whale disentanglement experience who could advance with additional training, though availability

remains a challenge. Members suggested expanding partnerships with institutions such as OSU and the Oregon Coast Aquarium, which have vessels and staff who could support response efforts.

Members highlighted limited local capacity on the south coast and noted that commercial fishermen are often the only consistent observers on the water. They asked for clearer guidance on who to contact and how industry can appropriately assist. ODFW reiterated that whales can survive entanglements for long periods and that untrained attempts to remove gear leads to worse injuries overall and makes disentanglement efforts by trained responders more difficult.

Overall, the discussion underscored the need for increased reporting, expanded responder capacity, stronger collaboration with industry, and clearer messaging about the challenges of detecting and responding to whale entanglements.

Oregon Research Updates – Drs. Leigh Torres and Lindsay Wickman, Oregon State University, GEMM Lab

OSU researchers, Leigh Torres and Lindsay Wickman, provided an update on their ongoing project, Overlap Predictions About Large whales (OPAL). This work integrates biological, environmental, and fishery effort data to examine overlap between large whales and fixed-gear fisheries and quantify relative exposure to entanglement risk across space and time. OEAC has received updates on Project OPAL study methods and results on several occasions, including most recently at the [May 2024](#) OEAC meeting. This update covered their most recent analyses, focusing on humpback, blue, and fin whale overlap with the Dungeness crab, sablefish pot, groundfish, hagfish, and spot prawn/coonstripe shrimp fisheries.

The Dungeness crab fishery was found to be the dominant contributor to exposure for all whale species by a wide margin. In Northern Oregon, exposure is largely driven by fishing effort, with both Dungeness crab and sablefish pot fisheries showing notable overlap. In Southern Oregon, exposure is more strongly influenced by whale presence, especially for the Mexico humpback whale DPS. Humpback whales show the highest overall exposure, with peak exposure from the Dungeness crab fishery occurring January through April in Northern Oregon and May through June in Southern Oregon, and additional peaks with sablefish from August through October. Fin whales experience their greatest exposure from the Dungeness crab fishery from February through April throughout Oregon, while blue whales experience peak exposure from the crab fishery in July and August, particularly in Southern Oregon.

For humpback whales, species distribution model outputs were combined with distinct population segment (DPS) proportion estimates, allowing density and exposure to be further assessed at the DPS level. Analyses were stratified by region (northern Oregon, southern Oregon, and northern California) and time period (May–June, July–mid-August, mid-August–September, October–November). DPS proportions varied in both time and space. Across Oregon regions and time periods, the density of the Mexico DPS was consistently highest. Notably, the density of the endangered Central America DPS fell to zero during October–November in

northern Oregon. When overlaid with spatially explicit fishing effort data, exposure is low overall for the Central America DPS, but higher in Southern Oregon than Northern Oregon.

OSU researchers emphasized the value of using multiple co-occurrence metrics to compare fisheries, identify exposure drivers, and inform management strategies. They also noted that shifting environmental conditions and potential northward expansion of humpback whales into Northern Oregon could alter future entanglement risk.

OEAC members raised several questions about the co-occurrence modeling and underlying assumptions. Some questioned whether high overlap between whales and gear necessarily translates to higher entanglement risk and emphasized the importance of distinguishing among exposure, overlap, and co-occurrence metrics.

Members asked how humpback DPS assignments were made. OSU researchers explained that species identification relies on trained observers and photoID, and DPS assignment is based on confirmed photoID matches to breeding ground catalogs; sightings without definitive identification are excluded from species specific modeling. Some members noted uncertainties in photoID and the potential for mixing among populations, underscoring the need for more images and continued research. Researchers noted that while confirmed entanglements are rare, scar analyses indicate that roughly 20% of whales show evidence of past entanglement.

Participants also highlighted the role of derelict gear, noting that gear left offshore for long periods may pose the highest risk and that removing deepwater derelict gear should be a priority. Questions were raised about whether the modeling approach could be applied to other species, such as gray whales; OSU indicated that fishing effort layers could be used, but species-specific whale distribution layers would need to be developed.

Finally, members noted regional differences in co-occurrence patterns, including higher modeled values in northern Oregon, though researchers cautioned that these estimates carry wide confidence intervals.

Five-year Risk Reduction Measures Evaluation (slide 15-26 of the [meeting presentation](#))

ODFW shared plans to bring a five-year evaluation of key entanglement risk reduction measures to the OFWC in August 2026. The evaluation will assess confirmed entanglements, entanglement risk reduction, fishery impacts, and compliance information. ODFW emphasized that this is a partial snapshot and invited OEAC input on additional metrics to include.

Preliminary findings show that confirmed entanglements attributed to Oregon crab gear increased from seven cases during the eight years prior to implementation of measures (2013–2020) to thirteen cases post-implementation (2021–2025), with most involving humpback whales. ODFW noted that improved reporting, a growing humpback population, and shifting ocean conditions likely contribute to this increase. Entanglements now occur across a wider range of months and are more frequently documented in Oregon waters, and several recent cases appear to involve derelict gear. None of the post-implementation cases involved late-

season tags, suggesting most have originated with gear set outside the May–August period targeted by the late season measures.

ODFW also reviewed what is known about gear set depths for humpback entanglements. Depth information varies widely across cases, and some lack depth data entirely. Across both time periods, entanglements involved gear set inside and outside 40 fathoms, with a general trend toward more cases involving deeper set gear.

On risk reduction performance, late season line-days (a proxy for entanglement risk) have declined by nearly 25% on average since implementation of measures, with four of the five post-implementation seasons showing reductions of 26–41%. The only exception was 2022–23, when unusually high crab abundance increased fishing effort resulting in higher late-season line-days.

Fishery impact metrics show little change in overall participation, landings, or value. Early season variability appears tied to differences in season opening structure rather than the risk reduction measures. Late-season participation remains consistent with pre-implementation levels. Landings have generally been higher post-implementation, with small decreases in July and August, and overall variability appears driven by crab abundance and price rather than regulatory measures. Ex-vessel value has similarly been higher each month on average during the post-implementation period.

Port level patterns suggest localized differences: northern ports have received a larger share of late-season landings in recent years, while southern ports—especially Gold Beach and Brookings—have seen declines. ODFW is exploring whether these shifts reflect crab distribution, processor availability, or changes in fishing effort, and will further analyze metrics such as permits per port, pot limit tiers, and vessel length to explore any differential impacts.

ODFW’s preliminary assessment concludes that entanglement rates have risen even as late-season risk has decreased, that most entanglements in recent years appear to have originated outside of the late-season window, and that overall fishery-wide impacts remain minimal. Compliance has generally been strong, though enforcing tag requirements is challenging, and noncompliance increased during the temporary shift in the late-season start date during the 2025-2026 season.

The presentation closed with request for feedback on what additional metrics should be included in the 5-year evaluation and what long- or short-term regulatory changes should be considered.

ODFW also welcomed ideas for nonregulatory approaches, such as voluntary measures or research needs, while noting that the immediate focus is on what may be brought to the OFWC in August.

OEAC members discussed several factors that complicate interpreting recent effort, landings, and entanglement trends. Participants noted that the 2022–23 season was an outlier due to near-record crab abundance, unusual market conditions, delayed openings, and reduced participation in other fisheries, making it difficult to compare directly with other years. Members asked whether removing that season from analyses would change results and whether effort differences by port may be driven by delayed starts rather than late-season management measures.

Questions were raised about how to define “success” for risk reduction measures. Some members emphasized the need for clear metrics and thresholds, beyond line-days alone, including whale behavior, feeding areas, soak time, and population growth (e.g., an 8% annual increase in humpbacks). Others noted that more whales will naturally lead to more entanglements, regardless of management actions, and that this context should be considered when interpreting trends.

Members also highlighted safety and compliance challenges, particularly in spring months when weather and strong currents can keep gear underwater for extended periods. They stressed that Oregon’s diverse coastline requires adaptive approaches rather than one-size-fits-all measures.

Several participants encouraged using the OSU co-occurrence model to evaluate the potential benefits of different management options, such as adjusting late-season depth restrictions or pot limit reductions. ODFW confirmed that an extension of the modeling work is being funded to support this type of analysis.

Members also discussed habitat shifts, upwelling patterns, and changes in whale distribution that may influence fishing effort and entanglement risk. Some emphasized the need to consider cumulative entanglements and DPS-specific metrics, including potential biological removal (PBR) and serious injury/mortality thresholds, which will be central to NMFS review.

Additional comments focused on electronic monitoring, logbooks, and derelict gear recovery. Members noted that electronic logbooks could reduce reporting burdens and improve data quality and suggested incorporating derelict gear participation into the five-year evaluation. They also described existing voluntary recovery programs and emphasized the importance of accurate pot tracking systems.

Finally, members raised questions about humpback population structure, including potential interbreeding and why certain stocks (e.g., CAM) may not be increasing, underscoring the need for continued research and careful interpretation of population level risk.

Public Comment

ODFW staff provided time for public comments. Commenters raised several concerns and suggestions related to entanglement risk assessment, regulatory approaches, and data needs.

One commenter questioned the reliance on co-occurrence as a proxy for entanglement risk, noting that while overlap is measurable, it does not necessarily translate directly to risk. They urged the group to consider additional biological and behavioral factors rather than defaulting to a single metric.

Another commenter referenced the earlier request for feedback on potential regulatory changes and noted that the petition submitted to the OFWC had already proposed additional measures that could help reduce entanglement risk.

A third commenter reminded the group that, in addition to humpbacks, other whale species with low population numbers also use Oregon’s coast and should be considered in risk discussions.

Finally, a commenter asked why more attention is not being given to analyzing the gear found on entangled whales. NMFS responded that the Oregon Dungeness Crab Commission has formally requested all available photo documentation of entanglements attributed to Oregon crab gear to support more detailed review.

ODFW staff wrapped up the meeting by thanking everyone for their participation and relaying that a meeting summary will be provided to the group soon. Follow-up questions and input can be provided via email or phone.