



# Animal Welfare Institute

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P. Michael Payne, Chief  
Marine Mammal Conservation Division  
Office of Protected Resources, NMFS (F/PR2)  
1315 East-West Highway  
Silver Spring, MD 20910

Dear Sir:

**Re: Comments on the NMFS proposal to prepare an Environmental Impact Assessment to analyze the potential impacts of applying a new criteria in guidelines to determine what constitutes a "take" of a marine mammal under the Marine Mammal Protection Act and Endangered Species Act as a result of exposure to anthropogenic noise in the marine environment.**

The Animal Welfare Institute (AWI) has long followed the issue of anthropogenic ocean noise and its effects on marine life and has attended every meeting of the Marine Mammal Commission's Advisory Committee on Acoustic Impacts on Marine Mammals (Acoustic Committee), where we were first introduced to the idea of a revision to the noise exposure criteria and to the existence of the NMFS Noise Criteria Group (Noise Group), upon whose 'science', the proposed revised criteria are based.

AWI welcomes the NMFS willingness to revise the current generic noise criteria that, since 1997, have been used to determine when a take by harassment might occur. A revision is long overdue, especially in view of: 1) the many noise related marine mammal stranding events that have occurred subsequent to the introduction of the current criteria; 2) the severe lack of understanding in relation to marine mammals and their physiological and behavioral reactions to ocean noise; and 3) the growing attention that anthropogenic ocean noise is receiving in the international arena and multiple calls for caution from respected international bodies.

AWI submits the following comments in response to the above-mentioned proposal by NMFS, published in the Federal Register Notice (the Notice) of January 11, 2005.

### *The influence of industries on the process*

In reviewing the Notice we are struck by how far the process has become compromised by deference to the very industries that NMFS is supposed to be regulating. The agenda revealed in the document shows the Agency's desire to raise the allowable level of sound so high as to avoid the inconvenience of restricting industries that use devices that inject massive amounts of intense sound into the oceans, namely the military, the oil and gas exploration industry, and the scientific

establishment. Only one of the Alternatives listed, Alternative II, which we support, even considers the actual protection of marine mammals from a precautionary standpoint. The other Alternatives range from bad (180dB, Alternative I), to worse, worse still, appalling and downright atrocious.

Instead of asking how the human use of sound in the oceans must be regulated in order to protect marine mammals, the exercise appears to be one of finding out how loud we can allow the routine discharge of sound and still keep a portion of the marine mammal populations alive. As was clear in the writing of the Marine Mammal Protection Act of 1972 (16 USC 1361 et seq.) (MMPA), this is an agenda that is guaranteed to fail in the protection of ocean creatures.

For the NMFS to suggest these increases in allowable sound after over a decade of strandings coincident with acoustic events reveals an obvious flaw in the process. A cursory glance at the funding sources behind the scientists on whose work the criteria are based shows why - every one has either worked for, presently receives, or has received funding from either the US military or the oil and gas industry. Industry involvement in the crafting of government regulations meant to control them defines corruption, a point we have pointed out on numerous occasions and most recently in a letter to the members of the Acoustic Committee on which NMFS is represented, and that incidentally, has yet to report to Congress on its findings.

#### *The legitimacy of the process*

Included as part of these comments are the legal basis behind both Environmental Impact Statements (EIS) under the National Environmental Policy Act of 1969 (42 U.S.C. 4321-4347) (NEPA), and the MMPA. The Notice does not comply with NEPA because it restricts the breadth of the discussion. The whole purpose of an EIS is to look at all information, not just that most palatable to the industries being regulated. According to the Code of Federal Regulations (40CFR1502), the purpose of an EIS is to “*insure that the policies and goals defined in the Act [NEPA] are infused into the ongoing programs and actions of the Federal Government. It shall provide full and fair discussion of significant environmental impacts... and the reasonable alternatives which would avoid or minimize adverse impacts...*”

The way that this EIS and the alternatives are presented is designed to prejudice the outcome, as does the grossly inappropriate influence on the Noise Group upon whose ‘science’ these choices are based. The NMFS permitting process has become compromised by the powerful industries it is supposed to regulate. This problem was recognized when the MMPA was originally conceived:

*“Recent history indicates that man’s impact upon marine mammals has ranged from what might be termed benign neglect to virtual genocide. These animal, including whales, porpoises, seals, sea otters, polar bears, manatees and others, have only rarely benefited from our interest; they have been shot, blown up, clubbed to death, run down by boats, poisoned, and exposed to a multitude of other indignities, all in the interest of profit or recreation, with little or no consideration of the potential impact of these activities on the animal populations involved.”* (US Congress Merchant Marine and Fisheries Committee Report 1971b: 11-12.)

That which was agreed to in the MMPA was a law that would ensure that “*future generations will be able to enjoy a world populated by all species of marine mammals.*” (US Senate 1972a.)

This lofty promise was guaranteed in the law by two built-in elemental and innovative legal features to govern future decisions: 1) building a conservative bias in favor of the species and 2) assigning the burden of proof to the party seeking to take or import the species.

The courts have upheld this conservative bias. In *Committee for Humane Legislation, Inc. v. Richardson*, 414 F.Supp. 297 (D.D.C.1976), *aff'd*, 540 F.2d 1141, Judge Charles Richey held that the Act should be interpreted, “for the benefit of the protected species rather than for the benefit of commercial exploitation.” Then, in *Kokechik Fishermen's Association v. Secretary of Commerce*, 839 F.2d 795, the District of Columbia Circuit Court of Appeals held that, when balancing commercial and conservation interests under the Act, “the interest in maintaining healthy populations of marine mammals comes first.”

As originally written and intended, the MMPA held as one of its basic precepts that any party wishing to exploit marine mammals should have the burden of proof that such activity will be consistent with the Act’s overall goals and not disadvantage any species: “If that burden is not carried—and it is by no means a light burden—the permit may not be issued. The effect of this set of requirements is to insist that the management of the animal populations be carried out with the interests of the animals as the prime consideration.” (US Congress Merchant Marine and Fisheries Committee Report 1971b: 18).

Now we come to this NMFS proposal to prepare an EIS which sets new criteria on thresholds at which sound might result in impacts to a marine mammal such that a take by harassment might occur. In every way the intention of the MMPA as discussed above is not being carried out and in fact has been reversed in this process. First, the administrative bias is strongly towards allowing the increased impact on marine mammals from the use of anthropogenic sound. In case of a question of data, deference is clearly made to the applicant wishing to use the sound. Second, the burden of proof has been shifted onto the creature, and their defenders, and away from the party wishing to use noise, to prove that the use is damaging. Presently, industries using sonar and seismic instruments do not have to prove their safety, just assert unproven mitigations and continue as usual.

#### *The scientific validity of the data*

The focus of the proposed EIS has been bizarrely attenuated, apparently in an attempt to ignore the plethora of data showing that anthropogenic noise does indeed harm living systems. The restriction of discussion to that related to Permanent Threshold Shift (PTS) and Temporary Threshold Shift (TTS) is blithely justified in the Notice by “providing a more scientific basis for defining the threshold levels.” For over five years now and throughout the intensely controversial EIS process for Low Frequency Active sonar, representatives of the Office of Navy Research and the NMFS have been decoying administrative and public attention by focusing almost exclusively on PTS and TTS. This orientation argues that the only effects of sound we have to be concerned with are those that cause physical damage to the ears of marine mammals. Real world events have not cooperated in supporting this particular argument and almost all of the new information about these events that has come to light, mainly through the Acoustic Committee, has been scrupulously ignored. Why?

Ignored is the elaborate modeling done by Dr. John Hildebrand, Dr. Peter Tyack and Dr. Bob Gisiner concerning the Bahamas 2000 strandings and presented at the San Francisco meeting of

the Committee on July 27, 2004. Combining the likely routes and intensities of active sonar devices moving through the area, and the likely movements of whales, they gave 138dB as the median level of sound that struck the whales who stranded and died.

We have learned that in some stranding incidents coincident with noise events, such as in the Azores (2002) and the Canaries (2002), whales have died with bubbles in their lungs and organs. It now appears from a series of studies and workshop presentations that there exists a mechanism of death quite different than that requiring levels of sound loud enough to physically injure hearing organs. It is the ability of sound to panic whales who, upon perceiving the onset of a sound louder than ambient, rise quickly to the surface from a deep dive and die from bubbles being created in their blood; a condition similar to the “bends”. Thus we see a behavioral response that at relatively low levels of anthropogenic sound can lead to death. This phenomenon does not appear to be restricted to beaked whales as had been previously thought, for now there are indications that sperm whales may also suffer from this condition given the right circumstances.

The formulation of this EIS ignores all of this, or so we can infer from the list of Alternatives proposed in the Notice. The EIS process is not being adhered to as the law mandates. It is not prefaced with a “full and fair” discussion for the process but is constrained to just those aspects of the discussions which have elements that can argue for higher levels of sound to be allowed. In fact, just about the entire logic of the PTS and TTS criteria is based on highly abusive studies by the Naval Ocean Systems Center, San Diego that involved the deliberate infliction of intense levels of sound on captive dolphins and belugas. The paucity of sample size and the irrelevance of the study provide neither informed science nor guidance for setting criteria. It would be impossible to measure a startle response at far lower levels of sound with this type of experiment.

Similarly, there are limits to how far data can be extrapolated. Over and over, from the Low Frequency Sound and Marine Mammals Committee in 1994, through the HESS panel, and up to the current deliberations of the Acoustic Committee, the paucity of data from which critical decisions are being made has to be decried. It appears from the Notice that the NMFS, while acknowledging the extreme lack of available data, has decided to proceed anyway, and to extrapolate from that inadequate data to all creatures in question, including using data from experiments on terrestrial animals to fill in the gaps.

#### *The legitimacy of the NMFS Noise Criteria Group*

The use of criteria proposed by the Noise Group, even in the guise of “just providing information”, is questionable because the legitimacy of the Noise Group is also questionable. In all respects it represents an “advisory committee” as defined in Federal Advisory Committee Act (Pub. L. 92-463, Sec. 1, Oct. 6, 1972, 86 Stat. 770) as “*any committee, board, commission, council, conference, panel, task force or similar group, or any subcommittee or other subgroup thereof, which is (C) established or utilized by one or more agencies.*” The Noise Group must therefore follow the rules as laid down by that Act, Section 2 of which specifically states that “*the Congress and the public should be kept informed with respect to the number, purpose, membership, activities, and cost of advisory committees.*” The Noise Group has met none of these requirements and their offerings therefore cannot legitimately be used in any way in the formation of policy.

Similarly, adherence to the US government's own guidance documents appears to be currently lacking with respect to the Noise Group and should be incorporated as part of the EIS process. For example, the Office of Management and Budget's "*Final Information Quality Bulletin for Peer Review*" of December 2004 that comes into force in June 2005, calls for the use of peer review by "*qualified specialists*" prior to the dissemination of "*important scientific information*" by the federal government. Further, the Bulletin calls for a transparent process and specifically calls out expertise, balance, independence and conflict of interest as important issues to address when selecting reviewers.

#### *The timing of the Notice*

Why is the issue of changing the noise criteria being raised now, when the Acoustic Committee is still in the process of deliberating exactly the ways intense sounds affect marine mammals. Unlike the Noise Group, the Acoustic Committee is a broad based group of stakeholders brought together by Congress to do this job. The criteria thresholds in question will likely constitute the most essential part of their recommendations, but instead of leaving it to their deliberations they are being pre-empted. Why?

In preparation of the EIS, NEPA requires the NMFS to "*consider all types of impact both direct and indirect.*" We would request that the EIS include thorough discussion on the following issues:

- The direct physical impact on each type of creature from each type of sound;
- How many additional times one organism is hit by the reverberation of each pulse of sound between surface and sea floor;
- The effect of multiple sound events, over hours, days, and weeks;
- The cumulative effect of multiple sources of sound, especially when both seismic and sonar are employed;
- The depth and size of creature that would be affected by resonance at different levels of sound frequency;
- The effect of long-term chronic exposure to each type and intensity of sound;
- The effect of masking in altering feeding and reproductive behavior;
- The effect of sound on the social behavior of each type of creature;
- The effect of each type of sound on prey species;
- The effect of long term chronic exposure of each type of sound to prey species, including plankton;
- The conditions under which bubbles are generated in cetacean and pinniped blood;

- The synergy between the effects on different species;
- All of the above at different sea states, at different depths, in different temperature zones, under differing bathymetric conditions;
- How the measurement of the same received sound in air differs to that measured in water;
- The applicability and use of the results of studies of the chronic effects of sound on human beings, including relatively low levels of sound;
- All the data extrapolation and ‘tuning’, including the reasoning to explain how the largely visual terrestrial creatures can be used in the place of ocean creatures, who are primarily sonic and therefore more sensitive to sound;
- The term “science-based”, in regard to the decisions on what data to use and what to dismiss;
- The socio-economic effects of the whale and dolphin watching industries;
- The relevance of documented global marine mammal stranding incidents that have occurred coincident to anthropogenic noise events;
- The applicability of the strong cautionary statements regarding anthropogenic ocean noise made by various international governments and bodies, including: the Agreement on the Conservation of Small Cetaceans of the Baltic and North Seas (2003); the International Whaling Commission (July 2004); the European Parliament (October 2004); the government of Spain in regard to the Canary Islands (October 2004); the Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and Contiguous Atlantic Area (November 2004); and the World Conservation Union (November 2004); and
- The current mitigation methods used in the permitting process, including an analysis of all known critiques on the effectiveness of these methods.

Given the extreme problems connected with this document, including the narrowing of the scope and basing the criteria on the information derived from a panel of questionable legitimacy, the Animal Welfare Institute requests that you reconsider the decision to prepare an EIS as outlined in the Notice and develop alternatives that truly address the best available knowledge. We also recommend that the process be suspended until the Advisory Committee has concluded its meetings, furnished its report and had the report’s findings and recommendations accepted.

Finally, we would like to remind NMFS that per NEPA, “*Environmental impact statements shall serve as the means of assessing the environmental impact of proposed agency actions, rather than justifying decisions already made.*”

Sincerely,



Cathy Liss  
President