July 2, 2024

The Honorable Cliff Bentz, Chairman
Subcommittee on Water, Wildlife and Fisheries
U.S. House of Representatives
409 Cannon House Office Building
Washington, DC 20515

RE: Comments on Legislative Hearing – June 27, 2024

Dear Chairman Bentz,

Please accept the following comments from the Viking Marine Group regarding the legislative hearing in the Subcommittee on Water, Wildlife, and Fisheries held on June 27, 2024. The hearing included discussions on several important pieces of legislation, with our focus on HR8704.

We appreciate the opportunity to provide comments on this important topic. As articulated by all the witnesses during the hearing, there is a strong commitment to supporting the recovery of the endangered North Atlantic Right Whale (NARW). Collaboration with the marine industry and leveraging private sector innovation is expected to provide the greatest opportunities for the species to recover.

Our comments relative to the legislative hearing are threefold: first, to correct inaccurate statements regarding the lack of technology that can detect NARWs to provide examples of risk reduction tools currently in use, and to raise awareness of risk reduction tools that were omitted from the hearing discussion.

Inaccurate Statements

It appears that the NOAA representative and the minority witness failed to consider current literature on the topic of technology that can mitigate the risk of vessel strikes to NARWs and other whale species. A casual literature review indicates that there is ample technology available today and installed on boats that can detect objects in the water, including NARWs and other marine mammals. It is critical to recognize that any technology that can detect objects in the water improves situational awareness and allows the operator to take necessary action to avoid a collision. Thus, having systems and equipment on a boat that detects objects in the water also provides a measurable reduction in the likelihood of hitting a NARW.

During the hearing, Dr. Evan Howell stated, "However, as it stands, there is no proven technology that can be adopted rapidly enough to reduce lethal vessel strikes of North Atlantic right whales." Not only is this statement incorrect but stokes a sense of concern noting that the Director of the Science and Technology in the federal agency charged with managing the NARW as not abreast of all ways of reducing risk. It has been recognized that technology is expected to play a role in preventing vessel strikes. As stated above, we urge Dr. Howell to investigate the

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array of equipment that is commonly installed on boats 35 feet and larger that can detect objects in the water, including NARWs.

When asked about technology currently available and employed that can save right whales Dr. Jessica Redfern stated, "The technology is not yet ready or available." This statement was also inconsistent with scientific literature.

It is important to note that there is strong scientific evidence supporting the existing and use of technologies to mitigate strike risk. Recent research from researchers at the Woods Hole Oceanographic Institution found, "We also conclude that surface-based whale detection may be very effective for whale-strike mitigation, and a large-scale deployment on suitable vessels in high-risk areas could effectively reduce whale strikes."[1] This highlights the effectiveness of surface-based detection systems, many of which are already in use and installed on a broad range of vessels.

Another 2024 peer-reviewed paper found that computer vision systems are viable for widespread vessel-based application and at various near-shore locations with high risks of physical disturbance to threatened and endangered whales: "Due to the relatively low acquisition cost (< $20k USD) of land-based TI (thermal imaging) systems, they are a viable option for widespread application at various near-shore locations with high risks of physical disturbance of threatened and endangered whales." Note that the equipment evaluated in this study is commonly installed on vessels.

Risk Reduction Technology Available and Currently in Use

Aside from scientific papers, the marine industry is constantly developing tools that allow boats to reduce at-sea collisions with objects in the water, including NARWs. Below are examples of equipment commonly installed on boats today with visual, thermal and infrared capabilities that can detect NARWs.

- FLIR M364C-364C LR: Capable of detecting a 30-foot vessel up to 3,700 meters and a human-sized target up to 1,030 meters.
- Sionyx Nightwave: Capable of detecting a man-sized object at 150m and a marine vessel-sized target at 450 meters.
- Sentry Cameras by SEA.AI: Capable of detecting a buoy at 700 meters and a dingy at 3000 meters.
- AI-Ris Computer Vision Sensor by Sea Machines Robotics: Provides advanced detection and classification capabilities for small objects out 500 meters.

Noting that NARW and other whale species spend time both at the surface and at depth, it is critical to recognize that there is below-surface detection technology available that is also in use today. Below are a few products that can detect objects far smaller than a NARW in the water.

- Argos 350 by FarSounder: 3D forward-looking sonar providing real-time images of the seabed and objects in the water column up to 35 meters ahead of the vessel.

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[1] Baille, L.M.R. and Daniel P. Zitter Bart, Effectiveness of surface-based detection methods for vessel strike mitigation of North Atlantic right whales. Endangered Species Research Vol. 49: 57-69, 2022 Effectiveness of surface-based detection methods for vessel strike mitigation of North Atlantic right whales (int-res.com)

- Wavefront Systems: The system will detect moderate-sized icebergs, submerged transport containers and whales across the whole 1,500 meter range.

For reference, an average size NARW is 52 feet long and weighs roughly 120,000 pounds.

A more mundane technology but one that is extensively in use by both commercial vessel and pleasure craft fleets is marine radar. Marine radar is an accepted and proven technology to improve navigational safety and detect large marine mammals. Radar has been used in biological research to monitor wildlife, such as detecting and tracking fin whales and smaller mammals up to 5.5km or more at lower sea states.[2] This demonstrates radar's is a fully capability and available tool widely employed by all manner and sized vessels for detecting marine mammals. This also counters the statements of some witnesses that technology is not available to detect NARWs.

Omission of SAT Tagging as a Risk Reduction Tool

The hearing witnesses failed to include any discussion the use of Satellite Tagging (SAT), a proven tool to track NARWs and mitigate strike risk. SAT tagging provides real-time positional information on tagged individuals, allowing vessels to avoid whales on an extremely fine scale when integrated into marine electronics. The Australian and New Zealand government have had great success deploying SAT tags on Southern Atlantic right whales, with some tags staying on for upwards of a year and a half with no detrimental impacts to the individuals.[3] In addition, a SAT tagging program carried out by the conservation community in the South Atlantic is able to track Southern Right Whales as they move across shipping lanes and oil/gas fields during their annual migration.

It was announced in 2023 that NOAA allocated $3.5 million from the Inflation Reduction Act to deploy satellite tags on NARWs, demonstrating its efficacy as a proven method used in southern right whale management. Yet, no tags have been deployed as far as we have been made aware. Satellite tagging can provide real-time tracks of whale movements, offering a highly effective tool in reducing risk. In simplest terms, if vessel operators know where NARWS are real time, they will avoid them. Noting the urgency expressed by the witnesses in taking action to reduce risk, it is unfortunate that this highly effective technology tool is not being utilized.

Conclusion

The long-term conservation strategy for the NARW and its subsequent management plan need to be firmly planted in a science and solutions-based approach. There is no place for driven agendas given the seriousness of the conservation challenge at hand with NARW. Any successful approach includes acknowledgment that meaningful conservation will only be achieved with through a multi-pronged approach that considers all tools to reduce risk of vessel strikes. Technology, in various forms and as supported by the facts, can and must play a role in those efforts. Technology will have varying degrees of effectiveness depending on a multitude of factors, including factors attributed to the vessel. Again, referring to the scientific literature, it

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[2] DeProspo, Douglas F., J, Mobley, W. Hom, and M. Carron "Radar-Based Detection, Tracking and Speciation of Marine Mammals from Ships.," Award Number: N00014-04-1-0729 2005.

[3] [3] Tag retention, wound healing, and subsequent reproductive history of southern right whales following satellite‐tagging (up.ac.za)

has been found that "when vessels have a high maneuverability and the ability to change velocity quickly (e.g. certain fishing vessels and ferries), vessel-based detection systems would be very effective,"[4] The science clearly supports the adoption of a comprehensive and nuanced approach that matches risk reduction measures to the risk profile of the vessel. This type of approach is expected to meet the conservation needs of the resource and balance the operation needs of the industry.

As noted during the hearing, a minimum of a 20% reduction of risk is likely to be achieved through a vessel speed rule. We believe that level of reduction can be achieved through other approaches. We hope members of the Subcommittee and NOAA understand that it is not expected that this level of risk reduction shall be achieved through a single piece of equipment or system but through a multimodal approach that utilizes all technology. Recognizing that not all vessels possess a suite of instruments that can achieve the desired level of reduction of risk, basic communication systems allow detection information to be share with other vessels when geographically relevant.

It is vital to acknowledge that there are multiple tools available today to reduce the risk of vessel strikes to NARWs. A recent paper authored by NOAA scientist, states that "Consideration should be given to multiple data sources, models, perspectives, sources of expertise, and possible solutions, rather than to a single model output or approach to mitigation."[5] We urge NOAA to recognize the role of these technologies alongside vessel speed regulations in mitigating risk. Moreover, we hope HR8704 advances in the House of Representatives, enabling the necessary resources to support the private sector in carrying out the evaluation and implementation of these tools.

Dr. Evan Howell stated that NOAA remains fully committed to minimizing the regulatory burden on ocean users by investing in and adopting technology-based solutions. We hope that commitment includes acknowledging the technology available today that allows boats to detect whales while underway and take action to reduce the risk of vessel strikes.

We are eager to work with the Subcommittee members, NOAA, and other partners to advance the important work of quantifying risk reduction that is taking place today. We also hope that HR8704 is advanced in the House of Representatives so the necessary resources can be distributed to the sector most capable of evaluating existing tools and bringing new risk reduction tools to market.

Sincerely,

John DePersenaire
Director of Government Affairs and Sustainability

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[4] Baille, L.M.R. and Daniel P. Zitter Bart, Effectiveness of surface-based detection methods for vessel strike mitigation of North Atlantic right whales. Endangered Species Research Vol. 49: 57-69, 2022 Effectiveness of surface-based detection methods for vessel strike mitigation of North Atlantic right whales (int-res.com)

[5] Roberts et al. North Atlantic right whale density model, Marine Ecology Progressive Series, Vol. 732: 167–192, 2024

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