MARINE MAMMAL COMMISSION

28 December 2016

Mr. Lyle Enriques
NMFS West Coast Region
501 W. Ocean Blvd., Suite 4200
Long Beach, CA 90802

Re: NOAA-NMFS-2016-0123

Dear Mr. Enriques:

The Marine Mammal Commission (the Commission), in consultation with its Committee of Scientific Advisors on Marine Mammals, has reviewed the National Marine Fisheries Service's (NMFS) proposed rule (81 Fed. Reg. 70660) and its associated Draft Environmental Assessment (EA) developed by the Pacific Fishery Management Council (PFMC) under the authority of section 303(b) of the Magnuson-Stevens Fishery Conservation and Management Act (MSA). The proposed regulations would establish strict limits (hard caps) on the incidental catch (take or bycatch) of certain marine mammals in the California/Oregon Large-Mesh Drift Gillnet Fishery (DGN fishery) and implement an immediate closure if those limits are met or exceeded. The Commission provides these comments and recommendations regarding the proposed regulations.

The proposed rule would establish hard caps on the incidental catch in the DGN Fishery of five cetacean species – sperm whales, humpback whales, fin whales, short-finned pilot whales, and common bottlenose dolphins. Sperm whales and fin whales, and two populations of humpback whales that are subject to incidental catch in the fishery, are listed under the Endangered Species Act.[1] The DGN fishery would be closed if the observed rolling two-year[2] mortality and serious injury (M&SI) level for any of these five species or stocks met or exceeded its specified hard cap. The fishery would remain closed until the rolling two-year M&SI rate that triggered the closure dropped below the corresponding hard cap. The proposed rolling two-year hard caps are as follows: two each for fin, humpback and sperm whales, and four each for short-finned pilot whales and common bottlenose dolphins.

The Commission appreciates the PFMC's stated goal of strengthening marine mammal protection in the fisheries under its jurisdiction, and NMFS's desire to improve management of the DGN fishery. However, as described in the attached June 26th 2015 letter, the Commission has a number of concerns regarding the PFMC proposal. Foremost among them is our concern that the development of bycatch mitigation measures independent of the take reduction team (TRT) process will diminish the effectiveness of the take reduction plan, in this instance developed by the Pacific

[1] Specifically, the proposed regulations would apply to the California/Oregon/Washington stocks of fin whales, sperm whales, short-finned pilot whales, and offshore common bottlenose dolphins, and to the Mexico and Central America Distinct Population Segments of humpback whales.
[2] The average of the M&SI in the current and previous year.

Offshore Cetacean TRT (POCTRT), and potentially undermine the integrity of the MMPA process specifically intended and designed to mitigate bycatch of marine mammals. Further, the Commission finds the proposed regulations to be inadequately justified, inconsistently applied, not based on the latest and best available data and science, and unlikely to achieve the stated goal.

ESA Listed Species

The hard caps proposed for the ESA-listed species and stocks were based on acceptable take levels specified in the Incidental Take Statement (ITS) appended to the 2013 biological opinion.[3] The ITS establishes the allowable levels of take by the DGN fishery of the specified listed species of marine mammals as shown in Table 1.

Table 1. Observed and expected take (bycatch or entanglements), and number of M&SI expected to be observed, in the DGN fishery as estimated in the 2013 biological opinion (Tables 8, 11, 12 and 13).

Species	Observed annual bycatch rate (#/1,500 sets)	Expected take in any given year	Expected take over a five-year period	Expected M&SI over a five-year period	Expected observed take over a five-year period
fin whale	0.37	1	2	1	1
humpback whale	0.74	2	4	2	1
sperm whale	1.48	2	8	6	2

In addition, the ITS establishes a suite of management and conservation measures that NMFS and participants in the DGN fishery must abide by in order to have the bycatch levels specified in the ITS apply to the fishery. The specified levels are based on the long-term average annual observed bycatch rate, expanded to expected bycatch (rounded up), based on an assumed fishing effort of 1,500 sets per year. The ITS requires that, if take exceeds any authorized level, then formal consultation must be re-initiated. Further consultation could result in the adoption of additional management and conservation measures designed to reduce the bycatch rate.

The EA states that the proposed hard caps are based on the expected take as specified in the biological opinion (Table 1). The "NMFS Preferred Alternative" in the EA proposes hard caps that are based on observed M&SI in the DGN fishery occurring over rolling two-year periods. In other words, in a given year (fishing season), the observed take in that year and the previous year would be compared to the hard cap. If observed M&SI exceeds the hard cap, then the fishery would be closed until the rolling, two-year, average take drops below the cap. Specifically, NMFS proposes establishing rolling, two-year, hard caps of two observed M&SI for humpback, fin, and sperm whales. These caps correspond to the level of "expected bycatch in any given year" specified in the

[3] NMFS. May 2013. Biological Opinion on the Continued Management of the Drift Gillnet Fishery under the Fishery Management Plan for U.S. West Coast Fisheries tor Highly Migratory Species. Sustainable Fisheries Division, Southwest Regional Office, National Marine Fisheries Service, Long Beach, CA.

biological opinion (see Table1), with one exception.[4] That is, if more than two whales of any of these species were killed or seriously injured in a rolling, two-year period, the fishery would be closed, and not reopened until the season following the year in which the rolling, two-year M&SI for the species that triggered the closure dropped below its hard cap.

The Commission sees several problems with this proposed approach.

1. The proposed rule states that the "hard caps [are] intended to manage the fishery under the MSA to protect certain non-target species … not to manage marine mammal or endangered species populations." The ESA and Marine Mammal Protection Act (MMPA) similarly are not designed to manage marine mammal or endangered species populations, but rather to provide protection from unauthorized takes (and adverse impacts) through regulation of human activities. Thus, it is not clear what regulation under the MSA adds to the management of the DGN fishery with respect to these whale species that cannot be accomplished through the ESA or MMPA. The proposed rule states that the hard caps are intended "rather to enhance the provisions of [the] ESA and the MMPA." However, the proposed rule and EA do not specify which provisions of those Acts would be enhanced, or why the protection afforded by the ESA and MMPA require enhancement. The Commission recommends that NMFS provide an explanation of why the management of the impacts of the DGN fishery under the ESA and MMPA concerning these three whale species requires enhancement under the MSA to provide the necessary level of protection.

2. As described above, a re-initiation of consultation under Section 7 of the ESA would assess, modify, and presumably add to the DGN bycatch mitigation measures to further decrease the probability of M&SI of listed species. One option through that process would be for NMFS, in consultation with the PFMC, to close the DGN fishery. Thus, it is not clear what establishing additional mitigation measures under the MSA adds to the management of the DGN fishery or the protection of listed species that could not be more appropriately accomplished under the ESA and MMPA.
   If NMFS concludes that the most effective way to prevent excess M&SI would be to close the DGN fishery once a hard cap has been met, the Commission recommends that the final rule explain why such a closure would be best implemented through MSA regulations rather than through re-initiation of Section 7 consultation and/or amendment of the applicable MMPA permit.

3. The stated purpose of the proposed hard caps (see point 1 above) implies that regulation under the ESA and MMPA has been inadequate and that stricter regulation is required. However, the proposed rule presents no evidence to suggest that this is the case. Observed bycatch levels of the listed species have exceeded the limits established in the ITS only once.

[4] The proposed rolling, two-year, hard cap for fin whales is set at two, "above the estimated, one-year, incidental catch 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."

In 2004, NMFS completed a biological opinion for the highly migratory species fisheries management plan, which included the CA DGN fishery, and appended an incidental take statement for that fishery. On 26 October 2007, NMFS issued a three-year permit under the MMPA authorizing the incidental take of sperm, humpback, and fin whales (California-Oregon-Washington stocks) by the fishery (72 Fed. Reg. 60814). On 5 December 2010, less than two months after that permit had expired, two sperm whales were caught in one net – one died and the other was seriously injured. In June 2011, the Sustainable Fisheries Division of NMFS notified the Southwest Region's Protected Resources Division that the taking of two sperm whales during the 2010-2011 fishing season of the CA DGN fishery likely exceeded the authorized take level. In July 2012, NMFS reinitiated consultation under section 7 of the ESA, resulting in release of a new biological opinion in May 2013.

Subsequently, NMFS reconvened the Pacific Offshore Cetacean Take Reduction Team (POCTRT), which met twice in 2013 to develop modified or new measures designed to reduce the likelihood of interactions between sperm whales and gear from the CA DGN fishery. Based on recommendations from the POCTRT, NMFS issued a temporary rule under section 305(c) of the MSA, effective from 15 August 2013 through 31 January 2014 (78 Fed. Reg. 54548), establishing a "100 percent observer coverage zone" (the Zone). The Zone included most California waters offshore of the 2,000-m contour, which runs north-south from the Oregon to the Mexico border. The rule made three changes to the management of the fishery: 1) it would be closed for the remainder of a season if one sperm whale was seriously injured or killed in the fishery, 2) all vessels fishing in the Zone were required to carry a NMFS-trained observer; and 3) all vessels were required to install, activate, carry, and operate a vessel monitoring system. Because most documented entanglements of sperm whales in the DGN fishery had occurred in deep water, these measures were expected to greatly reduce the likelihood of entanglements and the chances that the M&SI of sperm whales would exceed the stock's potential biological removal (PBR) level. Subsequently, NMFS issued a new three-year incidental take permit to the fishery (78 Fed. Reg. 54553), contingent on implementation of the management measures described above.

No take of sperm whales has been reported since then. Beginning in 1997, with the introduction of pingers, gear modifications, and skipper training, the take reduction process under the MMPA and section 7 of the ESA has been quite successful at reducing the average bycatch of all listed whale species below their PBR levels and, in many cases, below the MMPA's zero mortality rate goal (ZMRG, which is 10% of PBR). Further, these measures have been successful in reducing S&MI without fishery closures. Thus, it is not apparent why instituting more extreme measures (hard caps) would be necessary at this time. The proposed rule states: "The proposed action will have minor beneficial environmental impacts on target, non-target, and protected species and negative economic impacts to the DGN fleet." The Commission recognizes that a closure of the fishery once a threshold has been reached would reduce the likelihood that a specified limit on the observed bycatch rate would be exceeded, but it also agrees that the benefits to listed species would be minor (see below). The Commission also agrees that a closure of the DGN fishery lasting at least one season would have negative economic impacts on the fleet and notes that those impacts could be significant. While the average income

loss per vessel over time could be relatively minor, as suggested in the EA, the loss during a closure would be 100 percent of the potential income from this fishery, which some operators may not be able to sustain.

Therefore, the Commission recommends that NMFS provide additional justification for its conclusions that 1) section 7 consultation and the TRT process have provided inadequate protection to listed whale species by reducing bycatch rates to acceptable levels, and 2) a more stringent response to potentially excessive bycatch is required or is the best option for protecting fin, humpback, and sperm whales.

4. The EA states that "the proposed action is to implement management measures for the DGN fishery to further reduce: 1) interactions with ESA-listed species and other marine mammals; and 2) bycatch, including bycatch mortality." However, it is not clear that complete closure of the fishery will have the desired effects. The long-term bycatch rates for the listed species are very low and no bycatch is observed in most years. The 2013 biological opinion provides a formula for calculating the probability that a take of one, two, three, etc. animals will occur in a given year. As noted above, the estimated fin whale bycatch rate in the 2013 biological opinion is 0.37/1,500 sets, which means that the probability of two fin whales being caught in a single year is less than 5 percent, and the probability of three or more whales being caught in that year is less than 1 percent. Conversely, the probability that no fin whales are caught in a year (assuming a fishing effort of 1,500 sets) is approximately 69 percent. Thus, closing the fishery for one or two years is statistically unlikely to reduce fin whale bycatch and mortality in a meaningful way. In contrast, the sperm whale bycatch rate estimated in biological opinion is considerably higher (1.48) than the fin whale rate, which means that closure could appreciably reduce sperm whale bycatch for up to two years. The probability of the take of one or more sperm whales in a given year is approximately 77%. However, subsequent analyses by the NMFS have refined this rate, and the most recent estimate is lower (1.26),[5] which means that the benefit would be lower. For example, using this estimate, and a more realistic annual fishing effort (see below), the probability of taking one or more sperm whales in any given year would be just 34 percent, and probability of no takes would be 66 percent.

   More importantly, when the fishery reopens after a closure, the probability of an entanglement event occurring that causes the death or serious injury of a whale will be unchanged. In contrast, management and conservation actions taken under section 7 consultation and through the take reduction team (TRT) process have the potential to lower the probability of bycatch and mortality occurring in subsequent years without closing the entire fishery, as has been demonstrated in the past. The Commission therefore recommends that NMFS reconsider the proposed closures in light of the modest, and perhaps illusory, improvement in bycatch reduction likely to be achieved under the proposed rule as compared to those options available under section 7 consultation and the TRT process.

[5] Reported in the 2014 Pacific Stock Assessment Report.

5. The very low expected take levels (see Table 1) suggest that none of the proposed hard caps is likely to be exceeded in a given year. As noted above, the probability of the bycatch of two fin whales occurring in one year is close to zero, and, because most years would have no entanglements, it is even more unlikely that entanglements would occur in consecutive years. This logic, however, does not hold for sperm whales because observed bycatch events for this species often involve more than one animal. Since 1990, there have been six bycatch events, three involving single animals, two involving two animals each, and one involving three animals. Thus, although there have been only six entanglement events recorded in the past 25 years, half of those events would have met or exceeded the proposed caps and resulted in a closure of the fishery lasting at least a year, even though the overall impact on the whale stock, given its estimated size, likely would be negligible. For other species, it likely would take multiple entanglement events occurring in a two-year period to prompt a closure, which is unlikely to happen, but for sperm whales, given their social structure and behavior, the fishery could be closed as the result of a single event. The Commission recommends that, if NMFS establishes a hard cap in the DGN fishery based on the observed S&MI of sperm whales, it does so based on modeling that considers jointly the probability of entanglement events occurring and the distribution of the number of animals entangled per event.

6. The 2013 biological opinion and the EA each consider limits or caps in terms of observed take and estimated take or bycatch for the fishery as a whole, obtained by extrapolating the known take from the observed portion of the fishery. For example, the take of one whale with 20 percent observer coverage would result in an estimated take of five whales for the entire fishery. The proposed hard caps (Preferred Alternative) are based on an assumed level of observer coverage of 30 percent. Under the ITS, the allowable (expected) take of humpback whales in the fishery is two animals per year, and, therefore, the expected number of observed takes per year would be 0.6, which NMFS rounds to a hard cap of one animal, or two animals for the rolling two-year totals.

   While NMFS's target observer coverage for the DGN fishery is 30 percent, the coverage has varied considerably over the last few years. For example, since 2013, when the target was established, the actual coverage has varied from 21 to 37 percent. However, because of the way in which the cap is calculated, the rate of observed bycatch that would trigger a closure is much higher than stated. For example, the average observed bycatch rate of humpback whales is 0.74 per 1,500 sets (one year's effort), or 1.5 per 3,000 sets (two years' effort). Given 30 percent observer coverage, the expected take in a two-year period would be 0.45 whale, which would round up to a cap of one animal per two-year period, but really be more representative of an expected observed take of one animal every four years. However, because NMFS first calculates the one-year expected take and rounds that up, and then adjusts this to account for projected observer coverage and rounds the resulting value up, it ends up with a two-year cap of two animals. Thus, NMFS's two-year caps are at least twice as large as they should be if they are intended to correspond to the expected take estimates in the ITS. This bias is exacerbated if the observer coverage is less than 30 percent. That is, bycatch rates well in excess of the expected rates could occur without meeting the cap and triggering a closure.

Finally, the EA notes that recent fishing effort is much lower than the historical or assumed level reflected in the ITS. From 2010 to 2014, effort varied between roughly 400 and 500 sets per year, which amplifies the bias described here. For example, the expected observed take of humpback whales over a two-year period with an effort of 500 sets per year and observer coverage of 20 percent would be just 0.10. Thus, the take of just one animal during that period, which would not trigger a closure, could suggest a bycatch rate much higher than the expected rate, and perhaps in excess of the stock's PBR level. The Commission recommends that, if NMFS establishes hard caps, it use a method that establishes more conservative (risk-averse) caps and adjusts those caps according to the actual observer coverage and fishing effort.

7. The quite low observed bycatch rates for the three listed whale species mean that in most years, no entanglements are observed. For most of the history of this fishery, management actions were designed to be triggered in the event that bycatch in any single year exceeded the allowable take levels specified in the ITS or if total bycatch exceeded PBR. However, following the 2010 sperm whale entanglement event, NMFS reconsidered the way in which it estimated the overall bycatch rate. Previously, it had used a ratio method, which extrapolated the observed bycatch to derive a take estimate for the full fishery. In 2010, the take of two sperm whales produced an estimated fishery-wide take of 16 sperm whales. However, because entanglement events are quite rare, the ratio model is an inappropriate method for assessing the bycatch level in a given year. Carretta and Moore (2016) demonstrated that estimating take in a single year or small number of years, when take events are rare, results in imprecise and biased estimates. For example, if the true bycatch rate is two animals per year and the observer coverage is 20 percent, then the expected observed bycatch is 0.4 animals. However, only whole numbers of bycaught animals can be observed and, therefore, an accurate estimate of the true bycatch rate cannot be obtained using this method. No observed bycatch events would suggest the take rate was zero, which would be an underestimate, while one bycatch event would imply a total bycatch of five animals, a large overestimate. Only by pooling bycatch over a number of years can accurate estimates be produced. Carretta and Moore (2016) concluded that even pooling over five-year periods, which is the default in stock assessment reports prepared under section 117 of the MMPA, is an insufficient span for species for which bycatch events are rare. Subsequently, these authors decided that, for the CA/OR/WA sperm whale stock assessment, it would be most appropriate to pool bycatch data over more than 10 years.

   The bycatch of two sperm whales in 2010, expanded to an estimated take of 16 whales using the ratio method, triggered an immediate reaction by NMFS, at considerable expense and effort to NMFS over several years. However, when it viewed this event in a longer-term context, NMFS was able to conclude that the bycatch was not unusual or excessive, and did not represent a significant change in the average bycatch rate. The PFMC, in designing the proposed hard caps, recognized this principle, and extended the hard caps from a one- to a two-year timeframe. However, as demonstrated by Carretta and Moore (2016), even a five-year span is too short. As such, the two-year M&SI pooling period used for the proposed hard caps will produce errant signals that will result in unnecessary closures of the fishery. Therefore, the Commission recommends

that, if NMFS establishes hard caps, it do so using a model-based approach to estimate bycatch rates that pools M&SI data over periods much longer than two years.

8. The EA states that "the hard [cap] for fin whales [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 one-year hard cap for fin whales was therefore set at two animals. Thus, the one-year hard cap for all three listed whale species was set at two animals each across the entire fishery, which corresponds to the proposed, rolling two-year hard caps on observed M&SI of two animals each.[6] Thus, as explained in the proposed rule and the EA, the proposed hard caps are based on the ITS appended to the 2013 biological opinion, with the exception of the hard cap on fin whales. However, the reason given for the exception (see above) is quantitatively arbitrary. It is true that 1) the estimated bycatch rate for fin whales is lower than for the other two species (Table 1), and 2) the lower the expected take, for a given PBR, the less likely it would be to trigger a jeopardy determination. However, it remains unclear how low expected take levels would need to be to justify increasing the hard cap relative to take levels specified in the ITS. It is unclear why NMFS's argument would not apply to the allowable take and hard cap proposed for humpback whales. It also is unclear why an increase in the allowable take and hard cap of one animal, rather than two or three animals, is the appropriate adjustment. The Commission recommends that NMFS provide additional explanation of the quantitative criteria it is using to determine whether the hard caps should be based on the ITS assessment or increased using other factors.

Other Species

In addition to the ESA-listed species and stocks (humpback, fin and sperm whales), the proposed rule would establish hard caps for the allowable take of two non-listed stocks of other cetacean species, the CA/OR/WA stocks of offshore bottlenose dolphins and short-finned pilot whales. The EA states that hard caps are being proposed for these stocks because they are subject to an annual fishery M&SI greater than each stock's ZMRG. When M&SI exceeds PBR, NMFS is required under section 118 of the MMPA to establish a TRT or to take other action to reduce that level below PBR. Beyond that, section 118 includes a requirement to reduce M&SI to insignificant levels approaching the ZMRG, which NMFS has set as being below 10 percent of the stock's PBR.

The PFMC compared M&SI relative to PBR for these species using Table 7 in the 2013 Pacific Marine Mammal Stock Assessment Report. That table indicates that the M&SI for the stock of offshore bottlenose dolphins was at least 36 percent of its PBR while the fishery-related M&SI for the stock of short-finned pilot whales was zero and thus the ZMRG was being achieved for the latter but not for the former. Nonetheless, NMFS proposed a hard cap for the pilot whale stock as well because "its PBR of 4.6 animals is low." NMFS apparently is proposing to establish hard caps on non-listed species or stocks using two different criteria: 1) M&SI >10 percent of PBR, and 2) a "low" PBR.

[6] Allowable one-year take (2 animals) times the assumed observer coverage rate (0.3), or 0.6 animals, rounded up to one animal, and doubled to two animals to create the rolling two-year hard cap.

There are several problems with this approach.

1. The EA states that "The proposed action is to establish hard caps … on … high-priority protected species (HPPS), including … ESA-listed marine mammals, bottlenose dolphins, and short-finned pilot whales caught in the DGN fishery." However, the EA does not provide any explanation of why bottlenose dolphins or short-finned pilot whales are considered "high priority." The protection of these species is managed under the MMPA, and under section 118(f), species or stocks for which M&SI exceeds PBR are considered high priority (strategic stocks). Although ZMRG was supposed to have been achieved for all stocks by 2001, efforts to meet that goal have been pursued with less sense of urgency than reducing M&SI levels to below PBR. Thus, it is curious that NMFS is proposing a hard cap for the take of bottlenose dolphins in the DGN fishery, ostensibly to achieve ZMRG, when that goal remains unmet for several marine mammal stocks in several other fisheries. The high priority being given to these stocks and this fishery should be explained.

2. Additional discussion of the second criterion ("low" PBR) also is needed. Table 7 of the 2013 PSAR includes other stocks with low PBRs, such as the coastal bottlenose dolphin (2.4), Eastern North Pacific offshore killer whale (1.6), Eastern North Pacific southern resident killer whale (0.14), Baird's beaked whale (4.7), Mesoplodon beaked whales (3.9), pygmy sperm whales (2.7), blue whales (2.3), sei whales (0.16), and common minke whales (2.0). Perhaps the PFMC excluded these species and stocks because they have not been taken recently in the DGN fishery. However, one stock with what is arguably a low PBR, the California/Oregon/Washington stock of minke whales, is identified as a species taken by the DGN fishery in the past five years, and beaked whales have been taken in the past, and could be taken again. Other stocks with "low" PBRs also could be taken in the DGN fishery given their distribution and documented takes in other gill net fisheries (e.g., killer whales), but they may not have been taken yet because of their rarity in the region.

3. It is also unclear why NMFS is not proposing that hard caps be established for other marine mammal stocks, such as Pacific white-sided dolphins and northern right whale dolphins, that have a history of being taken in the DGN fishery and for which fishery-related M&SI levels have just met the zero mortality rate goal.

4. Another problem is that NMFS used outdated information to select stocks for hard caps. NMFS used the M&SI data and PBR values published in the 2013 Pacific Stock Assessment Reports. However, updated stock assessment reports were published in 2014 and 2015, and the information in them should be reflected in NMFS's analyses.

The Commission recommends that NMFS provide justification for implementing a fairly extreme management measure (fishery closure) to protect stocks with M&SI levels well below PBR, treating them as though they were strategic stocks. The Commission is not suggesting that hard caps should be established for other non-listed species and stocks. However, the Commission does recommend that if NMFS adopts hard caps for the DGN fishery, that it apply whatever selection

criteria it ultimately adopts to all marine mammal stocks and, as appropriate, to other fisheries, so that hard caps are implemented in a clearly defined and consistent manner.

Conclusion

Considering the problems with the proposed rule identified above and the fact that the establishment of the proposed hard caps is unlikely to have a significant effect on short-term bycatch rates and a negligible effect on the long-term bycatch rates for the specified species, the Commission recommends that NMFS not implement the proposed hard caps in the DGN fishery. Instead, the Commission recommends that NMFS encourage the PFMC to collaborate with the POCTRT in developing measures that will further reduce the probability of entanglement and mortality for all marine mammals vulnerable to take by the DGN fishery. While the POCTRT includes members from multiple sectors, including DGN fishermen, it would benefit from working closely with the PFMC in developing bycatch mitigation measures for the DGN fishery. Such an approach may lead to more effective management, and avoid the development of duplicative or inconsistent measures by the PFMC and the POCTRT.

Thank you for the opportunity to comment on these proposed actions affecting marine mammals. Please contact me if you have any questions about our recommendations and rationale.

Sincerely,

Rebecca J. Lent

Rebecca J. Lent, Ph.D.
Executive Director

Cc: Samuel D. Rauch, III
William W. Stelle, Jr.
Donna S. Wieting
Christopher E. Yates