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Ms. Angela Somma
Chief, Endangered Species Division
Office of Protected Resources
National Marine Fisheries Service
1315 East-West Highway
Silver Spring, MD 20910

Comments re Draft Recovery Plan for the Sperm Whale (*Physeter Macrocephalus*)

Via E-Mail to: spermwhale.recoveryplan@noaa.gov

Dear Ms. Somma:

The American Petroleum Institute ("API"), the International Association of Geophysical Contractors ("IAGC") and the National Ocean Industries Association ("NOIA") wish to take this opportunity to respond to the National Marine Fisheries Service's ("NMFS") request for public comment on the July 2006 Draft Recovery Plan and accompanying report ("report") for the sperm whale (*Physeter Macrocephalus*). Our organizations represent more than 400 companies that are involved in various aspects of the geophysical, oil and natural gas exploration, production and service industries, and we are committed to continuing to supply the energy that American consumers and businesses rely on to keep our economy growing. Because of the importance of offshore oil and natural gas resources to our nation's economy, API, IAGC and NOIA members have a direct interest in the issues presented in the documentation presented for the draft recovery plan.

The report lacks established and clearly stated objectives by which NMFS proposes to identify and then to manage stocks of sperm whales, or other marine mammal species. Without criteria for such management decisions, the report does not make clear when, where and under what circumstances a species would ever be delisted.

The report makes numerous assumptions about the effects seismic operations and other activities of the offshore oil and natural gas industry and its allied industries may have on sperm whale populations. Further, while the report notes the need to implement regulations on marine sound it fails to acknowledge that this regulatory activity is already underway through development of the acoustic criteria matrix and the programmatic regulations for the Gulf of Mexico. It is of particular concern that the report does not reflect the work of scientists on the Acoustic Criteria Matrix or provide evidence that these scientists have been consulted. Finally the report fails to fulfill both legislative and regulatory mandates that NMFS use best available science. In some instances obsolete science is referenced and in other circumstances where data is not provided the report relies on conjecture.. Finally, there are a number of places where the plan



proposes precautionary approaches to species management which is in direct conflict with the Agency's policy to use science-based risk assessments to inform management decisions.

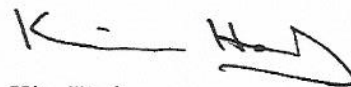
In view of the substantive nature of these defects in the report we recommend that it be withdrawn and substantially modified. More detailed comments are offered on the attachment.

Please include this letter and the attachment in the administrative record for the draft recovery plan.

Should you have any questions, please contact Richard Ranger at 202.682.8057.

Very truly yours,


Richard Ranger
API



Kim Harb
National Ocean Industries Association



G. C. Gill
International Association of Geophysical Contractors

Geophysical, Oil and Natural Gas and Allied Industry Comments
Draft Recovery plan for the Sperm Whale (*Physeter Macrocephalus*)
June 2006

I. Population Estimates

Overall Comment:

The report provides conflicting approaches about how to establish the status of a species. Stock definitions must be clearly defined and well understood for management goals to be clear or achievable, and to avoid delays or inconsistencies in making delisting decisions.

The text uses broad geographical areas as a basis for stock definition (North Atlantic, North Pacific and Southern hemisphere). At the same time, however, there is an implication that genetic differences on a much smaller geographical range are very important. The document does not provide a transparent methodology that would provide guidance to agency staff in establishing the discrete populations to be managed. Without a well understood and scientifically supportable means to define population stocks it is not clear how NMFS can determine the status of sperm whale populations or whether stocks are increasing or decreasing. Equally troubling is the fact that Agency managers have never published or sought critical comment on such methodologies. Such a methodology is therefore critical to this plan, and should be transparent and available, should involve public comment, and should resolve the Agency's ongoing internal debate between the "lumpers" and the "splitters" on how to make such determination. We would note with concern that in the absence of a clear policy, NMFS has been taking such decisions (e.g. transient vs. resident killer whales) at the region level without adequate consideration by Agency managers of the science, uncertainty and policy implications of such decisions.

Sperm whales are not endangered in any of the major provinces. This fact is demonstrated by the report's own acknowledgement of "their worldwide and nearly continuous distribution". Any requirement to establish that each group is distinguished by minor differences in genetic characterization will preclude removal from endangered status regardless of the status of the overall population. An effort to distinguish whales based on minor differences in genetic makeup could take decades. If each small sub-population must be monitored and population growth substantiated, it is unlikely that stock data would ever be collected to establish desired trends.

Population Discreteness -

Page IV-4 Item 2.0

"Existing knowledge of the population discreteness is insufficient, and a more nearly comprehensive understanding is essential for classifying sperm whale DPSs, according to their recovery status, and developing strategies to promote recovery, where necessary" The report continues: "As discussed by Taylor and Dizon (1996), until analyses with sufficient power are applied, the precautionary assumption should be that structuring exists, and reasonable provisional management units should be recognized..."

Comment: .

If adopted, such a position establishes a circular argument. The result is a likelihood that the Agency would never reach an endpoint since different management units will keep the animals from being delisted. With respect to the "precautionary assumption," NMFS determinations are presently conservative, and are consistent with U.S. statutes that do not officially recognize the precautionary principle. Contrary to recommendations in the report, there is insufficient evidence to

suggest additional conservatism is necessary regarding structuring. Finally, a good deal of research is proposed -- but without adequate explanation or vetting as to whether it provides a practical approach to answer the underlying management questions. Without this, there is significant potential to divert critical Agency resources toward research that will not advance the agency's mission.

Section 4.0:

"Sperm whales present a special, difficult case in assessing risk to the species because of their worldwide and nearly continuous distribution."

Comment:

The fact that the species has a worldwide and nearly continuous distribution would seem to be good news and helps make the case that the species is not endangered. The lack of present knowledge about the population structure on a small scale level should not contradict the fact that the population of the species is healthy on an ocean basin level.

II. Anthropogenic Sound Impacts

Page i-27:

"Sound transmissions in the marine environment may impact sperm whales by causing damage to body tissue or gross damage to ears causing a permanent threshold shift or a temporary threshold shift. An animal's detection threshold may be masked by noise at frequencies similar to those of biologically important signals such as mating calls."

Comment:

This statement is speculation and ignores the best available science. There is no scientific evidence to support a conclusion that animals have suffered "efficiency and energetic consequences" that have impacted species survival or reproduction.

Airgun Sources:

The process should have included consultation with NMFS own acoustics expert Dr. Brandon Southall. The discussion in this section of the report fails to cite data from Finneran et.al. indicating that an animal would have to be within 100 meters of an airgun array to even experience TTS let alone PTS. The report also fails to reference the Acoustic Criteria Matrix.

There is no evidence of displacement of sperm whales due to exposure to sound from seismic operations. Mate (1994) is not a valid reference (see page I-31). Mate et al. (1994) reported that the number of sperm whales decreased significantly during the first two days after the start of airgun seismic testing in an area, and that no whales were observed closer than 61 km to the active seismic activity after two days. This observation made during the early stages of the Gulfcet studies was reported as a one-paragraph abstract in a conference proceeding, and the results were never published in a peer-reviewed forum. Taken alone, this observation could possibly be interpreted as evidence indicating the potential for acoustic harassment and disturbance from the dB levels and/or frequency ranges produced from seismic surveys. However, as subsequently noted by the researcher, this observation was not based on an experiment with controls and could have been a coincidence with the apparent displacement attributable to other reasons. This observation should not be cited as the basis for conclusions on sperm whale responses to seismic operations.

Masking is implausible as well since a seismic pulse is ~ 30 ms every 10-12 seconds. It is questionable whether such a duty cycle, even when expanded at distance, would be of significant duration to meaningfully interfere with communications among individual whales. No data is

offered to show this is supported, and it is therefore speculation, which does not meet the best available science standard.

The citation of Bowles et al. (page I-31) suggesting that sperm whales go silent in the presence of seismic sound needs to be examined in light of data from Davis et.al., SWSS and others (Madsen and Mohl). There is no evidence that this phenomenon has been commonly observed.

The report does not offer a single case in which a sperm whale suffered any biologically significant effects resulting from exposure to seismic operations. This absence of documented cases of harm to sperm whales from exposure to seismic operations must be considered in light of decades of seismic survey activity in the Gulf of Mexico. It also fails to mention the Data Tagging studies done under SWSS, yet mentions the other components of this important research project. These controlled exposure experiments exposed this same species to this exact acoustic energy source. While it seems the analysis is still ongoing, the fine scale view of macro effects on the 8 exposed animals do not support the conclusions or description of the report. The report does correct state (Page I-28) "There is currently no evidence of long-term changes in behavior or distribution as a result of occasional exposure to pulsed acoustic stimuli." And the report fails to mention or cite the National Research Council's 2005 report "Marine Mammal Populations and Ocean Noise: Determining When Noise Causes Biologically Significant Effects, which states "No scientific studies have conclusively demonstrated a link between exposure to sound and adverse effects on a marine mammal population."

In addition to airguns the report also fails to document any effects on animal distributions from other sound sources from oil and gas operations (near platforms).

The summary statement on the top of page I-29 needs to be rethought following a complete analysis of the existing literature because it is not supportable by our understanding of the science and at best is highly speculative: "In summary, it appears that sperm whales may react strongly to a novel acoustic stimulus but that they may habituate to the presence of some anthropogenic sounds".

Page IV-2, Item 7.2:

The proposed management plan notes the need to "Implement appropriate regulations on sound production activities which are found to be potentially detrimental to sperm whales, until otherwise demonstrated".

Comment: There is little to no empirical evidence that sound from energy industry seismic operations is biologically significant or presents an adverse impact to sperm whale populations generally or in the Gulf of Mexico, specifically. The management plan should protect the animals from biologically significant adverse effects at a population level consistent with the recommendations from several reports prepared by the National Research Council.

Section 5.1:

"Any action that protects marine offshore habitat from noise and chemical contamination, or that reduces the intensity of ship traffic, fishing, military activities, and resource exploration and exploitation in the deep waters used by sperm whales should benefit the animals."

Comment:

The assumption in the management plan that all sound has an adverse effect on sperm whales is not scientifically supportable. It is well demonstrated that marine mammals are "hearing specialists", capable of hearing in specified frequencies such that sounds in some other frequencies have little to

no effect on certain species. Further, adoption of such a position conflicts with the stated goals of NMFS to base management and mitigation measures on appropriate and accepted risk assessment methods and adaptive management.

Unless there is some biologically significant impact from exposure to the sources mentioned here, there will not be any biologically significant benefit to eliminating the source. Importantly, this proposed position from Section 5.1 is in conflict with statutory, regulatory and policy precedent that emphasizes the need for balanced protection of economic, national and energy security, and environmental needs.

Section 7.1

“Sperm whales are not often subjected to close approaches by whale-watching vessels in North American waters. The potential impacts of whale-watching on Northern Hemisphere sperm whale populations are probably trivial in comparison to the potential impacts of loud noises produced by industrial, military, and research activities”.

Comment:

The report offers no scientific basis for this conjecture. Likewise the report makes no reference to the documented adverse impacts from whale watching in certain circumstances that received considerable attention at the recent 2006 International Whaling Commission annual meeting. In addition, because the report offers no evidence that there are biologically significant impacts from oil and gas operations, military activities or research on sperm whales, this comparison has no validity.

II-A Effect of vessels

Page I-28: A recent preliminary analysis of acoustical data from the northern Gulf of Mexico also indicates that sperm whales are, in some cases, affected by the passing of vessels, with fewer clicks and fewer whales detected afterwards (IOUP et al. 2005).”

Page I-30: “Sperm whales are not often seen from whale-watching vessels (either because the vessels are not located in areas where sperm whales are typically found or the vessels are disruptive and the sperm whales avoid them) on the east coast of the United States and Canada, and the potential for disturbance to sperm whales by such vessels is probably low.”

Comment:

In several places in the report the standards applied to assess the significance of effects on sperm whales from one activity differ from the standards applied to another activity such as seismic. Where the report discusses seismic operations there is conjecture and statements of concern with respect to perceived disturbance of individual animals from such operations. In the excerpt quoted above referring to whale-watching vessels, it would seem that avoidance of the vessels by the whales would also be evidence of disturbance, yet the report states that this is not a concern. The basis for this differentiation of significance is not apparent

III. Failure to use best science

Under Habitat Requirements and Limiting Factors in the Executive Summary page v, the report states: “Their demonstrated responsiveness to loud, unfamiliar underwater sounds makes it likely that they are adversely affected, at least transiently, by anthropogenic noise in the marine environment.”

Comment:

The observation is not supported by either empirical evidence or more importantly, by over 30 years of operations. There is no indication of stranding, physical injury or behavioral effect from seismic operations that is biologically significant to sperm whales at a population level.

The report cites Mate 1994 as a basis for large displacements of sperm whale response to seismic operations.

Comment: See note above with reference to 1994 observations by Mate.

The report uses Bowles et al to assert that sperm whales cease to vocalize from seismic operations 300 miles away

Comment: This statement has been contradicted by more recent science and should be so qualified or omitted from the report.

The report states that the biological significance of observed responses has not been established.

Comment:

If the biological significance of observed responses by whales has not been established, this begs the question as to what is meant by the use of the term "adversely affected". This is especially significant since any reasonable interpretation of available population data is that the sperm whales are recovering following cessation of whaling. Also, the report refers to SWSS but only cites work through 2004 and fails to cite their more recent studies -- and as previously stated, selectively omits a key component of the study.

IV Miscellaneous

Page vi – List of key features omits the one on Risk Analysis...

Page I-10 – There is no reference for Wright 2005.

Page III-3 First line should read "Sperm whales may be considered for DOWNLISTING when ..."