



DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

[RTID 0648-XD212]

Draft Updated Guidance for Assessing the Effects of Anthropogenic Sound on Marine Mammal Hearing – Underwater and In-Air Criteria for Onset of Auditory Injury and Temporary Threshold Shifts (Version 3.0)

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Notice; request for comments.

SUMMARY: The National Marine Fisheries Service (NMFS), announces the availability of our draft *Update to: Technical Guidance for Assessing the Effects of Anthropogenic Sound on Marine Mammal Hearing (Version 3.0): Underwater and In-Air Criteria for Onset of Auditory Injury and Temporary Threshold Shifts* (draft Updated Technical Guidance) for public comment. The draft Updated Technical Guidance assesses the effects of anthropogenic sound on marine mammal species under NMFS's jurisdiction. The draft Updated Technical Guidance provides updated received levels and auditory weighting functions, or acoustic criteria, above which individual marine mammals, in-air and underwater, are predicted to experience changes in their hearing sensitivity (auditory injury or temporary threshold shift) for all anthropogenic sound sources. Once finalized, the Updated Technical Guidance will replace NMFS's current *2018 Revisions to: Technical Guidance for Assessing the Effects of Anthropogenic Sound on Marine Mammal Hearing (Version 2.0): Underwater Thresholds for Onset of Permanent and Temporary Threshold Shifts* (2018 Revised Technical Guidance).

DATES: Comments must be received by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: The draft Updated Technical Guidance is available in electronic form via the Internet <https://www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-acoustic-technical-guidance>. You may submit comments by including NOAA-NMFS-2024-0026, by either of the following methods:

Federal e-Rulemaking Portal: Go to <https://www.regulations.gov/#!docketDetail;D=NOAA-NMFS-2024-0026>, click the “Comment Now!” icon, complete the required fields, and enter or attach your comments.

Mail: Send comments to: Chief, Permits and Conservation Division, Office of Protected Resources, National Marine Fisheries Service, 1315 East-West Highway, Silver Spring, MD 20910-3226, Attn: Updated Acoustic Technical Guidance.

Instructions: NMFS may not consider comments if they are sent by any other method, to any other address or individual, or received after the comment period ends. All comments received are a part of the public record and NMFS will generally post for public viewing on <https://www.regulations.gov> without change. All personal identifying information (e.g., name, address, etc.), confidential business information, or otherwise sensitive information submitted voluntarily by the sender will be publicly accessible. NMFS will accept anonymous comments (enter “N/A” in the required fields if you wish to remain anonymous).

FOR FURTHER INFORMATION CONTACT: Amy R. Scholik-Schlomer, Office of Protected Resources, 301-427-8449, Amy.Scholik@noaa.gov.

SUPPLEMENTARY INFORMATION:

The National Marine Fisheries Service has developed a draft Updated Technical Guidance document for assessing the effects of anthropogenic sound on the hearing of marine mammal species, in-air and underwater, under NMFS’s jurisdiction. Specifically, the draft Updated Technical Guidance identifies the received levels and auditory weighting functions, or acoustic criteria, above which individual marine mammals are

predicted to experience changes in their hearing sensitivity (auditory injury (AUD INJ) or temporary threshold shift (TTS)) for all anthropogenic sound sources. This document is intended for use by NMFS analysts and managers and other relevant user groups and stakeholders, including other Federal agencies, when seeking to determine whether and how their activities are expected to result in particular types of impacts to marine mammals via acoustic exposure in-air and underwater. The draft Updated Technical Guidance outlines NMFS's updated acoustic criteria and describes in detail how they were developed and how they will be updated in the future.

As with our current 2018 Revised Technical Guidance (<https://www.fisheries.noaa.gov/s3/2023-05/TECHMEMOGuidance508.pdf>), NMFS worked with the U.S. Navy, which updated their marine mammal acoustic criteria. Upon evaluation, NMFS has determined that the Navy's proposed criteria reflects the best available science and incorporated it into our draft Updated Technical Guidance.

NMFS conducted an independent peer review in October/November 2022 in association with the draft Updated Technical Guidance. Details of the peer reviews are available at the following website: <https://www.noaa.gov/information-technology/update-to-20162018-technical-guidance-for-assessing-effects-of-anthropogenic-sound-on-marine-mammal>. Additionally, in May and June of 2023, NMFS solicited input from other relevant Federal agencies on the draft Updated Technical Guidance. Federal agency comments and NMFS responses to those comments are available at the following website: <https://www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-acoustic-technical-guidance>. To complete the review process, NMFS is now soliciting additional stakeholder feedback via public comment on the draft Updated Technical Guidance.

As an overview of the draft Updated Technical Guidance, the main body of the document contains a summary of the updated acoustic threshold levels and marine

mammal auditory weighting functions, with additional details provided in Appendix A (Navy Technical Report), Appendix B (Research Recommendations), Appendix C (Review Process, which will be completed before finalization to reflect input received during this public comment period), and Appendix D (Glossary).

There are some notable changes associated with the draft Updated Technical Guidance. Namely, the marine mammal hearing group terminology from Southall *et al.* 2019 has been adopted. Furthermore, in-air acoustic criteria are also now included. However, the methodology for deriving AUD INJ and TTS criteria within the draft Updated Technical Guidance is very similar to the methodology for NMFS's current 2018 Revised Technical Guidance (which also underwent peer review and public comment), which we believe represents the best available science. Thus NMFS encourages members of the public to focus their comments on the incorporation of new data and recommended improvements to the existing methodology, if applicable.

Changes to AUD INJ and TTS criteria as reflected in the draft Updated Technical Guidance are primarily a result of new marine mammal audiogram and TTS data. Some of the most notable changes to the AUD INJ and TTS criteria include predictions of AUD INJ and TTS thresholds below 10 kHz for species formerly classified as mid-frequency cetaceans (now classified as high-frequency cetaceans) and significantly lower AUD INJ and TTS thresholds for underwater otariid pinnipeds.

Please note that until NMFS finalizes the Updated Technical Guidance, the 2018 Revised Technical Guidance remains our current guidance.

NMFS is aware that the National Marine Mammal Foundation successfully collected preliminary hearing data on two minke whales during their third field season in Norway (summer 2023). These data have implications for not only the generalized hearing range for low-frequency cetaceans but also on their weighting function. However, no official results have been published. Furthermore, a fourth field season

(2024) is proposed, where more data will likely be collected. Thus, NMFS has not proposed any changes to our draft Updated Technical Guidance based on these limited and unpublished data, though we recognize that mysticete hearing will likely merit re-evaluation in the future. Therefore, we anticipate that once the data from both field seasons are published, it will likely warrant additional updates to our Technical Guidance.

Dated: April 30, 2024.

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National Marine Fisheries Service.

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