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### Reckless Endangerment

#### Comments on the proposed small take authorization for LFA sonar

The following is a combination of my remarks presented on behalf of Animal Welfare Institute at two public hearings, in Los Angeles on April 26 and Silver Spring on May 3, plus some additional supportive material.

The National Marine Fisheries Service does not have the legal right to grant a small take authorization for the use of LFA sonar by the US Navy. The Navy has not come anywhere close to meeting the burden of proof that this system deployed as described will have a negligible effect on marine mammals. This is consistent with their exhibition of flagrant disregard for the law in their testing of LFA for years without bothering to even apply for this letter of authorization, even though they were in fact taking marine mammals. The response from your office that if you actually require the Navy to uphold the law you will force them into secrecy is pathetic in the extreme. The National Marine Fisheries Service has no other mandate but to enforce the law under the direction of Congress and with scientific guidance from the Marine Mammal Commission. Both of these bodies have expressed urgent concerns about LFA that have not been addressed. If your office goes ahead and grants this letter of authorization and the implied exemption from the Marine Mammal Protection Act, you will be declaring that you have finally raised the bar so high that no action, no matter how threatening to the life of the world's oceans, will prompt your department to enforce the MMPA and actually protect marine mammals.

The United States is a representative democracy. Citizens are promised that we have a government of, by and for, the people. Certain narrow powers are granted to government agencies to act on our behalf to protect us. The job of NMFS is to protect ocean life. The job of the Navy is to protect us from external threats. Your agencies have no other job. You have no choice but to obey the law.

Certain checks-and-balances are built into this system to prevent the improper use of the power conditionally granted. The primary check on the NMFS is the Marine Mammal Commission and their panel of independent scientists. They were established at the same time as the MMPA to make sure that the decisions of NMFS meet the requirements of the Act.

Comments of the Marine Mammal Commission pertaining to the Navy's SURTASS LFA sonar, and NMFS authority in the matter, are contained in a letter to Joseph Johnson dated October 27, 1999. Their comments, though delivered in typical low-key style- are damning in the extreme. They include the following criticisms of the Draft Environmental Impact Statement, and the granting of a small-take authorization based on the information contained therein. This author has added all bold type emphasis.

"The available information is insufficient to make direct assessments of likely cause-and-effect relationships."

"The conclusions are reasonable, provided the assumptions are valid--e.g., that exposure levels below 180db pose **zero risk** of having biologically significant effects on **any species or age/sex class of marine mammal.**"

"The DEIS concludes that exposure levels above 145 db would pose an unacceptable risk to human divers, while levels up to 180 dB would pose no risk to marine mammals. **...Explain why marine mammals would be expected to tolerate exposures more than 1,000 times greater than human divers.**"

"The rationale for concluding that animals would not respond differently to exposure levels between 155 and 180 dB is not evident and should be explained."

"No consideration was given to the possible effects of LF sound on the organ systems or the psychological, cardiovascular, or pulmonary functions of marine mammals. Rather, the assessment of the possible impacts of LF sound on marine mammals focuses almost exclusively on the possibility of temporary and permanent hearing threshold shifts."

"(The DEIS states) the scientific team established the threshold for risk of harm for a single ping at 180 dB received level. To establish a risk threshold, the scientific team would have had to have conducted a series of experiments demonstrating that the 180 dB RL was the threshold for risk of harm from a single ping. **No such experiments were done.**"

"Variation in water temperature, pressure and salinity can cause sound pathways to converge far beyond the source. **If the presumed 180dB sound level threshold could be exceeded in areas outside the disc shown [in figure S-3], either the figure should be modified or text should be added explaining the situations in which sound levels may exceed 180dB beyond the area indicated in the figure.**"

"The first sentence [ES-13, par.1] in this paragraph states that 'in order for marine species to be affected by the operation of the SURTASS LFA sonar...the animal must be capable of being physically affected by LF sound.' Although not stated explicitly, the statement implies that possible physiological, behavioral, and psychological effects {such as those explored in relation to human divers and LFA} need not be considered. The rationale for this conclusion seems questionable."

**"The titles of these tables (S-1 and S-2) appear to suggest that significant percentages (greater than 5 percent) of many marine mammal populations may be affected by injurious (Level A) harassment. If the tables accurately reflect the estimates of the percentages of marine mammal populations that could be subjected to Level A harassment, the conclusion that the proposed action would have negligible effects on marine mammals would be wrong or at least questionable."**

**"There is no evidence that [such] ramp-up will cause marine mammals or sea turtles to move away from the source. Further, it seems possible that some animals may be attracted to the source during the early stages of ramp-up, making them more vulnerable to injury."**

**"Alternative 2 [unlimited use of LFA] would not be consistent with applicable law as well as the CNO's commitment to the protection of the environment and good stewardship."**

**"Explain why fish eggs and larvae were eliminated [from research] during the screening process."**

**"The EIS should evaluate the possible effects of the proposed action on this population [of depleted Cook Inlet belugas that migrate into the Gulf of Alaska]."**

**"The information suggests that (1) there are no data concerning possible responses of representative cetaceans to low frequency sounds above 155dB; (2) there could be substantial behavioral responses to received sound levels between 155 and 180 dB; and (3) given points 1 and 2, it might be unreasonable to conclude that the 180 dB risk threshold is conservative. Thus, the FEIS should provide a clearer indication of (a) why the results of the LFS SRP are believed to support the conclusion that whales will not respond in biologically significant ways to received sound levels between 155 and 180 dB; and (b) why the 180 risk threshold is believed to be conservative."**

**"While it is true that the results of the second phase of the LFS SRP research program demonstrated that migrating gray whales did not respond to the sound source in detectable ways when it was moved further offshore, it is questionable whether these study results can be extrapolated to other species and other areas."**

**"While their impact of SURTASS LFA transmissions may be less than the cumulative impact from inshore vessel traffic, this does not mean that the effects of offshore SURTASS LFA sonar transmissions necessarily would be insignificant. Also, the possible additive effects of vessel traffic and the SURTASS LFA sonar transmissions should be addressed more explicitly in the section on cumulative impacts."**

**"The conclusions set forth [in this section and the earlier sections concerning the possible effects of the LFA sonar transmissions on pelagic fish are based on a number of unstated assumptions. Although the assumptions seem reasonable, it is important to recognize**

that they may not be valid and to point out the possible consequences if they are not valid."

"The monitoring described in this section should minimize the risk of killing and physically injuring marine mammals. It will not eliminate the risk."

All of the comments from the Marine Mammal Commission to the NMFS concerning the LFA DEIS were substantively ignored. Apparently, so have the pleas from members of Congress that the consideration of this letter of authorization be suspended until such time as the entire biological impact of manmade sound in the oceans is understood. That day is a long way away.

During the time the impact statements for LFA were prepared, and during the consideration and public hearing process, NMFS' officials have acted as though the decision on whether or not to grant the permit has already been made and that the Service was just going through the motions of holding hearings and giving the public their right to speak. Indeed, as far as I am aware, no one directly involved with making the ultimate decision on the application attended any of the hearings. In the first two hearings, the Navy's representative sat at the same table as the NMFS hearing officer. This officer, Ken Hollingshead, also tried to stop the acoustic demonstration of one Michael Stocker, saying that until he produced a document as expensive and voluminous as the Navy's EIS, then his comments held no bearing on the issue. This is not only grossly inappropriate behavior on the part of the hearing officer; it calls into question whether or not the Service is acting as an impartial arbiter of the law.

This concern is heightened by the clear conflict of interest of two key NMFS officials. Ken Hollingshead and Roger Gentry were intimately involved with the Navy in guiding the writing of the EIS. Ken Hollingshead is the first person that will pass judgment on whether or not this application merits a small take authorization. Roger Gentry is apparently responsible for changing the level of sound that can legally be emitted into the oceans for research from 120 dB to 180dB, a critical change in regulations necessary to allow the deployment of the LFA. I formally request that both individuals either recuse themselves or be removed from the team considering the application. It is reasonable to assume that someone involved in the preparation of a document would be more favorably disposed to approving it. I am copying this letter to the Inspector General of the Department of Commerce in order to pursue this case of conflict of interest.

This is a watershed decision for the National Marine Fisheries Service. As made clear in the letter from the Marine Mammal Commission, there is no scientific certainty that this system can be operated without causing a severe impact on marine mammals, including many endangered species. In fact, all indications point to a conclusion that it could be disastrous. In fairly weighing the arguments from both sides- the Navy and those opposing the LFA, I believe that it is clear that the opponents have met the burden of proof, even though we are not required to. We have many years of research into the effects of low frequency sound on the behavior of marine mammals, on the viability of fish eggs and larvae, on the ability of marine mammal ears to recover from temporary

deafness. The evidence the Navy uses to claim the device is safe is paltry in comparison. We can point to repeated examples where whales have been killed by active sonar, including LFA. And we can point to the precautionary principle and the conservative bias incorporated into the MMPA, which require the federal government to give leeway to wildlife when the effect of a proposed action is unknown. The possible effects of LFA are unknown. Because of the difficulty in monitoring cetacean and pinniped populations and the proposed change in the definition of Level B harassment (wherein individual deaths can be ignored) there would be no way to assess the damage before it is irreversible. To allow such a gamble is supremely arrogant and foolish, precisely the mistake the precautionary principle is designed to avoid. It would constitute willful reckless endangerment on a scale rarely seen before.

The Navy application to deploy the LFA does not meet the criteria established by law for granting a small take authorization in the following ways:

1. The levels of take are neither small nor negligible. Contrary to NMFS assertions, these are two separate burdens of proof. They are not synonymous.
2. The scope of the activity (at least eighty percent of the world's oceans) is too great to qualify for a small take authorization.
3. Using the Navy's own underestimated levels of take, percentages of populations in excess of five percent are noted. These levels exceed any fair definition of what could be considered "small" or "negligible".
4. The Navy was required to offer reasonable methods of monitoring the effect of their deployment of LFA. Especially with regards to marine mammals subjected to between 155dB and 180dB, this has not been done. The document is incomplete.
5. The entire array of assumptions upon which the Navy asserts the safety of this device are intrinsically flawed:
  - . That behavioral responses of whales to the SRP were insignificant
  - . That the SRP data can be extrapolated to other species at other levels of sound
  - . That temporary threshold shift, even when it lasts for days, does not constitute an injury
  - . That whales would have the same levels of response to 180dB as 155 dB
  - . That injury only begins at 180dB
  - . That whales would have less sensitivity to noise than human divers
  - . That whales are the most acoustically sensitive creatures, therefore no study need be done on any other creature (such as fish, plankton and turtles.)
  - . That whales and fish would escape an increasing sound source during ramp-up
  - . That the conversion factor from sound in air to sound in water is 60dB. It is actually 26 dB.
  - . That the cumulative sound production of the LFA array is limited to the volume of each speaker. This is false.

- . That there would be no areas outside one kilometer from the vessel that could have greater sound than 180 dB. This belies the Navy's conclusion from the Bahamas strandings that water conditions can create "lenses" which magnify sound.
- . That the point of reference for possible damage to marine mammals and other creatures should begin one kilometer from the vessel instead of right next to the array.
- . That a thorough enough surveillance can be made from a ship to insure that no marine mammal, turtle or endangered fish is affected by more than 180 dB.

6. The law requires a full disclosure of all alternatives to the proposed action within the EIS. This was not done. At least three major advances of passive sonar have been presented by the military over the past year. None were referenced in the document. This is an illegal omission.

7. The caveat in the EIS that the entire document and all LFA mitigations do not apply in times of "heightened tensions" not necessarily involving warfare or even the use of force renders the entire exercise specious. With the caveat, the Navy is actually applying for full-scale global deployment of LFA with no mitigations or Alternative 2. As pointed out by the Marine Mammal Commission, because the Navy expects to take marine mammals with the proposed action, and would not have a small-take authorization for Alternative 2, such an action would be illegal. Because of this language alone, the document avoids a serious discussion of the possible effects of LFA during times of heightened tensions and is therefore incomplete.

These details are not nuances to be dismissed with a wink and a nod by your office. They are specific areas where the Navy has failed to meet their burden under the law. Now the burden is yours to show that this system would have a negligible effect and that there would be no increased jeopardy for endangered species. You cannot do that. Therefore your office is required by law to reject the small take letter of authorization for the Navy's planned deployment of Low Frequency Active sonar.

Sincerely,



Benjamin White, Jr.  
International Coordinator  
Animal Welfare Institute