

Rice's Whale Critical Habitat Report

Review: ID 452

Peer Review Report

We solicited review of the Draft *Endangered Species Act Critical Habitat Report* from two potential reviewers. Both agreed to the review and provided comments. Reviewer comments are compiled below and are not in the order of the reviewer identification list below.

I. Peer Reviewers (alphabetically)

Dr. Eric Patterson
Cetacean and Pinniped Conservation Lead
Marine Mammal and Sea Turtle Conservation Division
Office of Protected Resources
NOAA Fisheries
U.S. Department of Commerce

Dr. Patricia Rosel
Research Geneticist
Marine Mammal and Sea Turtle Division
Southeast Fisheries Science Center

II. Peer Review Directive

Your peer review comments should focus on the following topics:

1. The accuracy, quality, completeness, and relevance of the scientific information and data considered; particularly whether any additional data exist that were not considered.
2. Whether scientific uncertainties are reasonably identified and characterized.
3. Whether the document provides a well-reasoned rationale in identifying the physical and biological features of a critical habitat designation for Rice's whales based on the best available data.
4. If a justification is lacking or specific information was applied incorrectly in reaching conclusions, provide specific comments.

III. Summary of Peer Review Comments

Major comments are compiled in the bullets below. All non-substantive edits were incorporated within the document when and where appropriate and are not repeated here.

- There are a variety of formatting errors with respect to numbering of tables and figures which require attention. In addition, the reference section is incomplete, with many of the papers cited in the text absent from the references section and at least one incorrect and incomplete citation to the Bryde's whale status review document. There are also a number of places where text has been lifted directly from published papers. I recommend that attention be paid to these sentences/paragraphs and revisions be made to remove this duplication of wording.
- Overall, the focus on continental slope associated habitat in the Gulf of Mexico seems an

appropriate target for critical habitat for this species. Waters between the 100m and 400m depth contours throughout US waters of the Gulf of Mexico are preferred habitat, based on both visual and acoustic studies of the species.

- It isn't just the water between 100 and 400m that is critical habitat, it is the condition of those waters that is critical to sustainability and recovery of the species - prey, proper environment for communication, reproduction and survival. Consistent and sufficient prey availability and the soundscape seem two integral components of that critical habitat to recovery of the species. As I understand the document, there is currently no expectation for the need of any type of mitigation or changes to 'maintain' these two qualities of the habitat (or any others), so the status quo is what is envisioned going forward. But perhaps the status quo is part of the problem, particularly with respect to noise.
- I did not see consideration of maintaining the prey base in the habitat and whether that can be accomplished through actions only within waters between 100-400m depth. Based on what is known to date, the prey species are not a target of any fisheries, although some may be taken as bycatch. But they are part of a broader Gulf ecosystem in which other species are harvested, particularly forage fishes like menhaden, which play an important role in the Gulf ecosystem. Consideration of the need to maintain a sufficient prey base in the habitat for sustainability and recovery of the species and what that would like would seem to be an important aspect to the essential feature defined in the document. Would this require any sort of mitigation, change to current practices etc.?
- Soundscape seems a very important aspect of the critical habitat to consider for the conservation of this species. If I understand correctly, and I am not sure I do, the document suggests that no noise mitigation is needed in the Gulf as part of critical habitat management for Rice's whales. This seems surprising given the overall noise levels in the Gulf, particularly the north central and western Gulf, and the recognition in the document of the potential detrimental impacts of noise to the species' feeding, reproduction, etc. given demonstrated impacts in other taxa. Noise travels, so even if the source is outside the critical habitat, it could be degrading the quality of the critical habitat. If the current soundscape of the critical habitat is impeding recovery, then keeping it from getting any noisier seems important; in fact lowering noise levels could be important to recovery.
- The document indicates that existing noise mitigation measures in the Gulf that are "...designed to protect the species also likely ensure the preservation of sufficiently quiet conditions for Rice's whales' normal use and occupancy of the proposed critical habitat wherever the whales or other protected marine species are present." I am wondering how do you know this? What is the evidence? I believe the Gulf is one of the noisiest (anthropogenic noise) marine environments on the planet, so it doesn't seem like existing noise mitigation measures are working very well and the existing levels of noise in the habitat could play a role in impeding recovery.
- Related to this, there are at least two places in the document where uncertainty in an impact is equated with concluding no impact. For example:

"However, given the additional uncertainty about the extent to which noise associated with oil and gas exploration and development activities would impact the proposed critical habitat and, specifically, Rice's whales' normal use and occupancy, we expect that these impacts would not rise to the level of adverse modification of the critical habitat. As a result, incremental costs associated with oil and gas exploration and production as a result of the

Rice's whale critical habitat will be limited to administrative costs of consultation.”

I do not see how uncertainty in an item automatically leads to the expectation that that item is not a problem. Uncertainty means you don't know the impact, not that it is unlikely there is an adverse impact on the whales or the habitat they use. This seems like faulty logic. For example, noise levels in the 100-400m portion of the Gulf could very well be impacting the environment such that, in locations where noise levels are chronically the highest, the whales are avoiding habitat they would otherwise inhabit, particularly in the northcentral and western gulf. Not reducing levels in the critical habitat could be impeding recovery.

- Recommendation to define the Rice's whale core distribution area prior to the first use of the term in the information report. The second reviewer provided a more recent citation to the core distribution area map.
- Recommendation to summarize ambient noise and impacts of sound and masking more succinctly with the caveat that ambient noise may be effecting our ability to detect Rice's whales and therefore what we know about their distribution.
- A commenter provided a more recent reference for density maps for the United States east coast that does not include Bryde's whales and included the following information from that document: “The "Bryde's whale" model is retired and no longer recommended for use. The model relied on four ambiguous "Sei or Bryde's Whale" sightings from the 1990s, and estimated a mean abundance of 7 whales for the waters of the East Coast study area south of Cape Hatteras on the shelf and south of the Gulf Stream off the shelf. Subsequently, Rosel et al. (2021) reviewed multiple lines of evidence, including our model, and concluded that "Overall, the evidence to date indicates Bryde's whales are extremely rare in U.S. waters of the western North Atlantic." They pointed out that passive acoustic monitoring has not recorded whale call types associated with any type of Bryde's whale along the East Coast, but sei whales have been regularly recorded. Our conclusion is that the ambiguous sightings from the 1990s were most likely sei whales. Lacking any more recent possible evidence of Bryde's whales, and given the expert opinions of Rosel et al., we now believe Bryde's whale is effectively absent from our East Coast study area.
- Recommendation to remove text discussing results of Southeast Fisheries Science Center unpublished small pelagic trawl survey data since there is no discussion of any results from the work.
- Recommendation to revise the essential feature language to include the proposed water depths between 100 and 400 meters.