Public Meeting/Webinar for

National Oceanic and Atmospheric Administration

Draft Guidance for Assessing the Effects of Anthropogenic Sound on Marine Mammals

Acoustic Threshold Levels for Onset of Permanent and Temporary Threshold Shifts

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Presenter: Amy Scholik-Schlomer
This transcript only covers the public comment portion of the public meeting/webinar. Meeting materials, including the presentation given during the public meeting/webinar can be found at:
http://www.nmfs.noaa.gov/pr/acoustics/guidelines.htm

PUBLIC COMMENT:

SCOTT SLAUGHTER: I am Scott Slaughter, and I am commenting today on behalf of The Center for Regulatory Effectiveness. CRE wishes to briefly make two important points. First, there is no evidence of any physical harm from oil and gas seismic, as currently and historically regulated. Second, the government should perform a cost-benefit analysis of its draft acoustic criteria, if the government intends to use it any rules. In regards to the first point, the government has repeatedly and correctly stated that oil and gas seismic does not harm marine mammals in current long-standing regulations. For example, BOEM recently stated in an Environmental Impact Statement that within the Gulf of Mexico “there is a long-standing and well-developed OCS Program (more than 50 years); there are no data to suggest that activities from the preexisting OCS Program are significantly impacting marine mammal populations.” As another example, the National Academy of Sciences agreed with the Department of Interior that quote “there are no documented or known population-level effects due to sound” and concluded with regards to the outer continental shelf quote “there have been no known instances of injury, mortality, or population-level effects to marine mammals from seismic exposure.” As a final example, NMFS itself agreed that quote “to date, there is no evidence of serious injury, death, or stranding by marine mammals to occur from exposure to airgun pulses, even in the case of large airguns arrays.” Given this absence of harm in the real world, the government should carefully consider the benefits and costs of regulating oil and gas seismic. In particular, the government should consider the requirements of Executive Orders 12866 and 13563 when regulating oil and gas seismic. Under Executive Order 12866, the Guidance should go to OMB to review standards that require a benefit-cost analysis be performed. Suggest that the government solicit public input performing cost-benefit analysis. We thank you for the opportunity to present these comments, and we look forward to the government’s response.

NICOLE LEBOEUF: Thank you, sir.

KAREN MATHIS: This is Karen Mathis. K-A-R-E-N M-A-T-H-I-S from Anchorage, Alaska. I work for ASRC Energy Services. It is a wholly owned subsidiary of Arctic Slope Regional Corporation, and I have a question. In the short presentation and overview of the acoustic guidelines, it is mentioned that these new thresholds are based on the most recent science. My question is was there any outreach to subsistence groups, the Alaska Eskimo Whaling Commission, Whaling Captains Association. I am speaking from the context of Alaska and the Arctic. I’m curious as to if there were outreach on traditional ecological knowledge. I am aware there are some studies going on, at least one by industry on traditional ecological knowledge.

AMY SCHOLIK-SCHLOMER: Thanks for your comment. No, we didn’t reach out to any specific groups, but if you do have studies that would be applicable to our guidance, we definitely encourage you to submit that during public comment because we want to be inclusive of all available data that is out there. So, thank you.
JOE WILSON: Good afternoon, this is Joe Wilson from the Army Corps of Engineers. I have four questions. The first: Will there be implementing regulations?

NICOLE LEBOEUF: Just to make sure I understood you...just to confirm. This is Joe Wilson from the Army Corps of Engineers?

JOE WILSON: That is correct.

NICOLE LEBOEUF: OK. Thank you, sir. There will not be implementing regulations in association with this document. This document will be implemented through authorizing actions for various activities.

JOE WILSON: OK. Second question: The development plan is to identify specifically those activities intended for regulations, for lack of a better word?

AMY SCHOLIK-SCHLOMER: Well, the document doesn’t identify which activities this pertains to because as I mentioned before how we regulate sounds is not changing. This just updating the best available science. So how we’ve...the sound sources we have regulated in the past...it’s the same. Yeah, the goal of the document is not to identify particular sources but to just identify the science we are using to update our thresholds.

JOE WILSON: OK. Third question: So will there be a plan to identify geographic scope of the activity proposed for regulation? That is how far inland do you plan to go?

NICOLE LEBOEUF: As Amy indicated, the way we regulate marine mammal impacts on sound will not change. But to the extent that the geographic scope need be clarified in the document, we would certainly appreciate your comments and input on that.

JOE WILSON: OK. Final question: How will you know if a marine mammal is within the necessary range for a project? For example, we make the Coast Guard to install piles to support navigation markers How will you know if there are marine mammals within miles of the location?
AMY SCHOLIK-SCHOLMER: So that is dealing more with the actual mitigation that is used when the activity is occurring. These thresholds are to be used more before the activity occurs. So when applicants come and they have to estimate how many marine mammals are going to be harassed...this more of a tool to be used beforehand rather than out in the field. Though, these thresholds could be used to help inform mitigation that is not their intent.

JOE WILSON: Of course for us, the answer is you’re never going to get an impact. It just seems awful vague in trying to figure out an activity..and how proximity of that activity to marine mammals.

NICOLE LEBOEUF: Right. So whatever process applicants are undergoing now in order to estimate the distribution or presence of marine mammals when they come in for authorizations under the MMPA would be the same using these thresholds. It is just that the science used in calculating these thresholds is different. So on a case-by-case basis, I would assume that applicants are doing the best they can to estimate the distribution and presence of marine mammals, but there is no guidance additional within this document for that kind of estimation.

JOE WILSON: OK. Thank you.

NICOLE LEBOEUF: Thank you.

JESSICA LEFEVRE: Hi. Thanks. I am Jessica LeFevre with Alaska Eskimo Whaling Commission. I got a couple questions and I am bringing questions from others, as well.

NICOLE LEBOEUF: Could you repeat your name, please?


NICOLE LEBOEUF: Spell your last name, please.

JESSICA LEFEVRE: L-E-F-E-V-R-E. First question is: Are you going to have another discussion of the guidelines at the Open Water Meeting this year?

AMY SCHOLIK-SCHLOMER: At this time, we weren’t planning on doing so.
JESSICA LEFEVRE: I think we might encourage you to do that, if it is possible, and we also will put in a request for an extension. This is pretty important and a lot of information to get on top of.

Those are procedural questions. My substantive question is: Could you talk a little bit how the cumulative SEL can be used to account for multiple, repeated exposures, where you've got an animal going past one site and then moving along encountering a second site? It just we have not had a lot of time to spend with this and that is one of the questions we're trying to wrap our heads around. Thanks.

NICOLE LEBOEUF: I think terms of the nature of that comment, what I would suggest is that you provide information that you think it is not clear how we are proceeding in accumulating sound from multiple exposures, and we will make sure we clarify that in the final document. Thank you.

ROGER GENTRY: I'm Roger Gentry..G-E-N-T-R-Y. I'm with ProScience Consulting and the Joint Industry Program. I'm going to read my statement. I think I speak for the whole noise exposure panel when I say “thank you” NOAA for adopting most of Southall et al. 2007 for your new draft guidelines. We wrote it to address NOAA's needs, and it is gratifying to see much of our approach has been adopted. It is an encyclopedic review of all published data available for this task and bases most of its decisions on those data. It was a good decision not to attempt numerical guidelines for behavioral responses using existing data because it may not be adequate. For the final version, I recommend adding a list of needed research at the end. This will forecast NOAA’s intentions for the future and give guidance to funding groups who are trying to get data that NOAA needs.

My written comments covers three pages, but I'll just here discuss the guidelines for low-frequency cetaceans. The frequency weighting function shown in Figure 2 are basically invented because there are no empirical data to support them. It is probably invalid to use mid-frequency cetacean equal loudness contours to set points “a” and “b” on that graph. The overall effect of this weighting function is much more aggressive than the approach presently in place, especially in the Arctic guidelines. It implies that low-frequency cetaceans are much more sensitive to acoustic exposure than is formally believed, and it does so with supporting data. This leads me to ask “what problem is NOAA trying to solve by this aggressive approach?” Is there any evidence at all that the present guidelines leave whales with hearing loss from shipping, low-frequency active sonar, seismic arrays, and others? Have whale populations declined in areas where these sources are used? Unless there is evidence of either effect, then it is best to discard this graph and continue to use the present guidelines until empirical data become available on hearing in low-frequency cetaceans. Several funding groups are interested in obtaining these data, and current development suggests they will be available in five to six years when the next version of these guidelines should appear. NOAA wisely declined to set guidelines for behavioral effects due to poor data and should make an equally wise decision to not to set guidelines for low-frequency cetaceans in total absence of data. Thank you.

NICOLE LEBOEUF: Thank you.

DAVID ZEDDIES: Hi. David Zeddies. Last name Z-E-D-D-I-E-S. I'm at JASCO Applied Sciences. I want to make a quick technical comment on the 24-hour integration period, and it starts with..we have a
pretty good idea why you want to do that. There are natural breaks in the operations or you want to give
some sort of method for allowing recovery to occur, but 24 hours is an arbitrary number that is really not
based in any type of biology that I am aware of. There is some scant studies on that, but basically there
are better ways of doing it. Agent-based models we have will give you a natural indication of how long the
animals...you expect the animals to be in that area. So instead of setting a guideline that strictly writes
down the number ..in a 24-hour period, you could ask people to estimate the time the animals would be in
that area, and there are also better ways of allowing for recovery periods. That would be as part of the
cumulative SEL measurement. You could integrate..you could use a function that would allow for some
recovery period.

NICOLE LEBOEUF: Are there any comments on the phone?

BRETTNY HARDY: I just wanted to ask really quickly: You mentioned that the peer review report
would be available, and you seemed to indicate it would be available before the comment period ends. Is
that correct? Do you have an anticipated date as to when that will be available?

NICOLE LEBOEUF: Yes, just for the record, can you please state your name?

BRETTNY HARDY: Oh sure. It is Brettny Hardy.

NICOLE LEBOUEF: Your last name?

BRETTNY HARDY: Hardy H-A-R-D-Y.

NICOLE LEBOUEF: OK. Thank you. We will provide the peer reviewers’ comments in short
order. We asked the peer reviewers to consider both the PTS/TTS but also the behavioral aspects of an
earlier draft of the document. So we are separating those out, so we can continue to consider the
behavioral comments and as soon as we have those comments divided, we will provide them online.

BARBARA NAPOLES: My last name is spelled N-A-P-O-L-E-S. I have a question: Why is NOAA
giving authorization to sonar testing or seismic testing when we know that this really actually harms and
kills dolphins and whales, and I want to know if this is granted, who is going to police the oceans or police
these permits to make sure that the loss of cetacean life is not a huge amount, as we have seen many
cetaceans showing up on the shores?
NICOLE LEBOEUF: Thank you. We are not taking questions other than clarifying question at this time, but we appreciate your comment.

BARBARA NAPOLES: OK.

DARLENE KETTEN: Yes, thank you. Actually, the last name is Ketten. K-E-T-T-E-N. I'm from Woods Hole Oceanographic Institute and Harvard Medical School and Curtin University in Perth, Australia. I wanted to say that first of all, I am very impressed with the document. I know how hard it is to put anything like this together. I would like to note that I agree with the majority of comments by Dr. Gentry and want underscore what he said about needing suggestions or a section at the end for suggested research. That would be of considerable use for most active researchers. I also would like to suggest that NOAA consider trying to set up a pipeline or system that reports…they amount to gray literature but as new data are coming out, if we can feed that information to you and particularly get feedback from NOAA about how this would work to assist your goals, I think this would improve the output rate and the appropriateness of the work we are all doing on research. So if you could take that into consideration. Also there are some new updates that I would like to provide to you concerning baleen whales, and I assume the best way to do that would be through the comment period before January 27 or is there another mechanism that should be considered to provide new data to you?

NICOLE LEBOEUF: Thank you for your comments, Dr. Ketten. At this time, as I indicated earlier, it is not clear if we are going to be able to extend the public comment period for this particular document, but of course any new information you have at any time would be welcome by us and you should feel free to contact Amy at any time with that. Thank you.

NICOLE LEBOEUF: If there is anyone here or in the room or on the webinar that is thinking of giving their comments later, please let me encourage you to do that now. Yes, sir? Thank you.

TIM GATES: Hi. I am Tim Gates from ManTech, and I have a general question or comment: It appears that the study places a lot of emphasis on whether a species can actually hear the noise when you develop your thresholds. Is there a way that you are going to determine whether they hear it or whether it produces a negative response?

AMY SCHOLIK-SCHLOMER: So our thresholds are for hearing impacts of noise. So you are asking? Sorry.

TIM GATES: If you are creating a noise and they hear it, it may not be a negative impact on the species. Is there a way or are you going to try to develop a way to determine if the noise is actually creating a negative impact or just that they hear it?
AMY SCHOLIK-SCHLOMER: Well, the specific thresholds are for noises that cause hearing loss, either temporary or permanent, so that would be the impact we are specifically addressing with these guidelines.

TIM GATES: You are not addressing migratory impacts?

AMY SCHOLIK-SCHLOMER: No.

TIM GATES: Just for hearing loss?

AMY SCHOLIK-SCHLOMER: This particular guidance is just for updating our thresholds for hearing impacts, yes.

TIM GATES: OK. Thank you.

NICOLE LEBOEUF: Again, I want to encourage anyone that is waiting for just the right moment either in the room or on the webinar to come forward and provide us with comment. I have been advised by Counsel that we don’t have to sit here until 5:00, but I also don’t want to rush you.

ROBERT SUYDAM: Thank you. My name is Robert Suydam. My last name is spelled S-U-Y-D-A-M. First, I would like to kinda re-emphasize what Dr. Ketten and Dr. Gentry mentioned about a section on needed research I think would be helpful in the document and then a couple of other points. One that Jessica LeFevre mentioned, the cumulative impacts issue of multiple operations that I know that frequently in the past NOAA has not ..dealt with each operation separately and not really addressed cumulative impacts from multiple operations on individual animals. So adopting new guidance criteria, I think needs to figure out how to address that issue of multiple operations that are occurring in one location. So, I think additional guidance is needed there. I would also like to comment on the guy from JASCO, sorry I didn’t catch his name that the 24 hour integration period for cumulative SEL seems a bit arbitrary and some additional support is needed for..in the document for why the 24 hour integration period is the appropriate one and not either a greater period or shorter period. So that would be helpful.

Another issue that really wasn't addressed in the Guidance is the issue of impulsive sound versus non-impulsive sound. Of course with seismic sound, they are impulsive when they are close, when an animal is close to the seismic source, but they become more non-impulsive the farther you are away from an airgun. Of course, the loudness of the sounds changes, as well, but maybe trying to figure out if having this dichotomy of impulsive vs. non-impulsive is really the best way to go or whether there needs to be some other category in between there? And then, I guess a question that I had: I understand that the Guidance is really about assessing what the effects are on the marine mammals prior to the operations
that I am at a loss to figure out at least how cumulative SEL is going to be actually monitored for what
animals are actually taken. So I think the Guidance, the new Guidance would really benefit by having a
section on how monitoring would occur to actually figure out if the projections of exposures to marine
mammals are realistic, and then my final comment is related to kinda the extension of the comment
period that given since this came out over the holidays, and there hasn’t been a long period of time to
review it. Obviously, there is another week and a half left before the comment period finishes, but without
the peer review report available, it makes it even more difficult for the public and decision-makers to
comment on this Guidance. Because of those reasons, I strongly encourage the agency to extend the
comment period. Thanks for the opportunity to say a few words.

NICOLE LEBOEUF: Thank you very much. I would just like to reiterate that any input that
anyone may have on the accumulation duration, we would much appreciate that. Thank you.

ADAM FRANKEL: Good afternoon. I just wanted to ask a quick clarifying question.

NICOLE LEBOEUF: Affiliation?

ADAM FRANKEL: Oh, I am sorry. I am with Marine Acoustics, Inc. and the last name is F-R-A-N-
K-E-L.

NICOLE LEBOEUF: Thank you.

ADAM FRANKEL: At several points in the document, there is this statement..the phrase that the
thresholds are quote based on “characteristics defined at the source” and not the receiver..that was a little
confusing, and I am wondering if that is addressing the issue raised by Mr. Suydam about the
characteristics if seismic is impulsive as they propagate out from the source or if you could elaborate on
that, the intent about the phrase a bit?

AMY SCHOLIK-SCHLOMER: Yes, I can provide more information. So, yes how we are dividing
our sound sources are based on the characteristics at the source, so closer to the source. As was
mentioned, in the previous comment, obviously sound changes as it propagates through the water. So
when something goes from being impulsive to being non-impulsive, we acknowledge that happens. It is a
little bit hard to define exactly when that happens depending on the sound source, depending on the
environment, which is why we chose a simpler method to just define the sound sources and their
characteristics closer to the source.
ADAM FRANKEL: So my understanding is that phrase is specifically talking, specifically referring to this issue?

AMY SCHOLIK-SCHLOMER: Yes.

ADAM FRANKEL: Temporal characteristics of the source…OK. Thank you.

AMY SCHOLIK-SCHLOMER: But we will be more clear obviously in the document because there seems to be some confusion. So thanks for that comment.

NICOLE LEBOEUF: There appear to be no comments here in the room. Are there any additional comments on the phone?

NICOLE LEBOEUF: My watch says it is 3:11 now. I would like to keep the phone line open until 3:15. If there are no further comments, we will close the phone line at 3:15. Please feel free to provide any comments, not trying to rush you.