Pacific Offshore Cetacean Take Reduction Team Meeting
March 17-19, 2015: Long Beach, California

*****Key Outcomes Memorandum*****

I. OVERVIEW

The National Marine Fisheries Service (NMFS) convened an in-person meeting of the Pacific Offshore Cetacean Take Reduction Team (TRT or Team) March 17-19, 2015, at the NMFS' Long Beach, California, office to achieve the following objectives:

- Provide updates on recent Pacific Offshore Cetacean Take Reduction Team-related activities, including sperm whale abundance, stock status and bycatch, research initiatives, Observer Program efforts, enforcement and fisheries activities
- Discuss and gather Team feedback on potential merits of using alternative methodologies for modeling bycatch estimates for strategic stocks in addition to sperm whales
- Provide update on Pacific Fishery Management Council discussions to develop a drift gillnet management and monitoring plan related to hard caps, performance measures for marine mammal bycatch, observer coverage; consider ramifications for TRP and potential Team recommendations
- Consider development of options for and, as needed, seek consensus on permanent amendments to the Pacific Offshore Cetacean Take Reduction Plan to reduce mortality and serious injuries of strategic stocks
- Outline post-meeting next steps

This summary report, prepared by CONCUR Inc., provides an overview of the meeting's key outcomes. It is presented in the following sections: (1) Overview; (2) Participants; (3) Meeting Materials; (4) Presentations and Meeting Discussion Topics; (5) Consensus Recommendations; (6) Public Comment; and, (7) Next Steps.

II. PARTICIPANTS

Eleven of the Team's 15 members or alternates participated in the meeting, including: Hannah Bernard, Tina Fahy, Kathy Fosmark, Dave Hanson, David Haworth (alternate for Chuck Janisse), Dennis Heinemann, Michelle Horeczko, Taryn Kiekow Heimer, Donald Krebs, Kristy Long and Arthur Lorton. The following Team members were unable to participate: John Calambokidis, Chuck Cook, Jim Harvey, Doyle Hanan and Chuck Janisse.

The deliberations were supported by several NMFS staff, including: Penny Ruvelas, Long Beach Branch Chief, Protected Resources Division; Charles Villafana, West Coast Region Fisheries Observer Program; Jim Carretta, Jeff Moore, Jay Barlow and Steve Stohs, all with the NMFS Southwest Fisheries Science Center (SWFSC); Heidi Taylor with the West Coast Region's Sustainable Fisheries Division; and Monica DeAngelis with the West Coast Region's Protected Resources. Additionally, Chris Yates, Assistant Regional Administrator

for Protected Resources, West Coast Region, offered opening remarks and observed a portion of the Team's deliberations.

Other participants and observers for all or part of the meeting included: the U.S. Coast Guard; NMFS' Sustainable Fisheries and Protected Resources divisions; ; NOAA General Council, and several members of the public. Scott McCreary with CONCUR, Inc. and Bennett Brooks with the Consensus Building Institute facilitated the meeting.

III. MEETING MATERIALS

A meeting agenda and a number of background meeting materials were provided in advance to support the group's deliberations. Copies of available meeting materials can be found on-line at: http://www.nmfs.noaa.gov/pr/interactions/trt/poctrp.htm.

Documents can also be obtained by contacting T. Fahy at 562-980-4023 or via email at christina.fahy@noaa.gov.

IV. PRESENTATIONS AND MEETING DISCUSSION TOPICS

Below is a brief summary of the main topics and issues discussed during the meeting. This summary is not intended to be a meeting transcript. Rather, it provides an overview of the main topics covered, the primary points and options raised during Team discussions, and any consensus recommendations.

A. Welcome and Introduction

Chris Yates opened the meeting by welcoming participants and thanking them for their ongoing commitment to the Take Reduction Team process. He underscored the Team's role as the Agency's primary advisory body related to commercial fisheries-marine mammal interactions, noting the unique mix of perspectives and expertise covered by the Team membership. He further acknowledged the confusion sparked by the Pacific Fishery Management Council's (Council) recent discussions regarding hard caps for the California drift gillnet fishery and suggested the TRT meeting offered a timely opportunity for Team members to offer its guidance on direction and next steps.

Following C. Yates' remarks (and Team member self-introductions), T. Fahy and S. McCreary reiterated the primary meeting objectives, the central importance of the Team's role and provided an overview of the meeting agenda. K. Long next reviewed NMFS' new Operating Protocols, which are meant to provide consistency across all Take Reduction Teams. B. Brooks then reminded participants of the Team's informal protocols intended to foster productive dialogue. He further noted that none of the Team members representing researcher/academic interests were able to attend the meeting due to last-minute constraints. As a result (and consistent with the Protocols), the Team will need to hold a follow-on teleconference to gauge full Team support for any consensus recommendations put forward during the meeting.

There were no proposed revisions to either the agenda or ground rules, but D. Hanson noted that, though a non-voting member of the Council, he is not formally representing the Council on the Team. T. Fahy further noted that the Agency is working with the Council to designate a formal representative to the Team (likely David Crabbe).

B. Background Briefings and Updates

To inform Team discussions, the deliberations included a series of updates and information related to the Take Reduction Plan. Below is a brief synopsis of the various updates; more detailed materials (presentations and handouts) are available on the Team website (see link provided earlier). Team member comments related to the various briefings and updates are captured in the Team discussion summary below.

- **Agency Activities – General Updates.** The first series of briefings by T. Fahy focused on general Agency activities. These included: (1) reminding Team members of Plan purpose, focus and immediate and long-term goals; (2) providing an update on Team membership (invitation extended to Council for its participation, Elizabeth Hellmers named as alternate for M. Horeczko, and D. Heinemann shift to the Marine Mammal Commission's primary representative, with D. Laist serving as alternate); (3) reviewing amount and extent of take of ESA-listed species in the California drift gillnet fishery; (4) reminding Team members of the Agency's current decision not to move forward with a permanent amendment to the Plan through implementation of a final rule for the California drift gillnet fishery; (5) brief overview of recent Team Working Group deliberations (discussed in greater detail elsewhere in the meeting summary); (6) recent fleet outreach/education efforts (including two in-person and three teleconference workshops attended by 29 skippers/ crew (representing 100% of active fishermen); (7) updates on 2015 loggerhead sea turtle time and area closure; (8) ESA-listed species status updates related to green turtles (proposed reclassification), loggerhead turtles (critical habitat not designated off the U.S. West Coast), common thresher shark (petition for status review;) and humpback whale (status review); and (9) the updated List of Fisheries.

  Additionally, T. Fahy provided updates on implementation status of the MMPA import provision, which is intended to bar importation of commercial fish or products from fish "if caught with commercial fishing technology which results in the incidental kill or incidental serious injury of ocean mammals in excess of U.S. standards." She also reviewed preliminary Observer Program data on the California drift gillnet fishery (# of vessels, trips and sets observed, coverage rate, extent of unobservable vessels, protected species takes, etc.), and provided a brief summary of Council deliberations on possible recommendations for hard caps and related topics for the California drift gillnet fishery (see more detailed topic synthesis below).

  Finally, K. Long provided a brief overview of the NMFS workshop held February 2015 to identify safe methods for deterring marine mammals from damaging fishing gear and catch, damaging personal or public property, or endangering personal safety. K. Long briefly reviewed workshop purpose, intended work product (e.g., possible prohibitions)

and likely timeline for any associated rule-making. Several Team members noted the growing concerns associated with the increased sea lion population in California (depredation, intimidation on vessels/docks, etc.).

- **POCTRP-Related Data Review and Updates.** Several presenters provided the Team with a detailed overview on both updated marine mammal mortality estimates, as well as a model-based approach for improving bycatch estimation, observer and fishery effort-related data, enforcement/compliance-related data, and recent cruise results. Key presentation highlights included the following:

  - ***Updated mortality and serious injury.*** Jeff Moore (on behalf of Jim Carretta) with SWFSC provided data from the current Stock Assessment Report (and in some cases, preliminary 2014 bycatch data) on minimum population size estimates and associated potential biological removal (PBR) and the estimated mortality and serious injuries of marine mammal stocks managed under the Plan in the CA drift gillnet (DGN). Key elements of his presentation included the following: two species covered by the TRP (sperm whale, short-finned pilot whale[1]) are below PBR but likely above the zero mortality rate goal (ZMRG); all other covered species are below both PBR and ZMRG. He also further reviewed the locations of observed bycatch relative to fishing effort.

  - ***Model-based approach for bycatch estimation.*** J. Moore with SWFSC presented two model-based approaches being considered by the Science Center for bycatch estimation. Both approaches are intended to provide a more accurate approach for modeling rare-event bycatch estimates and reduce the volatility in annual bycatch estimation that can impact takes relative to PBR and ZMRG.

    In one model-based approach, developed by J. Moore, instead of estimating sperm whale bycatch based on a ratio of observed takes to total effort, estimates are derived by using all available data over a longer time period to develop a probabilistic assessment of the likelihood of bycatch exceeding PBR. Based on this approach, there is a less than 1% chance that the sum of bycatch exceeded PBR from 2001-2013.

    A second model-based approach, being developed by Jim Carretta with SWFSC, focuses on a tree-based (or clustering algorithm) model, which assess the probability of bycatch based on a multi-year data set incorporating factors such as depth, latitude, time of day and other relevant factors. Based on this approach, the model suggests a summed bycatch estimate of 6.1 sperm whales between 2001-2013 (versus 9.9 for the ratio estimate).

[1] Carretta noted that two observed takes of short-finned pilot whales in January 2014 (estimates incomplete as of this meeting) are not expected to push bycatch above PBR of 4.6, but will push it above ZMRG.

Some of the advantages to both of these approaches include: maximizing use of available data; increasing stability of estimates and management by reacting to patterns rather than single-year events; and eliminating perceived subjectivity. SWFSC is still refining the models and will be subjecting them to peer review before determining which bycatch estimation model, or combination of models, to use going forward.

Team members posed numerous clarifying questions, but generally agreed that the models offer an improved method for calculating bycatch and one that would provide a more stable basis for future management decisions. Other comments included:

- Understanding the extent to which the model-based approach will be applied to other stocks and regions, as well as any plans to vet the model broadly among other TRTs and organizations involved in bycatch reduction. (J. Moore said the model-based approach is likely to begin being applied in the region within the next 1-2 years. It was also noted that a joint Science Review Group meeting to be held in 2016 is expected to look at bycatch estimation models across regions.)
- Suggesting that the model-based approach places a greater burden on the Agency to collect data on the co-variates that impact bycatch
- Noting that higher observer coverage levels generate improved model results

- ***CalCurCEAS cruise summary.*** Jay Barlow with SWFSC provided an overview of the CalCurCEAS 2014 cruise. Barlow noted that the survey, which relied on both visual and sonar methods to identify animals, had nearly 1,000 sightings of groups of animals and showed evidence of a warm-water year. Survey results are still being analyzed, but Barlow noted that the survey sighted more animals generally found in warmer waters (e.g., the first-ever pygmy killer whale) and cold-water species were more restricted to central/northern areas. He also noted that the survey spotted a similar number of animals as the 2008 survey, but with 20% less effort. Other points included: (1) strong sightings of humpback, sei and fin whales; (2) shift of short-beaked common dolphins towards the coast and farther north; (3) higher mean group size for sperm whales, and, (4) shift of striped dolphins farther north. Finally, Barlow noted that SWFSC is developing a new factor to correct for animals missed during surveys. The SWFSC hopes to repeat the survey in 2015, funding permitting.

- ***Observer Program Updates.*** Charles Villafana with the West Coast Region's Fisheries Observer Program gave Team members a brief, preliminary update on recent activity in the drift gillnet fishery (both for calendar and fishing year), highlighting the number of observed sets (97 for calendar year, 113 for fishing year); estimated sets (409 and 379); percent coverage (24% and 30%); percent of unobservable effort (35% and 30%); and protected species encountered (most notably, 2 short-finned pilot whales in calendar year 2014). C. Villafana

noted that all data presented were preliminary and should not be cited. Additionally, it was noted that there were fewer active vessels due to warmer water/fewer target species. C. Villafana also noted that the Program expects to test electronic monitoring this season (2015-16) and next (2016-17) on both observable and unobservable vessels to assess the types of data that can be reliably and accurately collected.

- ***Fishery-related updates.*** M. Horeczko with CDFW provided a brief overview of DGN permit status. In the 2013-14 season, 74 permits were issued for the DGN fishery; 19 vessels actually fished. In the 2014-15 season just ended, 72 permits have been issued thus far. (C. Villafana further noted that there were 15 active boats this season.) In response to a Team member question, M. Horeczko noted that permits can be issued up to a year after the March 31 deadline (with an associated late fee).

- ***Council activities.*** T. Fahy provided background on the Council's plans to put forward a California DGN fishery management and monitoring plan that relies on Magnuson-Stevens Act (MSA) authority to: impose annual hard caps to reduce bycatch and takes for high priority protected species; increase monitoring coverage rates, with a target of 100% by 2018; and establish "performance objectives" for non-ESA-listed marine mammals. She noted that the Council has said it sees a focus on marine mammal and sea turtle bycatch as a mechanism for more tackling broader bycatch issues related to the fishery.

  T. Fahy next reviewed the Agency's efforts to brief the Council on the challenges associated with implementing its preliminary preferred approach. She also noted that both the Highly Migratory Species Management Team (HMS MT) and the Scientific and Statistical Committee have both been asked to present additional information to inform the Council's discussions at its June 2015 meeting.

  At Team members' request, J. Moore reviewed for Team members his HMS MT presentation in early March that summarized the methodological and operational issues related to the use of hard caps for managing fisheries to limit protected species interactions, particularly for *rare-event bycatch*. Key points associated with his presentation centered on the following: (1) annual hard caps are unnecessary given marine turtle and mammal slow life histories and slow reactions to low/moderate levels of mortality; (2) annual hard caps are likely to result in management error unless there is 100% observer coverage (e.g., within-year estimates will commonly be inaccurate); (3) annual hard caps will effectively enforce a lower limit than provided by the nominal cap level); (4) annual hard caps can result in over-reactive management; (5) annual hard caps directly contrast with Agency best practices; and (6) annual hard caps would be very difficult to implement.

The proposed DGN fishery management and monitoring plan was a key focus of the Team's deliberations. A detailed synthesis of the Team's discussions and related recommendations is summarized in the Key Themes and Discussion Topics below.

- **Enforcement and Compliance.** Several presentations summarized recent activity and trends related to enforcement and compliance. J. Carretta noted that the most recent data shows widespread ongoing DGN fleet compliance with Plan requirements (pinger usage, net length, extender length). He noted, however, that less is known about compliance on unobservable vessels (although some data is gathered by the U.S. Coast Guard via random boardings). T. Fahy noted that the Agency has obtained an underwater pinger detection device but it is not currently in use. Lieutenant JG Joe Lacanlale and Chief Warrant Officer Glenn Lee with the U.S Coast Guard provided an overview of their efforts, emphasizing its broad responsibilities, capacities (vessels and personnel), and geographic range. They also underscored their willingness to work the Agency and fishery to target boardings at unobservable vessels.

  The presentations triggered extensive discussions regarding various strategies to better track unobservable vessels – both to assess compliance and to better understand the extent to which fishing practices may vary across observable and unobservable vessels. Team members also expressed interest in getting more detailed information on boardings to-date (frequency, observable v. unobservable). Primary themes related to this topic are summarized in the Key Themes and Discussion Topics section below.

- ***Other.*** T. Fahy provided brief updates on a series of other topics, including the following:

  - Two POCTRT Working Group deliberations in 2014 focused on developing recommendations for full Team consideration related to hard caps (not supported) and trigger (supported but more discussion needed to define an appropriate trigger and nuanced response).
  - Status of the California DGN final rule related to vessel monitoring system and pre-trip notification requirement (both effective March 2015)
  - Research into the viability of dynamic ocean management (an area discussed at the Team's February 2014 meeting) is still ongoing; no immediate progress is expected relative to cetaceans.

C. Key Themes and Discussion Topics

The Team spent the bulk of the meeting discussing and considering various options for strengthening TRP implementation and considering Council measures related to the California drift gillnet fishery. Below is a synthesis of the key themes and discussion topics that informed and shaped the Team's eventual adoption of consensus recommendations.

- **Pacific Fishery Management Council DGN Management Plan.** The Team spent considerable time discussing the Council's plan to manage and monitor the California DGN fishery for protected species bycatch under the Magnuson-Stevens Act (MSA).

  Team members broadly voiced concerns that the Council's work in this area is duplicative of the Team's efforts, inconsistent with its mandate and likely to undermine Team and Plan focus, authority and effectiveness. Team members were particularly concerned with (1) the focus on using hard caps to manage for rare-event bycatch given the numerous limitations identified in J. Moore's presentation, and, (2) the Council's foray into a policy space where it lacks the requisite scientific expertise and diversity of perspectives to develop management recommendations capable of being effectively implemented. There were also concerns that the Council's actions related to the CA DGN fishery could serve both as a (1) troubling precedent for other fisheries management councils throughout the U.S. and (2) disincentive for Take Reduction Team participation.

  Other comments centered on the following:

  - Underscoring the problems associated with annual hard caps, noting that such a strategy will inevitably result in frequent and problematic shifts in fishery management as fishery managers are forced to react to within-year single-events rather than looking to more instructive longer-term patterns. Such an approach is particularly ill-advised, they noted, given the longer life spans of marine mammals and sea turtles.

  - Acknowledging that the Team needs to continue developing recommended management actions that can help reduce serious injuries and mortalities to levels approaching ZMRG for all species managed under the TRP, as well as identify strategies to improve observer coverage for currently unobservable vessels. Additionally, several Team members stressed the importance of communicating this ongoing focus clearly to the Council, Agency and interested stakeholders.

  - Seeking to understand how the Agency would balance and weigh competing recommendations from the Council and the TRT, and suggesting that the Team's guidance should take precedence given its unique expertise, the structure of its consensus-seeking approach and its track record of successful collaboration in policy development. NMFS participants at the table reiterated the view that the Take Reduction Team is the primary body it looks to for advice on MMPA-related guidance, but also noted that the Agency must consider any recommendations put forward by the Council.

  - Noting the Team's success to-date in developing a Plan that has been successful in reducing marine mammal bycatch below PBR and, for most species, approaching ZMRG.

- Recommending improved communication between the Council and TRT to ensure the Council better understanding the Team's history, focus and expertise, as well as the Plan's successes to-date.

Team members suggested several specific actions given the Council's ongoing deliberations. Most immediately, the Team recommended it draft a letter to NMFS outlining: (1) the strengths of the TRT process; (2) the rationale for and success of the TRP strategy adopted to-date; and (3) the limitations and concerns associated with the Council's proposed approach. The letter should also include a listing of all members to demonstrate the unique cross-cutting composition of the Team. (A small drafting group met in the evening of Day Two to develop an annotated outline for the letter, which was then discussed and revised by the Team on Day Three.)

The Team further recommended that the letter be sent to both NMFS leadership (Assistant Administrator, Chief Scientist, Protected Resources and Sustainable Fisheries Division chiefs, and General Counsel), along with the Marine Mammal Commission. It also suggested that the Agency forward the Team's letter to the Council early enough to include in the read-ahead package and be presented on the floor at the June Council meeting. Team members were also encouraged to attend the June meeting and be available to discuss Team concerns.

A Working Group composed of K. Fosmark, D. Heinemann, M. Horeczko and J. Calombokidis is to prepare a draft letter based on the annotated outline discussed on Day Three of the Team meeting for subsequent review, comment and eventual confirmation (likely via email). The intent is to forward a final consensus-supported letter to the Agency by April 20, 2015.[2]

- **Unobservable vessels.** The Team spent significant time discussing the need and possible strategies for monitoring those vessels now considered by the Observer Program to be unobservable due to insufficient space or safety considerations (6 of 25 vessels in calendar year 2014; 5 of 20 vessels in the 2014-15 DGN season.) This is important, several Team members said, to understand both the reality and perception of whether species covered by the Plan have a higher likelihood of M&SI interactions with unobservable vessels. NMFS (West Coast Regional Office and the SWFSC) have taken a look at the logbook records (reporting on CDFW fishing block and swordfish/set) in association with observer data to determine whether there is a difference in location/effort/swordfish CPUE between unobserved/unobservable vessels and observed vessels. In general, given the more coarse nature of the logbook data, a true comparison was not possible; however, the 2013 Biological Opinion used observer data as representative of the fleet, without further investigation using electronic monitoring and looking at future VMS data.

[2] The final letter, as transmitted, is included as an attachment to this meeting summary.

Fishery representatives on the Team suggested that, given their familiarity with the vessels unable to carry observers, they do not expect fishing practices to vary meaningfully from those observable vessels. That said, they and other Team members said it was important to more closely assess fishing practices and gear requirements such as pinger usage to confirm compliance and, as needed, address concerns. The Team brainstormed a number of options for addressing issues related to unobservable vessels, including:

- Partnering more closely with the U.S. Coast Guard to prioritize boarding of unobservable vessels. Such an approach was seen as particularly viable – both by Team members and Coast Guard representatives at the meeting – given the 48-hour call-in notification and mandatory VMS usage. Coast Guard representatives also suggested that their vessels could carry non-Coast Guard personnel to aid in monitoring. (It was further suggested that this also be explored as an option with CDFW enforcement vessels.) The Team further discussed the importance of NMFS providing periodic training for Coast Guard personnel on TRP priorities and regulations given the Sector's frequent staff turnover (every two to three years).

- Using the Agency's pilot onboard electronic monitoring program to track currently unobservable vessels. C. Villafana noted that the Team and Program will need to develop priorities for guiding the use of electronic monitoring (e.g., location on vessel), since the video cameras will likely be more effective at gathering certain data (e.g., type of animal in an interaction) versus others (e.g., gauging injury severity). Some Team members voiced concerns with the costs associated with the electronic monitoring – both to industry for installing the hardware and the Agency for reviewing and analyzing the data.

- Considering ways to confirm that unobservable vessels are deploying a full complement of working pingers. Some Team members suggested greater dockside enforcement such as confirming the on-board presence of working pingers; however, Observer Program staff said such approaches in the past have been deemed ineffective since they do not provide assurance that the pingers are actually being used at sea. Given the limitation, several Team members suggested that unobservable vessels demonstrate compliance pre-season with Plan gear requirements (pingers on nets and functioning, etc.) either dockside or, if not possible, via a daytime at-sea set. If the vessels are deemed non-compliant, they said, the vessels should not be allowed to fish.

- Making better use of NMFS' underwater pinger detection device to assess whether pingers are functioning. The device could be shared with the Coast Guard or state partners to foster its more widespread usage.

- Analyzing VMS data to test and report back to the Team on similarities and differences in observable and unobservable vessel fishing behavior (e.g., location, set time, soak time, variation in fishing methods, etc.).

- Requiring all vessels to be deemed observable within a certain timeframe (i.e., within two years) or not be eligible for permitting in the fishery. This approach, while attractive to some Team members, was not deemed viable given the operational challenges or potential expense for some vessel owners.

- Making use of new technologies such as drones to track unobservable vessels.

Additionally, several Team members recommended that the Agency provide regular updates on its efforts to more closely monitor unobservable vessels, including the preparation of a mid-course report (after one year) on both unobservable vessel compliance and any findings from its pilot electronic monitoring program. A more comprehensive report was suggested for the two-year mark.

- **Strategies to meet MMPA short and long-term goals.** The Team considered the need for potential Plan amendments to keep M&SI takes below PBR and make documented progress towards the longer-term goal of approaching ZMRG (defined as 10% of PBR). The Team considered a range of options, from expanded observer coverage requirements and time/area closures to improved fleet communication and other avoidance strategies. The Team did not identify any immediate regulatory changes, but the discussion did highlight a number of issues requiring further analysis and/or Team deliberation. Below is a summary of key discussion points.

  - ***Observer Coverage Levels.*** Team members reaffirmed the need for high levels of observer coverage to narrow uncertainties in bycatch related to sperm whales and other protected species. Team members reiterated their support for 100% coverage of the California DGN fishery. However, to the extent such coverage is not possible due to resource constraints, the Team suggested identifying the minimum coverage level needed to provide a reasonable likelihood of detecting a significant shift (double or tripling) in the bycatch rate. (A working group composed of T. Kiekow Heimer, H. Bernard, A. Lorton, D. Heinemann and C. Villafana is to put forward a recommended minimum coverage level based on an analytic approach developed by J. Carretta. Working Group discussions should include computation of impacts of various coverage levels on the likelihood of detecting doubling or tripling of bycatch rate, possibility of missing significant shifts in bycatch rates, consideration of biologically important areas, etc. The results of this Working Group are to be folded, as possible, into the Team's recommendations.)

The Team also considered the merits of targeting observer coverage at biological "hot spots" (e.g., areas with frequent marine mammal sightings, critical habitat, etc.) versus more randomized assignment. J. Caretta noted that such approaches can work where the distribution of data points indicates clear recurring patterns of marine mammal distribution and interactions, but noted that for the stocks embraced by the TRP, there is no readily apparent set of "hot spots." Based on the discussion, Team members generally felt there was insufficient data at this point to warrant targeted coverage. Still, some Team members recommended the Agency continue to consider and assess the viability of "hot spot" monitoring by reviewing recent data generated by the U.S. Navy, J. Calambokidis and others.

- ***Achieving ZMRG.*** Several Team members emphasized the need to identify concrete strategies for achieving the MMPA longer-term goal of approaching ZMRG, particularly for sperm whale and short-finned pilot whale[3] (the only two species covered by the Plan that are currently above ZMRG). At the same time, Team members suggested any recommended measures need to be tempered by (1) consideration of economics, availability of existing technology and existing state or federal FMPs, as called for in the MMPA, and (2) a better understanding of the impact recent survey results and shifts in the methodology for calculating bycatch rates will have on PBR. Most immediately, the Team focused on avoidance strategies (vessel-to-vessel communications, alerts to fleet based on Agency data, etc.) as the most viable methods for further reducing interactions. The Team agreed to set up a Working Group to further brainstorm strategies for achieving ZMRG.

- ***Recommendations related to September 2013 Emergency Rule.*** Team members did not recommend making permanent the 100% observer coverage and closure requirement in the deeper water Zone (as described in the September 2013 Emergency Rule) given (1) the updated abundance and M&SI bycatch estimates that show sperm whale takes are below PBR; (2) the implementation challenges it poses for the Observer Program to maintain effective coverage levels in shallower waters (where oceanic shifts may increase the potential for marine mammal interactions); and (3) the need to broaden the focus of observer coverage beyond sperm whales. Similarly, Team members recommended against proceeding with hard caps given the array of concerns highlighted in J. Moore's presentation.

- ***Graduated triggers.*** Graduated triggers are generally seen as a useful method for assuring monitoring and identifying concerns before interactions rise to a level necessitating more severe consequences such as closures. Team members broadly recommended that the Agency first identify and understand any spikes in M&SI before imposing harsher limits on the fishery.

[3] Note that the SI/M estimates of two observed short-finned pilot whales taken in January 2014 have not yet been calculated by the SWFSC.

Similarly, to the extent that bycatch falls below ZMRG, the Agency should consider the viability of relaxing management measures. Further discussions are needed to define possible triggers and related consequences.

Other topics discussed during the meeting included the following:

- K. Fosmark provided Team members with an overview of the Exempted Fishing Permit (EFP) her group is seeking through the Council process. Potential variations on existing DGN gear configuration may include testing longer extenders and break-away panels, in addition to exploration into the use of dynamic ocean modeling research. Additionally, T. Fahy provided a more general overview of the status of several EFP applications before the Council.

V. CONSENSUS RECOMMENDATIONS

Based on the Team's deliberations, the Team developed a set of non-regulatory recommendations addressing a wide range of issues, from the Council's proposal for a California DGN Fishery Management and Monitoring Plan to strategies to improve TRP effectiveness. Given the lack of researcher/academic Team member participation at the in-person meeting, the Team did not formally endorse its recommendations at the meeting. Rather, draft consensus recommendations were expanded by a Work Group (T. Kiekow Heimer, H. Bernard, A. Lorton) following the in-person meeting and subsequently distributed to the Team and unanimously endorsed via email in April. Below is the language adopted with full consensus by the Team.

POCTRT Consensus Recommendations

(Based on discussions during the Team's March 17-19, 2015 deliberations; refined by Working Group and confirmed during a full Team follow-up teleconference to ensure cross-interest representation)

The Pacific Offshore Cetacean Take Reduction Team (Team) met March 17-19, 2015, in Long Beach, California. The Team's deliberations identified a number of specific recommendations for consideration by NOAA's National Marine Fisheries Service (NMFS), as well as measures to help address the broader goal of achieving Zero Mortality Rate Goal (ZMRG) under the Marine Mammal Protection Act (MMPA). The Team did not identify any proposed amendments to the Take Reduction Plan (TRP or Plan).

Below is draft language proposed by the Working Group (Hannah, Arthur and Taryn) to be reviewed, amended (as needed), and adopted by the Team.

Recommendation regarding the Pacific Fisheries Management Council (Council)

The Team recommends sending a letter to NMFS leadership outlining: (1) its concerns with the Council's intent to establish hard caps within the drift gillnet fishery; and (2) its own preferred approach, which includes compliance requirements; measures to address unobservable vessels; observer coverage rates; and, fleet communications. The Team further recommends that NMFS leadership share the letter and the Team's concerns – including on the floor at the Council's June meeting – with the Council to ensure its members have an opportunity to consider the Team's comments and concerns. The Team recommends finalizing and sending this letter to NMFS no later than April 20, 2015.

Recommendations to address concerns with unobservable vessels

The Team recommends that, before the start of the season, all unobservable vessels demonstrate compliance with all the gear requirements contained in the Plan (including, but not limited to, functioning pingers on nets). Compliance may be demonstrated either dockside or, if not feasible, via an at-sea set during daytime hours. Any vessel deemed noncompliant with gear requirements contained in the Plan shall be cited and will not be allowed to fish.

The Team recommends that, using VMS data and 48-hour reporting requirements, NMFS coordinate with the Coast Guard to prioritize at-sea boardings of all currently unobservable vessels in order to assess and confirm compliance with all Plan requirements. A report on unobservable vessel compliance shall be provided to the Team after one season.

POCTRT Consensus Recommendations
(continued)

The Team recommends that NMFS strengthen its outreach and training efforts with the Coast Guard to improve coordination and enforcement of the TRP. This effort shall include, but is not limited to: (1) providing periodic training to ensure that Coast Guard personnel (given the typical two-year turnover cycle) are kept apprised of Plan requirements and priorities; and (2) providing training and encouraging the Coast Guard's use of NMFS's underwater pinger detection device to track compliance with pinger requirements.

The Team recommends that NMFS aggressively pursue opportunities to assess and improve compliance with all Plan requirements by testing alternative methods to observe currently unobservable vessels. Such alternative methods shall include, but are not limited to, using: (1) electronic monitoring; and (2) Coast Guard, California Department of Fish and Wildlife or other alternative platforms to observe vessels. NMFS shall provide the Team with the results of its efforts on a periodic basis. The Team further recommends that NMFS' Observer Program work closely with the Team to identify priority data to gather via its pilot electronic monitoring program. To foster this coordination, the Team recommends that NMFS's Observer Program:

- Develop and distribute to the Team for comment the Agency's recommended priorities for data collection via electronic monitoring; and
- Conduct a review after one year in order to assess the effectiveness of its electronic monitoring program, as well as recommend modifications. These results shall be provided to the Team for its input and guidance.

The Team recommends that NMFS analyze VMS data, as it is gathered, to test and report back to the Team on similarities and differences in observable and unobservable vessel fishing behavior (e.g., location, set time, soak time, variation in fishing methods, etc.). The Team recommends that NMFS, within two years, provide a comprehensive report on compliance associated with unobservable vessels, drawing on its analysis of, and findings from, Coast Guard and other law enforcement activities, dockside monitoring, electronic monitoring, VMS data, and any other available sources. Based on this report, the Team may make a future recommendation that all unobservable vessels be made "observable" – either via electronic monitoring or some other means, or will not be allowed to fish.

POCTRT Consensus Recommendations
(continued)

Recommendations to address short and long-term goals under the MMPA

The Team recommends 100% observer coverage of the drift gillnet fishery to the extent possible. To the extent 100% coverage is not possible due to resource or other constraints, the Team recommends that NMFS explore funding from outside the agency or fishery. In any event, NMFS shall provide at least *[20-30%]* annual observer coverage. This coverage should be randomized throughout the range of the drift gillnet fishery. The Team recommends that the drift gillnet fleet continue and enhance its real-time vessel-to-vessel communication to foster avoidance of protected species covered by the Plan.

Finally, the Team is committed to achieving ZMRG. To that end, the Team recommends forming a Working Group to develop appropriate strategies for tracking and achieving ZMRG, such as encouraging gear modification or identifying biologically important areas.

VI. PUBLIC COMMENT

Opportunity for public comment was provided during each of the three days. Two members of the public opted to speak on both Days One and Two. There were no public comments on Day Three. Comments included the following:

- Acknowledging successes of the TRT process, but emphasizing the need to put in place permanent amendments that will ensure the Plan achieves the long-term goal of ZMRG.
- Calling on NMFS to more consistently implement recommendations put forward by the Team related to maintaining takes below PBR.
- Supporting and providing additional rationale for the Council's possible recommended actions under the MSA on hard caps, performance measures and monitoring requirements associated with the California drift gillnet fishery.
- Recommending the eventual phase out of the California drift gillnet fishery given its high fishery bycatch and discard rate and high costs associated with increased observer coverage rates and, instead, replacing it with deepset buoy gear (as opposed to longline gear
- Recommending the Team endorse 100% observer coverage in the fishery to be consistent with the Council's emerging preliminary preferred alternative; if 100% coverage isn't possible, then randomized observer coverage is preferred to targeting possible hotspots.

VII. NEXT STEPS

Based on the discussions, the meeting generated the following next steps:

- ***Team Letter on Proposed Council Action.*** A Working Group composed of K. Fosmark, D. Heinemann, M. Horeczko and J. Calambokidis is to draft a letter from the Team to NOAA's NMFS leadership articulating its concerns regarding the Council's preliminary preferred alternative related to the California DGN fishery management and monitoring plan. A final letter, once confirmed by Team members, is to be forwarded to NMFS leadership no later than April 20.

- ***Refining Consensus Recommendations.*** A Working Group composed of T. Kiekow Heimer, H. Bernard and A. Lorton is to refine and expand draft Team recommendations developed at the meeting for subsequent review and confirmation by the full Team (either via email or teleconference). The intention is to have a final set of recommendations confirmed by the Team in mid-April, which will then be incorporated into this Key Outcomes Memorandum[4].

- ***Observer Coverage Working Group.*** A Working Group composed of T. Kiekow Heimer, H. Bernard, A. Lorton, D. Heinemann and C. Villafana is to further develop recommendations related to minimum observer coverage levels needed to effectively

[4] Note: This KOM includes the Team's revised and approved recommendations.

monitor the fishery. Working Group discussions should include computation of impacts of various coverage levels on the likelihood of detecting doubling or tripling of bycatch rate, possibility of missing significant shifts in bycatch rates, consideration of biologically important areas, etc. The results of this Working Group are to be folded, as possible, into the Team's recommendations.

- ***Unobservable vessels.*** Participants agreed to a series of next steps intended to better track the currently unobservable vessels. These included the following:

    - NMFS is to work with the Coast Guard to develop a strategy for targeting unobservable vessels, coordinate training for new personnel, and explore opportunities to use the underwater pinger-testing device.
    - A. Lorton and D. Krebs are to provide Coast Guard representatives access to their vessels so personnel can better familiarize themselves with DGN gear.
    - CDFG is to provide the Coast Guard with DGN landing information to better target their enforcement efforts.
    - NMFS is to provide to the Coast Guard a contact list for Team members to facilitate future outreach efforts.
    - C. Villafana is to work with the Team via email to determine a priority focus for electronic monitoring pilots to be conducted this year and next.

- ***ZMRG Working Group.*** The Team recommended establishing in the longer term a working group to further develop options for meeting the longer-term goal of ZMRG. Team members interested in participating on the work group included T. Kiekow Heimer, H. Bernard, A. Lorton and M. Horeczko. J. Calambokidis was also recommended to serve on the Working Group.

- ***Future Team Meetings.*** The Team did not set any target dates for a next meeting. However, the Team suggested its next meeting be focused on following up on the various Working Group deliberations and timed to coincide with the DGN off-season. It was recommended that the Agency take stock of Team meeting needs in late summer or early fall.

- ***Key Outcomes Memorandum.*** CONCUR is to distribute for Team comment and review a Key Outcomes Memorandum summarizing primary discussion points, consensus actions and next steps. Team members are asked to undertake a timely "red-flag" review, highlighting errors or omissions.

- ***Meeting Materials.*** T. Fahy is to post all meeting materials and presentations on the Team website at:

http://www.nmfs.noaa.gov/pr/interactions/trt/poctrp.htm

Questions or comments regarding this meeting summary should be directed to S. McCreary, B. Brooks or T. Fahy. S. McCreary and B. Brooks can be reached at 510-649-8008 and 212-678-0078, respectively; T. Fahy at 562-980-4023.

ATTACHMENT 1

TO: Eileen Sobeck, Assistant Administrator for NOAA Fisheries

CC: Richard Merrick, Director, Scientific Program and Chief Science Advisor
Donna Wieting, Chief, Office of Protected Resources Division
Alan D. Risenhoover, Chief, Sustainable Fisheries Division
Samuel D. Rauch, III, Deputy Assistant Administrator for Regulatory Programs
Adam Issenberg, Chief, Fisheries and Protected Resources Section, NOAA Office of General Counsel
Will Stelle, West Coast Regional Administrator
Rebecca Lent, Executive Director, Marine Mammal Commission
Members, POCTRT

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

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.[5] 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 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

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

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).