

**Peer Review Report
on the**

Draft North Atlantic Right Whale (*Eubalaena glacialis*) Source Document for the Critical Habitat Designation: A review of information pertaining to the definition of critical habitat.

Draft Endangered Species Act (ESA) Section 4(b)(2) Report Critical Habitat for the North Atlantic Right Whale (*Eubalaena glacialis*)

Peer Reviewers:

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Comment: The Biological Report appears to be well-researched and includes pertinent references from both physical and biological sciences which strongly support the identified essential features and those particular areas in which they are found. The supporting science referenced in discussions on the ecological significance of *C. finmarchicus* was particularly useful to this purpose. Data gaps and uncertainties were well-identified in the Report, and conclusions were reasonably established throughout. The authors are commended for properly identifying those features that are truly essential, within the general purpose of designating habitat essential to the right whale, and resisting the inclusion of such features as “air to breathe” or “water to swim in” which, while arguably essential, would render meaningless the concept and purpose of critical habitat.

Response: We agree with this comment

Comment: There seems to be a lack of discussion regarding the Eastern North Atlantic stock of right whales and why it is not included here.

Response: We are not authorized to designate critical habitat outside of U.S. jurisdiction. Further, the current distribution and migration patterns of the eastern North Atlantic right whale population are unknown. Sighting surveys from the eastern Atlantic Ocean suggest that right whales present in this region are rare. An intense period of whaling in the eastern North Atlantic between 1902 and 1967 (including harvest off the Shetlands, Hebrides and Ireland in the years

1906-1910) was particularly catastrophic for the eastern North Atlantic right whale population. Since that time, there have only been sporadic sightings of right whales in the eastern North Atlantic (Best et al. 2001). In two recent winter surveys of Cintra Bay, no evidence was found to suggest that right whales still use the area; this absence of evidence also corresponds to a lack of recent observations in northern European waters (Reeves 2001). Based on the paucity of sighting information, current distribution and migration patterns of the eastern North Atlantic right whale population are unknown.

Comment: The migratory corridor(s) for these whales are poorly described; this owing more to an apparent lack of information than failings of the Report to identify relevant research. I wondered if anything may be known about the prevailing currents along the Atlantic seaboard and whether right whale movements are associated with such currents. Also, is there evidence or thought that the winter and spring migrations may follow different routes? I agree that, as presented in the Report, the available data do not support the identification of any essential features that provide for migratory movements.

Response: There is no information or studies available that evaluate whether “nearshore currents” in the Mid-Atlantic influence migratory behavior of North Atlantic right whales. In November and December, right whales began to leave the feeding grounds and migrate to calving grounds in the southeastern U.S and to unknown areas. By late March, most right whales present in the southern calving habitat have left, traveling north to feeding areas. The space used by right whales along their migration remains almost entirely unknown (Schick et al 2009).

Comment: There was little in the Report regarding the importance of the acoustic environment to these whales, nor to what extent sound or the absence of noise might be an essential feature. There exists a very large body of literature on acoustic masking and other effects of noise on cetaceans, and it would seem this issue deserves attention.

Response: The acoustic qualities or features of the habitat that are essential to the conservation of North Atlantic right whales are currently unknown. Clark et al. (2009) noted that specific questions and uncertainty exists regarding large whale communications and the potential for communication loss to lead to impacts to the conservation of right whales. These researchers concluded that “At present, we can only speculate because we do not know enough details about when and how whales use their calls to communicate relative to the behavioral and ecological contexts, and how reductions in these capabilities translate to biological cost.” In addition Clark et al. (2009), with regard to bioacoustic effects of ocean noise states “.....the greatest uncertainties in our abilities to estimate the impacts of communication masking come from our ignorance of spatial and temporal scales over which animals engage in their bioacoustic activities. Very little is known about the ranges over which the large whales actually communicate...” Therefore, an expansion of the list of essential physical and biological features for North Atlantic right whales to include the acoustic qualities that allow them to communicate efficiently and carry out other essential biological functions is not warranted at this time. As new information becomes available, we will take appropriate action if warranted.

Comment: Why weren't large -scale offshore aquaculture operations these analyzed for the foraging area?

Response: During the development of the proposed rule and the supporting documents (e.g., Biological Source Document, Section 4(b)(2) Report), we conducted an in-depth and thorough analysis of the potential for a variety of activities to impact the essential features of foraging and calving habitat including offshore aquaculture. The potential impacts of the activities cited by the commenter were not identified as reasons the essential features may require special management, or as activities that would require section 7 consultation because they might adversely affect the essential features of foraging habitat. The introduction of vertical lines, mooring, and buoy lines into the water column associated with the development of offshore aquaculture may present an entanglement risk for large whales, including right whales, but is not a route of effects to the essential foraging features of the critical habitat. Thus, the agency would consider those impacts during a section 7 consultation to insure those activities are not likely to jeopardize the continued existence of North Atlantic right whales.

Comment: With fewer than 500 whales in this population, and because the conservation goal of critical habitat is that it have capacity to provide for a recovered population, this conclusion¹ may not be appropriate. It is possible the current areas of abundance are in part due to the very small current level of abundance, and the distribution has collapsed into the "best of the best". Less productive habitats, albeit presently underutilized, could be important to a recovered population. Also, the regulations as described would seem to require such areas be included provided they 1) fall within the range of the species and 2) contain the described essential feature(s).

Response: An analysis of right whale sightings data along the east coast indicates that right whales rarely venture into bays, harbors, or inlets (70 FR 35849, June 25, 2005, NMFS 2007, 72 FR 57104, October 5, 2007). Based on this analysis, we have concluded that it is unlikely that right whales spend substantial amounts of time in the coastal waters of Maine, particularly inshore areas such as bays, harbors, or inlets (70 FR 35849, June 25, 2005, NMFS 2007, 72 FR 57104, October 5, 2007). Similarly, right whales are seldom reported in the small bays and harbors along the inside edge of Cape Cod, with the exception of Provincetown Harbor. As discussed, foraging right whales are indicative of the presence of dense aggregations of late stage *C. finmarchicus*. Due to the absence or rarity of foraging right whales in many of the inshore areas, bays, harbors and inlets, NMFS concludes that these essential biological features are not found in these areas shoreward of the boundaries delineated in the bullet points below. Furthermore, inshore areas, bays, harbors, and inlets create their own oceanographic conditions that, while influenced by the prevailing oceanographic conditions and processes in the greater Gulf of Maine-Georges Bank region, are distinct enough from the Gulf of Maine-Georges Bank

¹ The comment references this determination that the essential physical and biological foraging features are absent from a number of inshore areas, bays, harbors and inlets in Unit 1 and that subsequently, these areas do not meet the definition of critical habitat and have not been designated as such in Unit 1. "Due to the absence or rarity of foraging right whales in many of the inshore areas, bays, harbors and inlets, NMFS concludes that these essential biological features are not found in these areas shoreward of the boundaries delineated in the bullet points below." (See page 73, in the Draft Biological Source Document, December 2013).

system for us to conclude that the essential physical features that serve to aggregate and distribute copepods are not present in inshore areas, bays, harbors, and inlets.

Comment: This seems the weakest of any arguments made regarding need for special management or protection. The defense rests largely on how energy development will impact the whales, rather than the essential features. In this vein, one might more-easily construct arguments concerning noise from commercial vessels – a likely more-prominent issue that might also fragment the habitat.²

Response: In Unit 2, we identified three broad categories of potential future activities that could result in negative impacts to the essential features and their ability to support conservation of North Atlantic right whales. Of these three broad categories, we concluded that offshore energy development and large-scale offshore aquaculture operations have the potential to fragment large, continuous areas where the essential features are present. The potential route for these impacts is:

Offshore energy development in Unit 2 may fragment large, continuous areas of the essential features such that Unit 2 is rendered unsuitable for calving right whales. Further, the numerous floating, fixed, and submerged structures, mooring lines, and transmission cables associated with large ocean energy facilities could result in adverse effects to the essential features of Unit 2 by limiting selectibility of optimal areas necessary for successful calving.

Large-scale offshore aquaculture generally involves the placement of large arrays or fields of individual net-pens. The construction and operation of large-scale offshore aquaculture facilities within the specific area have the potential to affect the selectibility and availability of the dynamically distributed essential features of calving habitat. Availability of the essential features may be limited by the construction of large arrays or fields of permanent structures that may act as physical barriers and prevent or limit the ability of right whale mothers and calves to use the essential features.

Large-scale permanent activities are more likely to interrupt contiguous areas of optimal combinations of the essential features such that the essential features are no longer able to support successful calving of right whales. Because of the size and scope of large-scale activities, these activities are also more likely to reduce or eliminate the “selectability” of dynamic, optimal combinations of the essential features such that the essential features are no longer able to support successful calving of right whales. Further, large-scale activities that occur over long durations are more likely to decrease the availability of large, contiguous areas of the features, if not act potentially as permanent “barriers” to the availability of the features over time.

We concluded that the impacts of vessel traffic, including noise, given the relative short and impermanent nature of any possible affect, was not likely to reduce or eliminate the “selectability” of dynamic, optimal combinations of the essential features such that the essential

². The comment relates to the potential of offshore oil and gas development activities to fragment large, continuous areas where the essential features are present (See page 135-137, in the Draft Biological Source Document, December 2013

features are no longer able to support successful calving of right whales. As discussed, we believe that the risks associated with vessel traffic and ship strike constitute a takings issue that we are currently addressing through separate regulatory means.