Agenda Item E.3.a
NMFS Report
June 2015

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FROM: Pacific Offshore Cetacean Take Reduction Team (signatories listed below)

DATE: May 8, 2015

RE: Pacific Fishery Management Council Proposed Hard Caps on Marine Mammal Bycatch in the Drift Gillnet Fishery

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INTRODUCTION

We are writing to express several serious concerns regarding the Pacific Fishery Management Council's (PFMC) proposed "hard caps" on the bycatch of strategic stocks of marine mammals in the California/Oregon drift gillnet (DGN) fishery for thresher shark and swordfish.

As required by the Marine Mammal Protection Act, the Pacific Offshore Cetacean Take Reduction Team (POCTRT) was convened in 1996 in response to excessive bycatch of marine mammals in this fishery to develop a Take Reduction Plan (TRP) for reducing that bycatch. The POCTRT has been intimately involved in the development of bycatch reduction measures in this fishery, which largely have been adopted and implemented by NMFS, and have proved to be successful for the last 20 years (including the achievement of the zero mortality rate goal (ZMRG) for most stocks over that same period).

We believe that the TRT system provides the most effective and appropriate process for addressing bycatch reduction, and do not believe that the PFMC's proposed measures will improve the management of marine mammal bycatch in the DGN fishery. The bycatch of strategic stocks in the DGN fishery has become a relatively rare event, the importance of which we do not downplay, but we continue to work closely with the agency to understand its complexity and to achieve further reductions.

We laud the desire of the PFMC to reduce bycatch and support their efforts to reduce non-target fish bycatch in fisheries. We also commend their desire to reduce the bycatch of marine mammals in the DGN fishery, but believe that this goal has been and will

continue to be most effectively and efficiently achieved through the TRT process. This position reflects our consideration of several significant issues which we discuss herein.

BACKGROUND AND ELEMENTS OF TRT SUCCESS

The POCTRT was convened in 1996 to reduce bycatch of marine mammals in the DGN fishery, specifically addressing incidental serious injury and mortality of Baird's beaked whales, Cuvier's beaked whales, beaked whales in the genus Mesoplodon, short-finned pilot whales, pygmy sperm whales, sperm whales, and humpback whales. Following its inception, the team met 5 times in 5 months to create a consensus-based plan to reduce marine mammal bycatch in the DGN fishery.

POCTRT Composition, Actions and Success

The POCTRT was and continues to be made up of experts on marine mammals, the California and Oregon marine ecosystems, and the DGN fishery. The team includes experts from federal agencies, state agencies, DGN fishermen, scientists, and representatives of environmental NGOs. The team worked diligently to produce a TRP, the first to be created with the complete consensus of its TRT. The team carefully considered the factors responsible for the bycatch of several species, and designed mitigation measures to reduce the risk – primarily the use of pingers, training workshops and gear modification (e.g., extenders), and a voluntary reduction in the number of permits, which resulted in a significant reduction in the size of the fleet. Management measures called for in the TRP were implemented in 1997 and were likely responsible for a substantial reduction (and in some cases, elimination) in the bycatch of key species of marine mammals (Carretta et al., 2008). Because of that success it was not necessary to reconvene the team until very recently.

Timely Team Reconvening and Process Design

In 2010, two endangered sperm whales (California/Oregon/Washington stock) were killed or seriously injured, which pushed the bycatch rate above the potential biological removal (PBR) for that stock. The team was reconvened, whereupon it quickly crafted emergency measures that were designed to ensure that take would not exceed PBR again while continuing to allow the fishery to operate as long as possible (Emergency Rule 78 FR 54548, September 4, 2013). At the same time, in response to the POCTRT recommendations, NMFS investigated the status of CA/OR/WA sperm whales, the factors contributing to their bycatch, and improved methods for assessing the magnitude of the bycatch when such events are rare.

This process, which is still ongoing, has resulted in an emerging consensus that the sperm whale bycatch rate in this fishery since 2001 is below PBR and is not a serious threat to the viability or recovery of the population. Nonetheless, the POCTRT is continuing to

work toward the development of long-term management measures that will ensure that bycatch of sperm whales and other species remains below PBR and is further reduced toward ZMRG.

The effectiveness of this process has not been an accident. It is the direct result of the design of the TRT system as crafted in the MMPA. Key features are 1) the inclusion of experts on marine mammals and the fishery from several sectors, 2) the close working relationship of the team with scientists and managers within NMFS, and 3) the ability of the team to reach consensus decisions. In addition, the plan is comprehensive, covering management measures, needed research, public outreach, and monitoring. We are concerned in part because the PFMC's proposed measures share few of these characteristics.

ISSUES OF GREATEST CONCERN IN THE PFMC'S PROPOSAL TO IMPLEMENT "HARD CAPS"

Stemming from its recently stated goal to reduce bycatch of finfish and protected species in the DGN fishery the PFMC has proposed to impose "hard caps" with respect to the taking of several marine mammal species/stocks. While the goal is commendable, the TRT has identified serious concerns with the proposed bycatch reduction concept and design (the imposition of "hard-caps"), and finds that it is not based on the best available science.

In its Preferred Alternative, the PFMC has proposed to close the fishery for the remainder of a fishing season if more than a single sperm or humpback whale or two fin whales is/are killed or seriously injured in the fishery. There are several problems with this proposal.

- Hard caps as long-term management measures have been considered by the POCTRT and rejected for use in a situation where interactions are rare and sporadic. Dr. Jeff Moore (Protected Resources Division, Southwest Fisheries Science Center) presented an assessment of the use of "hard cap" as a bycatch reduction measure at the last POCTRT meeting.[1] Dr. Moore pointed out that annual hard caps are not appropriate for interactions in the DGN fishery because 1) of the prolonged life histories of marine mammals and slow reaction to low levels of mortality for the species of concern; 2) estimates of take within an annual time frame are highly prone to error unless observer coverage is close to 100%; 3) the Preferred Alternative enforces a lower limit than the targeted bycatch level under MMPA, which is statistically within the ZMRG averaged over time; 4) the Preferred Alternative is likely to produce over-reactive management, resulting in volatile decision making, and instability in the fishery, which can incentivize 'bad behavior'; 5) hard caps are not consistent with the agency's "best practices" (NOAA Guidelines for Assessing Marine Mammal Stocks; NMFS 2005, Moore and Merrick 2011) and default recommendation to

[1] Dr. Moore made a similar presentation to the HMS Management Team in February 2015

evaluate the effect of bycatch over multiple years; and 6) they are difficult to operationalize.

- The POCTRT recognizes that in certain, likely short-term circumstances a hard cap might be appropriate. For example, in response to the 2010 bycatch of two sperm whales the POCTRT recommended a hard cap to prevent bycatch from exceeding PBR in the near future, which resulted in the issuing of Emergency Rule 78 FR 54548 on September 4, 2013. In that circumstance the cap was carefully designed as a short-term measure to take into account the dynamics of the fishery, its interactions with the marine mammals, and the latest science. The Council has not taken this approach. The Council's Preferred Alternative proposes permanent hard caps, without consideration for future adaptive management such as changes to marine mammal populations, permit latency, or their identification/integration with long term management goals for the fishery.

- Of particular concern, is the potential volatility in long-term management resulting from proposed annual hard caps based on rare events. Although there have been conservative annual hard caps or quotas instituted/considered under the Magnuson-Stevens Act (MSA) to address bycatch of overfished fish species or incidental take of quota-managed species by the NPFMC and the PFMC, there are some important differences. Hard caps/quotas on finfish, although in some cases very conservative, are capping take of metric tonnage of thousands or hundreds of individuals. Fishery managers are able to monitor catch in-season and project when a quota is likely to be reached, thus reducing volatility and maintaining an orderly fishery during the management process. However, bycatch of marine mammal species in the DGN fishery are rare events, involving one or two individuals only and with statistical occurrences averaging close to zero over several years. And, importantly those events cannot be "projected." The rarity and dynamics in these events are characteristically different than bycatch of finfish managed under caps or quotas.

- The Council's Preferred Alternative would apply hard caps to fin, humpback and sperm whales. These species (stocks, actually) were selected because their latest 5-year averages of serious injury and mortality were greater than their ZMRGs (10% of PBR). The Council proposal based the hard caps on the 'expected take' numbers in the "Incidental Take Statement" (ITS) contained in the May 2013 Biological Opinion regarding marine mammal bycatch in the DGN fishery. Based on analyses conducted in 2012 by marine mammal population-dynamics experts at the Southwest Fisheries Science Center, the ITS established an 'anticipated annual take' of up to 2 fin whales, 1 sperm whale, 1 humpback whale. These values were derived from historical information from the fishery "that [was] considered to be consistent with the manner of current and future operation of this fishery." The anticipated take is an expected number of takes based on the average, five-year bycatch rate. NMFS was able to issue a permit for the take of these species because the bycatch rate, reflected in the ITS, was below PBR, which enabled NMFS to make a Negligible Impact Determination

(NID) under the MMPA. Whether considering the permit and NID, or the ITS, the appropriate response under the MMPA to bycatch that exceeds the ITS expected take or PBR is the reexamination of the situation by the TRT and NMFS. Closure of the fishery in this situation would prevent further bycatch for the remainder of the fishing season, but would not lead to better understanding of the factors that contributed to the bycatch or whether the operation of the fishery had changes, or to improved bycatch reduction measures.

PFMC Preferred Alternative Is Not Based on Best Available Science and Lacks a Clear Rationale

- The PFMC has not used the best available science in selecting the values of its proposed hard caps. Extensive research and application of model-based approaches by marine mammal stock assessment and population dynamics scientists in the SWFSC Protected Resources Division have substantially refined the estimates of the long-term bycatch rate, the expected bycatch and its variance in a given year. That work has vastly improved the state of the science beyond that which informed the 2013 ITS. By taking numbers from the 2013 ITS the Council is proposing to base bycatch management on outdated information.

- The Council, in selecting the species to manage through hard caps and in establishing its basis for the hard caps, has made a number of decisions that appear arbitrary and lacking in scientific justification, because they are not supported by a clear rationale and lack an analytical basis. For example, the Preferred Alternative states that for fin whales the hard cap is "set above the estimated one-year take in the ITS, recognizing that [this] species [is] infrequently encountered in the DGN fishery so expected take is less likely to trigger a jeopardy determination." The Council provides no justification for what 'encounter frequency threshold' was used, what its basis was, or on what basis they selected the increment to add to the cap.

- The Council acknowledges that "DGN fishery currently complies with all applicable laws, including the MSA, ESA, and MMPA," and "seeks to establish more stringent standards with respect to these laws," but does not provide a reason for why "more stringent standards" are needed or what goals would be achieved. This is especially puzzling given the success of the TRT process in reducing bycatch to very low levels in this fishery.

- The Council states that "[t]he proposed action is needed to better integrate fishery management under the HMS FMP with enhanced protection of ESA-listed species and other marine mammals," but does not explain how it would lead to better integrated management or why that is necessary.

- The Council proposes establishing performance standards for non-ESA listed stocks, but does not explain why they are needed, or why they are not needed for listed stocks.

- The Council does not explain how hard caps would reduce bycatch of protected species, or by how much. There is no explanation of why they are needed in addition to the measures that result from the TRT process, or, why they would be an improvement.

ANTICIPATED IMPLEMENTATION CHALLENGES STEMMING FROM SHORTCOMINGS IN PFMC'S PROPOSAL

In addition to concerns that the Council's proposal is not adequately specified and lacks basis on the best available science, the proposal presents many implementation concerns and would likely create a number of problems, as described below.

- The management measures based on the recommendations of the POCTRT have been successful in part because of the responsive and adaptive TRT process. The Council's proposal lacks a mechanism to modify the caps when estimates of PBR or serious injury and mortality change.

- The imposition of hard caps would require in-season monitoring of fishery effort and bycatch, something that cannot be done now. The Council's proposal suggests an in-season monitoring system similar to that used in the Hawaii deep-set longline fishery could be used, but without assessing whether such a scheme could be implemented in the West Coast region for the DGN fishery. We note that, the Hawaii longline fishery's monitoring system works because it is managed under the TRP devised by the False Killer Whale Take Reduction Team.

- Although the Council's stated goal is the reduction of bycatch in general, the Council's proposal does not demonstrate how the caps would achieve that goal or how it would specifically reduce marine mammal bycatch in the long run. Under the TRT process, bycatch that exceeds some pre-defined threshold typically triggers additional analysis and research, and the consideration by the TRT of the factors responsible for the bycatch, so that measures can be adapted to reduce bycatch risk while allowing the fishery to operate. Although the Council's proposal would reduce bycatch by preventing further takes in the same fishing season, it would do so by closing the fishery and imposing a possibly unnecessary and severe economic burden on the participants.

- Because the Council's caps rely on reference points developed under the MMPA and ESA for other purposes, the Council in effect is using the MMPA and ESA inappropriately and as a very blunt instrument to try to regulate the bycatch of protected species.

- The implementation of hard caps by the Council would be seen by the fishermen (and likely other TRT members) as superseding the management coming from the TRT process. That could create a disincentive to their participation on the TRT, which would greatly diminish the effectiveness of the TRT.

- The DGN fishery operates with very slim profit margins and is able to support only a small number of boats. The imposition of a 'hard cap' system, with the potential for periodic full closures of the fishery could make the fishery economically unviable.

PFMC PROPOSAL'S IMPACTS ON NMFS' MANAGEMENT OF THE DGN FISHERY

Because the Council is operating independently of the POCTRT, the implementation of the Council's proposal would require NMFS to employ protected species bycatch management measures under the MSA separately from those implemented under the MMPA and the ESA through the TRT process. This precedent has the potential to create several management problems for, or at the very least create considerably more work by, NMFS to reconcile or integrate the different measures, such as:

- Overlapping and uncoordinated responsibilities
- Conflicting management measures and goals
- Break-down of what is now a clear separation of authority and responsibilities
- Duplication of effort
- Potentially less effective management
- More costly management
- Decreased support from stakeholders

RISKS OF UNCOORDINATED CO-MANAGEMENT OF MARINE MAMMAL BYCATCH IN THE FISHERY

There is nothing inherently wrong with developing management measures under more than one authority, or implementing them through more than one division within NMFS. Indeed, the POCTRT, working closely with the Protected Resources Division (PRD), addresses the requirements of the ESA and the MMPA, and when necessary NMFS has implemented the recommendations of the POCTRT under the MSA. In addition, the POCTRT regularly consults and works with the Sustainable Fisheries Division (SFD). However, few of these elements are at work at the Council.

The Council is not working closely with the POCTRT or the PRD, and is instead developing measures largely independently, presumably working with the SFD. This is a concern because of the obvious inefficiency of such a system, but also because unlike the POCTRT working with the PRD and SFD, the Council working with the SFD alone does not fully possess the experience and expertise to enable the crafting of effective measures to manage the bycatch of marine mammals.

Precedent-Setting Consequences Are of Concern

The PFMC's actions have the potential to set a precedent for other Councils to become involved in reducing marine mammal bycatch under the MSA instead of, or in addition to, the MMPA. Such an approach potentially suffers from all the problems described herein, and runs the risk of undermining the TRT system. We believe this precedent could lead to a duplication of effort, inefficient management, likely increased economic burden on the agency, and increased risk to protected resources for the following reasons:

- The MSA and the parts of the MMPA that address bycatch each have a very different focus – fish yield first and other species second *versus* the explicit problem of reducing the bycatch of marine mammals that interact with commercial fisheries.

- The MSA and MMPA/ESA reflect different mandates – the optimal exploitation of fish resources *versus* the protection of marine mammal species and populations. It does not make sense to try to manage marine mammal bycatch under the MSA. It was not designed for that task (bycatch is defined under the MSA as finfish), unlike the MMPA, and doing so is likely to produce less effective management.

- The MSA and MMPA/ESA have different management objectives. The same underlying surplus-production population-dynamics modeling framework is used to define benchmarks and reference points, but the way in which the model is used is very different – achieving maximal/optimal yield while secondarily minimizing incidental impacts *versus* achieving and maintaining OSP (not MSY or OY) and identifying the maximum take levels that do not compromise that goal.

- The MSA and MMPA establish different conservation/protection models – fishing is allowed until a negative impact is identified *versus* the precautionary approach, in which activities are permitted only if they are shown not to have an impact.

- The Council operates under a majority-rule decision-making model, while the POCTRT operates under a consensus-based decision-making model. We believe that the latter has a proven track record and is more effective at dealing with the complex interaction between protected species and fisheries. That the Council operates under majority rule, may in part explain why it has not been responsive to two of its expert committees (HMSMT and HMSAS), both of which have expressed strong concerns with implementation and utility of the hard cap proposals for the DGN Fishery

- The Council and the POCTRT use different stakeholder participation models. Participation in the Council is driven by self-interest, whereas the TRT is collaborative, and membership on the TRTs is mandated by the MMPA to include the full range of relevant stakeholders and experts specific to bycatch reduction.

> There is no mechanism or requirement that a Council will have a balanced representation of stakeholders or individuals with the requisite experience and expertise to address marine mammal bycatch issues. In contrast, there is a great deal of effort that goes into making sure that TRTs have the necessary balance and range of expertise/experience. Indeed, consensus by a TRT requires the participation of all of the requisite sectors (federal government, state government, members of each fishery involved, scientists, and environmental NGO representatives).

The Council's basis and operating model have proven effective in recent years at sustainably management fishing, however that model does not have a similarly successful track record with respect to reducing bycatch.

CONCLUSIONS AND RECOMMENDATIONS

While the POCTRT appreciates the Council's desire to address marine mammal bycatch, MMPA Section 118 was purposefully enacted as the process for governing incidental commercial fishery takes, and was provided with support provisions (Section 117) that set up a process for the identification, quantification, and continual monitoring, assessment and adjustment (Scientific Review Groups & Stock Assessment Reports) of marine mammal stock status (PBRs). TRTs convene when necessary, evaluate bycatch in relation to stock status, and recommend fishery changes with the direct participation of all stakeholders. The Council process is simply not structured or funded to carry out that process, nor does it have the experience and expertise with marine mammals and protected species bycatch to be successful.

Nonetheless, the Council and NMFS's SFD have substantial experience and expertise with the management of fisheries, gear and fishing practice modification, and working with fisheries to achieve mutually beneficial outcomes. That experience and expertise would most effectively contribute to the improved bycatch reduction of marine mammals if used to augment the efforts of the TRT. The POCTRT suggests that the Council could enhance or improve the measures developed by the TRT by contributing its knowledge and expertise to the POCTRT, rather than trying to develop potentially competing and conflicting management measures independently of the POCTRT. One step in this direction has been the appointment of a Council representative to the POCTRT. We welcome the proposed appointment of David Crabbe as Council representative on the POCTRT and believe this will greatly assist our two groups in working together to reduce bycatch in the DGN fishery. The Council and the POCTRT share a significant common goal, and we believe that the Council can be most effective at reducing marine mammal bycatch by integrating its efforts into the TRT process.

Finally, we thank you for your consideration of these points and ask that this letter be shared with the Council – both as part of the read-ahead package and at the June meeting itself.

This letter was reviewed and formally endorsed by the following Team members:

Hannah Bernard, President, Hawai'i Wildlife Fund
John Calambokidis, Cascadia Research
Chuck Cook, The Nature Conservancy
Kathy Fosmark, Alliance of Communities for Sustainable Fisheries
Doyle Hanan, Hanan & Associates, Inc.
Jim Harvey, Director, Moss Landing Marine Laboratories
David Haworth, Commercial Fisherman (alternate)
Taryn Kiekow Heimer, Staff Attorney, Marine Mammal Project, Natural Resources Defense Council
Michelle Horeczko, Senior Environmental Scientist, California Dept. of Fish and Wildlife, Marine Region
Chuck Janisse, Alliance of Communities for Sustainable Fisheries
Donald Krebs, Commercial Fisherman
Arthur Lorton, Commercial Fisherman

Two additional Team members – Kristy Long and Tina Fahy, both with NOAA Fisheries – recused themselves consistent with the role of Agency members in decision-making outlined in the TRT Protocols. Two other members, David Hanson and Dennis Heinemann, have recused themselves given the roles of their organizations (Pacific States Marine Fisheries Commission and Marine Mammal Commission, respectively).