

Moreover, the summary paragraph on page 1-19 does not provide an example similar to that for LF cetaceans to support why BOEM believes the number of exposures of MF and HF cetaceans would “remain the same or slightly reduced overall” if the Guidance were used.

Additionally, the analytical methods and criteria that are used in the acoustic analyses supporting the Appendix D modeling are less than straightforward. For example, starting on page 4-12 of the DPEIS, BOEM refers to the NMFS 1995 criteria (180/160 dB re 1 μ PaSPL rms), a set of 2012 weighting functions (*e.g.*, those used in the modeling for the DPEIS) for which a reference is not provided, and to the NMFS July 2016 criteria. Appendix D uses the NMFS 1995 criteria, but applies Southall et al. (2007) M-1 weighting to those values, which were originally unweighted values. DPEIS, Appx. D at D-174. The Appendix D modeling also uses Southall et al. (2007) SPL peak Permanent Threshold Shift (“PTS”) onset values, but for LF cetaceans creates its own PTS onset threshold of 192 dB re 1 μ Pa² s SEL by subtracting 6 dB from the MF cetacean onset value of 198 dB re 1 μ Pa² s (another precaution layered on top of already precautionary numbers). *Id.* at D-55. Another example of unclear development of a threshold value appears in the very next paragraph where the analysis cites a value of 187 dB SEL as the MF cetacean threshold, derived by using a beluga TTS onset of 186 dB, applying Finneran and Jenkins (2012) Type II M-weighting to derive a weighted value of 172 dB and then adding 15 dB to produce a PTS threshold for MF cetaceans of 187 dB. Obviously, the methods for deriving the criteria used in the analysis are hardly clear. Nowhere in Appendix D or the body of the DPEIS is there a simple table listing the threshold values that were applied in the exposure analysis.

In sum, the failure of the DPEIS to use the Guidance in its effects analysis is legally and scientifically tenuous. *See N. Plains Res. Council, Inc. v. Surface Transp. Bd.*, 668 F.3d 1067, 1086-87 (9th Cir. 2011) (“Reliance on data that is too stale to carry the weight assigned to it may be arbitrary and capricious.”). Proper application of the Guidance in action-specific NEPA evaluations may remedy this shortcoming; however, to the extent the final PEIS does not address this issue in a more robust manner, NMFS’s future reliance on the final PEIS for the MMPA incidental take rulemaking process could be jeopardized. It is imperative that the public be provided a reasonable opportunity to carefully review and comment on the application of the Guidance as it directly pertains to the current action. Regardless of its future application, if BOEM does not intend to use the Guidance in the modeling that will support the final PEIS, then it must provide a more developed and accurate assessment of the differences that result from application of the Guidance compared to the criteria and methods actually used. BOEM must also more clearly explain those criteria and methods in the final PEIS.³⁷

³⁷ As the Associations addressed in three comment letters submitted during the process for developing the Guidance, there are technical flaws in the Guidance. We have attached those three comment letters to this letter, and request that they be included in the administrative record for this NEPA review process. *See Attachment E.*

F. The Appendix D Modeling Inconsistently and Unreliably Uses Marine Mammal Population and Density Data

The Phase I modeling in Appendix D uses Navy Operating Area Density Estimates (“NODES”) and NMFS Stock Assessment Reports (“SARs”) marine mammal population data. However, the Phase II modeling inconsistently uses the 2016 Duke model of animal distribution and abundance. The following summarizes some of the problems associated with Appendix D’s use of varying datasets and models related to marine mammal abundance and density.

First, a problem with habitat-correlated density modeling is that the model may not capture all the habitat variables that are important to the animals, and consequently places modeled animals in areas where they never or rarely go. For example, Bryde’s whales are rarely if ever seen outside De Soto Canyon, yet the Duke model places modeled Bryde’s whales in relatively high density at the continental shelf edge from Texas to the Florida Straits because the habitat suitability model indicates that they “could” use those places. The Duke model thus results in the calculation of densities of Bryde’s whales in Zone 4 of the Appendix D’s seven zone system when that clearly is not supported by the available sighting data.

Second, the Appendix D makes unsupported revisions to some results from the Duke model, which were themselves arbitrary or poorly supported. For example, the Duke model places sperm whales and Kogia whales in 500 m of water even though the available sighting data shows that they occur in shallower water. The Appendix D modeling, however, goes one step further and pushes all sperm whales into 1,000 m water depth or deeper, further exaggerating the disparity between actual observations (which tend to be biased toward shallower water) and the model (which uses “expert knowledge” to put the animals where the modeler thinks they ought to be).

Third, the Appendix D modeling evenly spreads species for which little data are available (e.g., killer whales, false killer whales, Fraser’s dolphins) across all habitats the modelers deem appropriate (generally deeper water, Zones 4-7). Some species, such as Fraser’s dolphins and false killer whales, are therefore assumed to be abundant and widespread in areas where they are historically seldom seen.

Fourth, rather than use a specific value for each 100 km square, the Appendix D modeling averages the values from each 100 km² box across an entire zone containing hundreds or thousands of 100 km² boxes. This enables the placement of animals into the outermost Zone 7 where there is little or no data and therefore no modeling by Duke. By expanding the Duke averages into areas outside the scope of the model, Appendix D increases the total number of animals present beyond the predictions of the SARs, NODES, or the Duke model. Appendix D presents the averaged values as a minimum, maximum, and mean, which is an appropriate way to convey some of the statistical uncertainty about the model numbers (*see* DPEIS, Appx. D at D-201), but there is insufficient information to determine how these values were obtained from the source information.