

Responses to 16 November Questions from the White House on Right Whale Ship Strike Reduction Final Rule

NOAA/NMFS

20 November 2007

Question: 1) There is an assertion made by NOAA that loss of one female whale (cow) could make the difference in the species survival/extinction based on population dynamics. They have produced a table that shows the impacts of various speed limits on overall population that has become a central part of the debate. However, the studies that feed the assumptions into the table are from 1999 and 2001, which is before an observed dramatic increase in the number of calf births (roughly post-2000).

- What is the impact of the increase in whale calf births on the projected populations?

Response: To meet the requirements of the Data Quality Act and OMB regulations implementing it, NOAA can only use peer reviewed information and data when promulgating regulations. NOAA used the latest, peer-reviewed, scientific data when developing rule. NOAA closely monitors calf counts but is unaware of any recent scientific publications that provide more recent information on more recent calving. OSTP was posed this question as well; and we have not received from them any new information on studies.

Regarding how increased calving may affect projected populations, as long as the number of female calves born and subsequently recruited to adulthood is greater than the number of adult females dying from ship strikes, gear interactions, and natural mortality, the population will increase. However, only about half the calves born are female and natural mortality for calves and juveniles is normally higher than for all other age classes. As a result, for every 10 calves, only 5 are females. Of these 5, 1 or 2 would likely die as calves, and another 1 or 2 might die before they reach adulthood. This could leave only 1-3 adult females recruited out of a cohort of 10 calves.

In addition, there is an average of 3.2 KNOWN right whale deaths per year during 2001-2005 (Waring et al. 2007). This represents only part of the actual deaths, and these were mostly adult females. Therefore, approximately 15-20 calves born every year are needed just to maintain a stable population. The mean number of right whale calves known born per year during 1992-2006 was 14.9 per year (Waring et al. 2007). As such, the current calf production may be just enough for the population to be remaining stable.

Question: 2) Can we split out the effects of reducing speed by vessel size/mass. OSTP's analysis showed the effects of a lower speed limit phasing out between 120-140 meters, due to the force generated by larger vessels. NOAA responded with a table that showed reductions in force across sizes. We raised questions with the relevance of this table,

because it didn't provide any cutoff for survival/death--question being, does the force from the larger vessel get below that cutoff under the proposed rule?

- What is the threshold force that determines whether whales survive or die as the result of a ship strike?

Response: The table referenced by the questioner was simply intended to illustrate the forces involved in a ship-whale collision at various speeds and sizes. It was never intended to illustrate at what force level mortality occurs – only that the force of a collision is really determined by how fast the vessel is going, and not its size.

There are no data or studies to directly answer this question. Field experiments have not been conducted (in which living whales are intentionally struck). Even if possible, there likely would not be sufficient data to identify an exact threshold of death versus survival as the intensity of a blow depends on the angle of impact, the rapidity of onset, and other factors. The data set of actual ship strikes is not rich enough with regard to vessel size to determine such a threshold. On the other hand, a number of studies, multiple statistical analyses, and physics theory all indicate that vessel speed, not vessel size, is the most significant factor in determining the likelihood of a whale surviving a collision with a ship.

Question: 3) NOAA's rule would apply to geographic areas covering 95% of whale sightings. We have questioned whether this results in an overbroad regulation.

- Why has NOAA selected the %age it has, and is this consistent with the threshold used in other rulemakings?

The question implies NOAA drew the Seasonal Management Areas (SMAs) based on the 95% figure – it did not and has tried to explain this several times. The SMAs proposed by NOAA do not cover 95% of right whale sightings. Although there are some variations in the northeast and southeast, generally speaking about 95% of right sightings occur within 30nm of shore. The 95% figure demonstrates the relevance and importance of the 30nm figure – it is not relevant in and of itself.

NOAA has a robust understanding of where and when North Atlantic right whales spend time off of the U.S. coast. In crafting this rule, NOAA extensively evaluated vessel traffic data. Therefore, NOAA was able to compare where and when the whales are likely to be in U.S. waters and compare to that vessel traffic along the east coast.

NOAA drew boundaries for SMAs in each region (northeast, mid-Atlantic, southeast) based on our understanding of where and when the areas of greatest risk of vessel-whale interactions are. For the mid-Atlantic SMAs, NOAA used 30nm as an outer boundary knowing that 95% of right whale sightings occur within that distance from shore. To achieve coverage of 100% of right whale sightings, NOAA would have had to extend the outer boundary out to about 140nm. NOAA's view is that an outer boundary of 30nm in

the mid-Atlantic SMAs achieves the appropriate level of protection for the whales while avoiding economic impacts NOAA found to be unreasonable.

In terms of whether this is consistent with thresholds from other rulemakings, there is no precedent, i.e., "standard approach", to rulemaking to manage the operation of the shipping industry for this purpose. However, NOAA promulgates fishing regulations to reduce bycatch of marine mammals throughout significant portions of an endangered species' range.

- Is that cutoff %age consistently applied in all areas, and if not, what does the map look like if a standard %age is used?

No, 30nm is used as the outer boundary only in the mid-Atlantic SMA. The boundaries for the northeast and southeast SMAs extend out farther than 30nm because the sightings data reveals that when right whales feed in the northeast and breed in the southeast, they are likely to do so much further from shore.

- What is the impact of reducing size of the covered areas per mile from the port, and can any projected increase in ship strikes be offset with alternative provisions?

As previously stated, the three SMAs proposed by NOAA are tied tightly and directly to right whale movement and migration, and as juxtaposed with high vessel density, i.e., near ports. They were selected because they protect right whales while also minimizing economic impact to the shipping industry.

A number of alternative provisions were considered (NOAA assessed over 100 options) and are described in the EIS that accompanies the rule. Among others, they include an area that extends along the entire coast (rather than only around port entrances) and year round in duration. This is far more protective for whales, but carries greater economic burden to industry. Another was only use of "dynamic management areas" in specific locations where whales are sighted, but the industry indicated the resulting unpredictability to scheduling was not feasible as voyage planning would not be possible, and potential for delays for waiting inter-modal transport and longshoremens, would increase. Known, finite management areas occurring at known times allow for advance scheduling, specific voyage planning, and foreseeable inter-modal connections.

Moving the outer boundaries of the SMAs closer to shore, whether in one region or all three, results in a rule that is less protective of right whales and increases the legal vulnerability of the rule. It is not possible to come up with an empirical value for that

risk, but suffice to say it does exist and will impact the government's ability to successfully defend the rule from suits by environmental groups that believe the rule is not protective enough.

Response:

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NOAA does not believe these provisions to be overly broad. The provisions are tied tightly and directly to right whale movement and migration, and as juxtaposed with high vessel density, i.e., near ports. They were selected because they protect right whales while also minimizing economic impact to the shipping industry.

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