October 3, 2022

Ms. Janet Coit
Assistant Administrator for Fisheries
National Oceanic and Atmospheric Administration
1315 East West Highway
Silver Spring, MD 20910

Re: Proposed North Atlantic Right Whale Vessel Strike Reduction Rule

Dear Administrator Coit:

The undersigned representatives of the recreational fishing and boating community understand the importance of protecting the endangered North Atlantic Right Whale (hereafter RW). Considering the safety concerns to RWs and human life, it is simply in our best interest to reduce strike risks. However, given the substantial impact of the proposed vessel speed rule, the fact that it raises concerns about navigational safety and safety at sea, and lack of stakeholder engagement, we urge the National Marine Fisheries Service (NMFS) to pause this rule until additional analysis on the issues expressed in this letter can be conducted, and potential new alternatives can be developed in collaboration with the recreational fishing and boating industry.

We understand that the proposed rule has been in development for over a year solely within the Office of Protected Resources and yet, no formal engagement with stakeholders occurred. As America's original conservationists, the recreational fishing and boating community is highly engaged in the management processes that impact our sport. In many cases, our industry has offered the constructive input that was ultimately used to develop management solutions that meet conservation goals and allow for the continued social and economic contributions our sector provides to the nation. The importance of this collaboration ensures the greatest benefit to our nation with recreational boating alone generating $170 billion in annual economic impact, and over 50 million American anglers fishing each year.

Unfortunately, the lack of meaningful engagement led to a proposed rule that will have excessively severe impacts on fishing and boating. The rule would expand mandatory speed restrictions to include vessels 35 - 65 feet and significantly broaden seasonal speed zones (SSZs) in both space and time impacting tens of thousands of recreational vessels. Many boaters and fishers will forego boating and fishing trips altogether due to the time, cost and safety burdens imposed by the rule. This in turn will negatively impact marinas, tackle shops, charter and party boat operations--all businesses that represent America's small business economy.

Given the clear social, conservation and economic benefits of recreational fishing and boating to the nation, and uncertainty around much of the justification for the proposal, we believe more deliberation and analysis is needed to determine if conservation goals could be achieved with less restrictive measures. A pause in rulemaking would provide opportunity to further evaluate the importance of those trade-offs as analyzed below. We stand ready to work with NMFS to ensure our community is doing everything within reason to avoid conflicts with right whales.

Below we provide concerns on numerous aspects of the proposed rule. While each concern warrants consideration and reanalysis within the rule, taken in total they drive home the message that this rule is significantly flawed and not ready for implementation.

1. Seasonal Speed Zones (Currently Referred to as Seasonal Management Areas)
The proposed rule significantly expands the geographic scope of the existing SSZs. NMFS justifies the expansion on the need to reduce human induced RW mortality events from vessel strikes and uses a complex risk model to justify the scope of the proposed changes. The risk model simulates the likelihood of a fatal vessel strike in space and time using various sources of RW and vessel traffic data. NMFS risk analysis resulted in a proposed expansion of SSZs but realized mortality supports the maintenance, not the expansion of the existing SSZs. For example, NMFS notes that since 2008, four of the five strike mortality events involving vessels less than 65 feet occurred inside active SSZs. Therefore, the observed data suggest that an 80% reduction in realized mortality since 2008 could have been achieved if vessels less than 65 feet were added to existing SSZs. Instead, NMFS opts for a vast geographic expansion of SSZs from Massachusetts to north Florida based on projected risk when realized risk indicates existing SSZs would be an effective management strategy to achieve conservation goals for the 35 - 65 foot vessel class. To be clear, we are not expressing support for applying the proposed restrictions to the existing SSZs, but rather pointing out these issues as an example of the lack of justification for the proposal.

2. Dynamic Speed Zones (Currently Referred to as Dynamic Management Areas)
To address elevated vessel strike risk in areas outside SSZs, NMFS is proposing to implement mandatory Dynamic Speed Zones (DSZ) for vessels 35 feet and larger to replace the current voluntary DSZs. Practical application of the risk model would result in the highest probability of vessel strikes occurring during times and in areas when vessel traffic is high and RWs are visually or acoustically observed, triggering a DSZ. In other words, DSZs with high vessel traffic should have the highest risk of vessel strikes with RWs because RWs are known to be present. However, to our knowledge since 2008, none of the 35 - 65 foot vessel strike mortalities occurred in a DSZ, despite the risk of RW and vessel collisions being highest in high traffic DSZs. Voluntary compliance with DSZs could partially explain no mortality events, but NMFS speed rule assessment determined that vessel cooperation with DSZs is low, and therefore, the reduction in risk provided by the voluntary DSZs is minimal (NMFS, 2020). Again, it is contradictory that in areas where vessel strike probability is highest (in high traffic DMZs) associated RW mortality is lowest. This speaks to the difficulty of modeling interactions between vessels of 35 - 65 feet and RWs

given the significant number of vessel trips (millions), the size of the proposed area (tens of thousands of square miles), low number of RWs (hundreds), and the infinite variability in human and RW behavior through space and time.

3. Estimating Risk of a Recreational Vessel Strike

In an impact analysis for this proposed rule, Southwick and Associates analyzed the probability of a recreational fishing trip in the 35 - 65 foot size class striking a RW to better characterize realized risk (Appendix A). Using NMFS Marine Recreational Information Program (MRIP) effort data published by NOAA, they estimated there have been over 92 million offshore fishing trips taken since 2008 in states within the proposed SSZ expansion. Of these trips, they conservatively estimate using vessel registration data, that at least 5.1 million were taken by vessels 35 - 65 feet in length. Assuming that all five RW strikes were from recreational vessels, and that all these vessels were on fishing trips, the chance of a 35 - 65 foot recreational vessel striking a RW during an offshore fishing trip is less than one in 1,000,000. Furthermore, this analysis only incudes recreational fishing trips and does not include recreational vessel trips that occur for other reasons. Therefore, it is reasonable to assume that many more non-fishing trips occurred as well, and non-recreational vessels may have been responsible for one or more of the strikes, meaning the actual probability is likely much lower than Southwick's estimate.

While this analysis demonstrates that the chances of a recreational boat striking a RW is exceedingly rare, it also shows that in general, the recreational fishing and boating sector does not pose a significant threat on an individual RW level. Despite considerable boat activity, recreational boats are not interacting with RWs at a rate consistent with the NMFS risk model.

NMFS attempting to predict risk on a one-in-a-million chance of a vessel strike is simply not an effective management strategy and highlights the futility of expanding the SSZs to address such a small probability of vessel strike interactions. Furthermore, almost all the strike mortality events in the 35 - 65 foot vessel size class occurred within current SSZs (as referenced in section 1) and higher mortality occurrences within current SSZs is logical because existing SSZs are bottleneck points for vessel traffic being centered around major Atlantic ports (see current SSZ Figure). This observation lends management to focus more on vessel traffic density on a spatial scale, not on the absolute number of trips.

Finally, NMFS is using unrepresentative whale density values and thereby creating a significant bias in the risk model. NMFS's own technical memo states that, "*the high densities predicted along the mid-Atlantic may not be realistic.*" These inflated density values feed the risk assessment model and produce outcomes that are inconsistent with actual risk and the occurrence of known strikes. The model also served as a primary tool in the development of the proposed rule, thus, the density bias is reflected in those expansive measures. NMFS acknowledges that model development and evaluation is ongoing to address this source of bias. Noting this inherent bias and the ongoing work on the model, it would be irresponsible moving forward with the proposed rule until these issues are fully resolved.

4. Number of Recreational Vessels 35 - 65 Feet and Fishing Trips Impacted

Further exploration of available datasets indicates the NEPA Environmental Analysis (EA) underestimates the number of anglers, boaters, and economic impact associated with the proposed rule. For example, NMFS identifies 9,200 recreational vessels that will be impacted by the proposed rule. However, based on 2021 vessel registration data analyzed by Southwick Associates, there were more than 63,000 registered recreational saltwater vessels measuring 35 - 65 feet in states across the proposed SSZs. Furthermore, an analysis of MRIP trip data from 2019 - 2021 reveals that each year more

than 70,000 recreational fishing trips in the 35 - 65 foot size class take place in the Atlantic Ocean more than 3 miles offshore in states with proposed SSZs during the months when the speed restrictions would be in place. We recommend that NMFS address shortcomings of the EA through more thorough investigation of the number of recreational vessels impacted, speeds needed for offshore trips to be viable, and the true costs and economic impacts of the lost fishing opportunities associated with Alternative 5, as they clearly exceed the $1.2 million claimed (see Appendix A).

5. Establishing the 35 - 65 Foot Vessel Size Class

NMFS proposes that current RW speed zones do not address the threat of strike mortalities involving vessels less than 65 feet and extends proposed speed restrictions to a 35 - 65 foot vessel size class. However, since 2005, only a total of six fatal vessel strikes occurred involving vessels 42 - 54 feet. NMFS additionally makes reference that Canada expanded the length of vessels covered by dynamic mandatory 10-knot speed restrictions in the Gulf of St. Lawrence in 2019 to include vessels 43 feet or greater in length. The data suggest a smaller vessel size class of 42 - 65 feet appears more justifiable than the proposed 35 - 65 foot size class. At a minimum, it brings into question how 35 feet was selected as the low end of the range since vessels around this size have not been responsible for any right whale vessel strike mortalities in the U.S. The proposed rule appears to argue that extending speed restrictions to smaller vessels will help address safety concerns as vessel strikes pose a threat to human life. As stated, we value minimizing safety concerns from strike occurrences, but given the rarity of vessel strikes in the 35 - 65 foot size class, we expect more safety concerns and threats to human life will occur from the proposed vessel speed restrictions, due to forcing boaters to spend more time on the water in potentially unsafe conditions, than the highly improbable chances of striking a RW.

6. Misestimate of Draft Depths for 35 - 65 Foot Recreational Vessels

The NOAA Technical memorandum NMFS-SEFFSC-757, may vastly overestimate the probability of a recreational vessel 35 - 65 feet interacting with a RW. The model assumes a 10-meter (m) draft depth criteria when calculating vessel strike risk. Recreational vessels in this size class rarely have a static draft that exceeds 2 m. For example, a 35 foot center console has a static draft of 1.01 meters and a 64 foot sportfish boat has a static 1.7 m draft. Given that most recreational boats in this size class are planing or semi-planing hulls, once at speed their draft is further reduced. The result is that these boats have minimal intrusion beyond the upper 6 feet (2 m) of the water column. Assuming that this class of boats poses a RW vessel strike risk beyond 2 m of depth is simply invalid. Based on this fact alone, we believe the vessel strike risk attributed to vessels 35 - 65 feet is overestimated at a minimum of 80%.

7. Overlap of Speed Rule with Known Recreational Fishing Seasons

The date ranges of the proposed SSZs conflict with many popular inshore and offshore recreational fishing seasons currently managed by the three Atlantic regional fishery management councils, NMFS Highly Migratory Species Division, and the Atlantic States Marine Fisheries Commission. For example, we evaluated NOAA's MRIP catch data from 2017 - 2021 across all waves to determine the proportion of recreational catch occurring in waves overlapping with the timing of proposed SSZs. As expected, we found that several recreationally important species including but not limited to cod, haddock, bluefish, black sea bass, striped bass, tautog, Spanish mackerel, dolphinfish, and wahoo have a significant amount of catch that overlaps with the timing of proposed SSZs (see Appendix B). Although these data are not specific to vessel size class, they demonstrate that NMFS' assumption that colder weather and rougher sea conditions will result in lower boating activity during the timing of proposed SSZs needs further exploration. We are concerned that NMFS has failed to directly engage the regional fishery management bodies to reduce the overlap between proposed changes to the timing of SSZs and recreational fishing

seasons as much as possible. Additionally, there are other recreational fishing seasons for highly migratory species that overlap with the proposed SSZs and are not sampled by MRIP (e.g., bluefin tuna).

8. Draft Regulatory Impact Review and Initial Regulatory Flexibility Analysis

Law requires NMFS to conduct a thorough evaluation of impacts to the human environment, however, the Draft Regulatory Impact Review (RIR) provides conflicting economic analyses for benefits versus impacts. For example, the RIR cites a 2020 NOAA study that estimated the direct economic output of six whale watching operations within Stellwagen Bank National Marine Sanctuary at $95.1 million (Schwarzmann, 2020). In contrast, the RIR estimates $46.2 million from the proposed rule cumulative impacts for all vessel size classes and regions combined. It is difficult to understand how the economic benefits of six whale watching operations exceeds the economic impact of 9,200 recreational vessels, a vessel number likely underestimated based on Southwick's findings (Attachment A). Furthermore, the RIR includes no indirect impact analysis, but indirect benefits from whale watch operators is included by reference in the benefits section. We question that NMFS was unable to compile any indirect economic impact information for recreational vessels especially when NMFS regularly publishes a Fisheries Economics of the United States report. These points call into question the thoroughness of NMFS' analysis and highlight the need to revisit to make it more consistent with the intent of the law.

9. Enforcement Concerns of the Proposed Rule

Currently, RW speed restrictions are enforced almost exclusively by evaluating Automatic Identification Systems (AIS) data. AIS data are analyzed to determine if a vessel has exceeded the speed limit within a seasonal speed restriction zone. AIS is a piece of marine electronics equipment made mandatory for certain vessels over 65 feet to improve the navigational safety of the vessel and other vessels operating in the area. AIS is not required on recreational vessels 35 - 65 feet thereby making the primary enforcement tool of the RW speed restrictions unavailable for boats 35 - 65 feet, which represents the largest number of vessels impacted by the proposed rule. In short, enforcement of the proposed rule would be impractical. Additionally, there are no indications that rulemaking to amend 46 USC 70114 has begun or will be initiated in the near future. This leaves the proposed rule, as written, with an extremely low likelihood that it can be enforced.

The technological limitations of AIS make the enforcement of speed limits based on its data unreliable. Positional information transmitted through AIS can carry sufficient variation, as a function of the rate of transmission and sea state, that can produce a range of estimated speeds. This variability can be particularly considerable during high seas and heavy weather conditions. Furthermore, certain conditions, such as a following sea or entering an approach on a flood tide, may result in a vessel exceeding a 10-knot limit through its AIS data (speed over ground) but its speed through the water is at or lower than the 10 knots because of additive vectors in like direction. During these conditions, a vessel must increase speed to maintain adequate steerage. The rule would clearly create scenarios where operators may be forced to run a boat at an unsafe speed in fear of AIS triggering a speed violation.

It is also important to point out that AIS is a tool that was developed and then mandated for use in certain vessels to improve navigational safety. It was not designed or intended to be used as a tool to enforce spatial or fisheries management regulations. Many vessels under 65 feet voluntarily carry and operate AIS for the added safety-at-sea benefits gained from the technology. It is a very real concern that operators of boats less than 65 feet may decide to turn off their AIS systems in fear of triggering a RW speed restriction enforcement action. This would have the unfortunate consequence of reducing navigational safety, boater safety and hampering efforts during search-and-rescue operations.

10. Updates to Safety Deviation Provisions

NMFS provides a safety deviation provision as part of the proposed rule. The deviation provision is only applicable to vessels less than 65 feet, allowing those vessels to transit at speeds greater than 10 knots within areas where a National Weather Service Gale Warning, or other National Weather Service Warning for wind speeds exceeding those that trigger a Gale Warning is in effect. The National Weather Service defines Gale force wind speeds at 39 - 46 mph. We question how NMFS arrived at a Gale force threshold because from recreational boating experience, vessels 35 - 65 feet cannot operate safely at 10 knots during wind speeds exceeding approximately 25 mph. Therefore, we suggest NMFS lower the wind speed deviation threshold to 25 - 31 mph to ensure safe vessel operation at sea.

It is also important to note that vessel speed is a significant safety feature on a recreational boat. Most recreational boats lack high displacement hull design that often provides ocean going and commercial vessel stability and the ability to operate safely in significant sea states. Recreational vessels utilize speed to conduct fishing and other recreational trips during weather windows of opportunity. Forced to not exceed a 10-knot speed limit, recreational boats could be forced to operate in conditions that would compromise safety of the passengers and vessel. Speed is also a safety asset in the event of localized weather events such as thunderstorms where a vessel could return to port or avoid a line of thunderstorms with the ability to operate above 10 knots. The proposed rule would unfairly deprive a primary safety feature of recreational boats 35 feet and larger.

Operating at speeds that do not exceed 10 knots, for most recreational boats, forces the vessel to operate at a less than optimal speed and angle of attack. Operating at these speeds raises the bow which reduces the visibility of the operator to see and avoid hazards in the water, including RWs. Most recreational boats have hull designs that allow the boat to ride level when on plane. Operator visibility is optimized when a boat is on plane. The proposed rule may actually have the unfortunate consequence of reducing operator visibility and elevating the risk of collisions.

11. Criteria for Speed Rule Alternatives

Using guidance from the Environmental Assessment, we believe proposed Alternative 5 fails to meet 6 of the 12 Alternative Selection Criteria. Specifically, it does not meet the following:

- Criteria 6, *be administratively feasible and enforceable*, since Automatic Identification System (AIS), the primary enforcement tool, is not required for vessels under 65 ft, the proposed rule will have many enforcement issues as described in the enforcement section.
- Criteria 7, *have scientific support*, because the proposed rule relies on modeled risk for vessel strikes that have less than a one-in-a-million chance of occurring, in addition to many other flaws in the analysis as identified in this letter.
- Criteria 8*, use the smallest footprint and timeframe necessary for SSZs and DSZs to achieve conservation goals*, as the rule proposes an expansive and excessive SSZ that is not consistent with where 5 fatal vessel strikes occurred since 2008.
- Criteria 9, *be easily understood and carried out by those being regulated*, since vessels under 65 feet are not required to carry transmitting AIS, the primary tool that will be used to enforce the speed restrictions.
- Criteria 10, *provide opportunities to evaluate their effectiveness*, because NMFS put forward such expansive SSZs to address such a low level of risk based on risk modeling with undefined uncertainty. Furthermore, NMFS states that the reduction in vessel strike mortality from the 2008 measures is not statistically significant.

- Criteria 11, *minimize impacts to resources (economic, transportation) and small entities,* as the proposed rule will cause the cancellation of numerous recreational fishing and boating trips that require speeds more than 10 knots to carry out.

To understand how the proposed rule would impact the recreational fishing and boating industry and determine its consistency with the selection criteria, NMFS must have direct interaction with stakeholders. The fact that the proposed rule fails to meet 6 of the 12 alternative selection criteria is clear evidence that further engagement with our industry is necessary.

12. Exploring Technological Advancements and Mariner Outreach

Pausing the rule would provide opportunity to focus on two key areas of interest that warrant discussion. First, technology that can deliver real-time monitoring of individual RWs continues to advance. From direct observations, aerial surveillance, acoustic detection, heat signature technology, satellite monitoring and ambient DNA signatures found water samples, it is feasible to gather real-time location information on a significant portion of the RW population. Fewer than 350 individual RWs remain which makes tagging or other high-value monitoring techniques possible. If all RWs cannot be tagged or monitored, perhaps efforts could be focused exclusively on mature female RWs, roughly 100 individuals, to protect the most reproductively valuable segment of the population. Even if monitoring of all RWs is not possible, we can expect any real-time monitoring to provide ancillary protection to non-monitored RWs because of their grouping behavior. This approach would be consistent with the criteria used to trigger DSZs. Outreach could also be conducted with the recreational fishing and boating community on ways they can provide direct observations of RWs to NOAA.

The second key portion of this effort is the need to disseminate information to mariners and other vessel operators. Distributing this information to anglers and boaters and into their marine electronics is essential. This is something NOAA continues to struggle with given the lack of outreach to the recreational fishing and boating community following the implementation of the 2008 measures. As mentioned, on the rare occasion when recreational boats unintentionally interact with RWs, the outcome often results in risk to life. Our industry would welcome developing ways to provide real-time positioning on navigational hazards, including RWs, to vessel operators. We also support this approach because it applies empirically based, targeted precaution instead of excessively severe measures that do not accurately reflect actual risk nor can be adequately enforced. Developing ways to distribute this information to vessel operators will only occur through direct engagement with the industry and fishing and boating organizations.

13. Need for Stakeholder Engagement

We continue to question why stakeholder engagement was not a significant part of the proposed vessel speed rule process considering known significant impacts to recreational fishing and boating. For years, NMFS has used the Take Reduction Team (TRT) model to work collaboratively with the commercial fishing industry to develop management solutions that address commercial fishing gear-related whale mortality. Even if the Marine Mammal Protection Act doesn't require TRTs for a vessel speed rule, it shows a lack of responsibility that NMFS did not use the TRT model to engage the recreational fishing and boating community in the development of this proposed rule.

We reiterate the need to pause this rule until additional analysis on the issues expressed in this letter can be conducted, and potential new alternatives developed in collaboration with the recreational fishing and boating industry.

Thank you for your consideration, and we look forward to working with you to ensure our community is doing everything within reason to avoid conflicts with right whales.

Sincerely,

Glenn Hughes, President
American Sportfishing Association

Dr. Guy Harvey, Ph.D., Chairman Emeritus
Guy Harvey Ocean Foundation

Chris Edmonston, VP Government Affairs
Boat Owners Association of the United States

Jason Schratwieser, President
International Game Fish Association

Jim McDuffie, President and CEO
Bonefish and Tarpon Trust

Matt Gruhn, President
Marine Retailers Association of the Americas

Jeff Angers, President
Center for Sportfishing Policy

Frank Hugelmeyer, President
National Marine Manufacturers Association

Patrick Murray, President
Coastal Conservation Association

Rob Nixon, Executive Director
Recreational Fishing Alliance

Jeff Crane, President
Congressional Sportsmen's Foundation

Whit Fosburgh, President and CEO
Theodore Roosevelt Conservation Partnership

Appendix A

Impact Analysis for Proposed Modification to the North Atlantic Right Whale Vessel Speed Rule (50 CFR 224.105)

Prepared for

By

SOUTHWICK ASSOCIATES

September, 2022

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Introduction

The National Marine Fisheries Service (NMFS) is proposing changes to the North Atlantic right whale vessel speed regulations to further reduce the risk of vessel strike mortality on right whales. The proposed rule expands existing seasonal speed zones across space and time and also extends restrictions to the 35 to 65 foot vessel size class. Because this size class would be new to speed regulation, and largely made up of recreational fishing and boating vessels, the American Sportfishing Association requested Southwick Associates examine the proposed rule to evaluate the expected impacts to the recreational fishing and boating industry.

Number of Vessels Impacted

NMFS estimates that only 9,200 recreational vessels will be impacted by the proposed Seasonal Speed Zones (SSZs) recommended under Alternative 5 (NMFS, 2022). However, detailed boat registration data was obtained from Info-Link Technologies, Inc. to explore the number of vessels that would be subject to speed restrictions. Info-Link maintains a National Boat Registration Database, receiving boat registration information from all 50 states plus the U.S. Coast Guard (USCG) monthly. Because some states require USCG documented vessels to also be registered with the state, while others do not, Info-Link regularly identifies vessels that are registered in multiple places to ensures that there is no double counting.

As of December 2021, there were more than 63,000 recreational saltwater vessels measuring 35 feet or longer were registered in states where SSZs would be created under Alternative 5 (Info-Link, 2021). Of those vessels, 19,000 are classified as saltwater fishing boats and 44,000 are classified as yachts. Given that the proposed speed restricted areas cover nearly all the Atlantic coast from Northern Florida to Massachusetts, there is reason to believe that more than 9,200 of the 63,000 registered saltwater recreational vessels would be impacted. See Tables 1 and 2 for full counts of impacted vessels by state.

NMFS has used Automatic Identification System (AIS) data to estimate the number of recreational vessels that will be impacted by proposed speed restrictions. However, it acknowledges that most recreational vessels are not equipped with AIS units and that “available AIS data for this vessel size class are biased and not a representative sample of vessels < 65 ft operating in active SMAs”. Yet, NMFS assumes that vessels 35- 65 feet in length act in the same way as larger vessels, when it is possible that these vessels travel through SSZs at speeds over 10 knots on a more regular basis. This is especially true for recreational offshore fishing vessels, which often need to travel a long distance offshore to reach suitable fishing areas. Southwick Associates recommends that NMFS conducts a more thorough investigation of the true number of recreational vessels that would be impacted by the speed restrictions proposed under Alternative 5 and the speeds needed for offshore fishing trips to be viable.

Recreational Fishing Trip Impacts

The cost estimates presented by the NMFS for recreational vessels include only the opportunity cost of delayed transit hours. These estimates do not consider the number of recreational fishing trips that will be impacted by Alternative 5 or the potential reduction in angler expenditures and the associated economic impacts. NOAA’s Marine Recreational Information Program (MRIP) data provides insight into the number of recreational fishing trips that could be impacted by speed restrictions presented under Alternative 5 (NOAA, 2022). A custom query of monthly trips from 2019-2021 was provided by NOAA

staff for this purpose (Recreational Fisheries Program - Request ID: 5774). Analysis of these data reveal that each year more than 70,000 recreational fishing trips are taken on boats 35 feet or longer offshore on the Atlantic Coast in states with proposed SSZs during the months when the speed restrictions would be in place. Results from a NOAA report titled "The Economic Contribution of Marine Angler Expenditures on Fishing Trips in the United States, 2017" were used to estimate the amount of money spent on these trips (NOAA, 2017). Angler spending on impacted offshore recreational fishing trips is estimated at more than $15 million per year. Many of these trips would need to be canceled or significantly shortened if the vessels used were subject to a 10-knot speed restriction while travelling to and from the fishing grounds.

The methodology used above is intentionally conservative, as it only considers the impacts of the proposed speed restrictions to offshore fishing trips (trips where fishing occurs more than 3 miles from shore). An estimated 52,000 additional inshore fishing trips by large vessels would also be impacted by the proposed speed restrictions, though the impacts may be lesser than for offshore trips due to the shorter distances travelled. Southwick Associates recommends that NMFS conduct a more thorough study of the true costs and economic impacts of the lost fishing opportunities associated with Alternative 5, as they clearly exceed the $1.2 million claimed under Alternative 5. See Tables 3 and 4 for full details on the estimated trips impacted and associated angler spending.

Wage Rate as Opportunity Cost

NMFS states that "When estimating the potential economic impacts for recreational vessels… we used the average wage rate of each coastal state as a proxy to estimate opportunity costs" (NMFS, 2022). This approach assumes that the only cost for recreational boaters is time, and that they will not alter or cancel their boating plans due to speed restrictions. However, as demonstrated above, the proposed speed restrictions are expected to have substantial impacts on offshore recreational fishing, leading to cancelled or shortened trips and reduced expenditures in coastal economies. These direct costs, their multiplier effects and impacts to coastal businesses should be considered as well.

Chance of Strike by a Recreational Vessel

NMFS states that "Vessels < 65 ft (19.8 m) in length accounted for five of the 12 documented lethal strike events in U.S. waters since 2008" (NMFS, 2022). Using MRIP effort data published by NOAA, it is estimated that there have been over 92 million offshore fishing trips taken since 2008 in states where SSZs would be established under Alternative 5 (NOAA, 2022). Of these trips, at least 5.1 million were taken by vessels 35-65 feet in length. Assuming that all five right whale strikes were from recreational vessels, and that all these vessels were on fishing trips, the chance of a 35-65 ft recreational vessel striking a right whale during an offshore fishing trip is at most 0.000098%, or less than one in 1,000,000.

It is important to note that this analysis estimates chance of a strike based on fishing trips that are captured through the MRIP program and therefore does not represent all recreational vessel activity. In reality, there are thousands of additional nearshore and offshore trips made by both recreational and commercial vessels 35-65 ft in length each year that have nothing to do with fishing. These trips and this activity are not quantified through any federal or state reporting programs. Therefore, the chances of a vessel striking a right whale while on a recreational fishing trip are likely significantly lower than estimated above. Southwick Associates recommends that the NMFS reconsider the extremely low chance of 35-65 ft recreational vessels causing right whale mortality before implementing Alternative 5.

In their cost analysis, NMFS assumes one passenger per recreational vessel when calculating the cost of delayed recreational vessels. NMFS makes this assumption because there are currently no data available on the number of passengers per recreational vessel trip. Similarly, MRIP does not provide information on how many angling trips occur per vessel. In the absence of adequate data to parse MRIP angling trips to vessel trips, Southwick Associates employs the same assumption as NMFS: one person (angler) per vessel.

Uncertainties

Several assumptions needed to be made to provide the estimates above. The percent of offshore fishing trips taken by vessels 35 feet or longer is not known, so boat registration data was used as a proxy. It was assumed that saltwater fishing boats 35 feet or longer were twice as likely as smaller vessels to venture offshore given the demands of the open ocean. For example, if saltwater fishing boats 35 feet or longer accounted for 2.5% of boat registrations in a state, it was assumed those boats accounted for 5% of offshore fishing trips in that state. Given that recreational vessels 35 feet or longer are much more suitable for offshore fishing on the Atlantic coast compared to smaller vessels, especially during winter months when seas can be especially rough, this approach is intentionally conservative and likely underestimates the impacts of the speed restrictions to offshore recreational fishing. Please see Appendix 2 for a full list of assumptions made in this analysis.

It is also unclear how anglers will alter their behavior when faced with these restrictions. They may focus on other activities once the restrictions go into place, causing economic harm to coastal communities and businesses serving these anglers and vessels. Currently, adequate data do exist to quantify the exact impacts of Alternative 5 on recreational fishing. Based on the initial assessments presented above that show the impacts may be greater than claimed in Alternative 5, Southwick Associates recommends the NMFS conducts a comprehensive evaluation of the true potential costs before proceeding.

References

Info-Link, Technologies, Inc. (2021). *National Boat Registration Database.*

National Marine Fisheries Service. (2022). *Draft Regulatory Impact Review and Initial Regulatory Flexibility Analysis. Amendments to the North Atlantic Right Whale Vessel Strike Reduction Rule.*

National Ocean and Atmospheric Administration. (2022). *Marine Recreational Information Program.*

National Oceanic and Atmospheric Administration. (2020). *The Economic Contribution of Marine Angler Expenditures on Fishing Trips in the United States, 2017.*

Southwick Report Appendix 1: Detailed Impacts by State

Table 1. Saltwater Fishing Vessels Subject to Proposed SSZs

	Saltwater Fishing Boats		
State	**35' - 64'**	**65' +**	**Total**
CT	801	3	804
DE	766	16	782
FL	9,969	218	10,187
GA	383	9	392
MD	1,251	6	1,257
MA	976	7	983
NJ	1,156	16	1,172
NY	1,835	15	1,850
NC	609	16	625
RI	393	7	400
SC	473	5	478
VA	553	9	562
All States	**19,165**	**327**	**19,492**

Table 2. All Vessels Subject to Proposed SSZs

	Saltwater Fishing Boats & Yachts		
State	**35' - 64'**	**65' +**	**Total**
CT	3,027	35	3,062
DE	3,404	603	4,007
FL	23,877	1,331	25,208
GA	1,685	43	1,728
MD	6,152	60	6,212
MA	3,646	42	3,688
NJ	3,826	68	3,894
NY	8,449	137	8,586
NC	1,948	59	2,007
RI	1,645	34	1,679
SC	1,263	24	1,287
VA	2,397	55	2,452
All States	**61,319**	**2,491**	**63,810**

Table 3. Estimated Atlantic Ocean Recreational Fishing Trips Impacted by Proposed SSZs

	Headboat or Party Boat			Charter Boat			Private / Rental Boat			**All Boats**		
State	**Ocean <= 3 miles**	**Ocean > 3 miles**	**All Ocean trips**	**Ocean <= 3 miles**	**Ocean > 3 miles**	**All Ocean trips**	**Ocean <= 3 miles**	**Ocean > 3 miles**	**All Ocean Trips**	**Ocean <= 3 miles**	**Ocean > 3 miles**	**All Ocean Trips**
CT	72	403	475	1	0	1	463	97	560	536	500	1,036
DE	0	768	768	2	24	26	892	3,688	4,580	894	4,479	5,373
FL	0	0	0	382	667	1,049	6,843	13,561	20,405	7,226	14,228	21,454
GA	0	0	0	1	8	9	340	504	843	340	511	852
MD	0	1,646	1,646	0	92	93	142	1,228	1,370	142	2,967	3,109
MA	166	1,371	1,537	8	79	86	2,288	3,427	5,714	2,461	4,876	7,338
NJ	5,169	9,245	14,414	402	788	1,190	14,911	7,290	22,202	20,482	17,324	37,806
NY	6,163	8,248	14,411	78	105	182	9,730	8,357	18,087	15,971	16,710	32,681
NC	0	0	0	22	139	162	1,061	1,791	2,852	1,084	1,930	3,014
RI	685	463	1,149	10	22	32	1,361	3,776	5,137	2,057	4,261	6,318
SC	0	0	0	7	47	54	545	609	1,154	552	656	1,208
VA	0	1,122	1,122	5	2	7	490	831	1,321	495	1,955	2,450
All States	**12,255**	**23,267**	**35,522**	**918**	**1,973**	**2,891**	**39,066**	**45,159**	**84,225**	**52,239**	**70,399**	**122,638**

Table 4. Estimated Angler Spending on Impacted Recreational Fishing Trips

	Headboat			Charter Boat			Private/Rental Boat			All Boats		
State	**Ocean <= 3 miles**	**Ocean > 3 miles**	**All Ocean trips**	**Ocean <= 3 miles**	**Ocean > 3 miles**	**All Ocean trips**	**Ocean <= 3 miles**	**Ocean > 3 miles**	**All Ocean Trips**	**Ocean <= 3 miles**	**Ocean > 3 miles**	**All Ocean Trips**
CT	$47,576	$267,725	$315,301	$651	$0	$651	$135,772	$14,204	$149,976	$183,999	$281,929	$465,929
DE	$0	$228,210	$228,210	$1,255	$6,431	$7,686	$340,391	$703,525	$1,043,916	$341,646	$938,166	$1,279,812
FL	$0	$0	$0	$158,059	$137,814	$295,872	$1,109,236	$1,099,063	$2,208,299	$1,267,295	$1,236,876	$2,504,171
GA	$0	$0	$0	$949	$6,013	$6,963	$124,647	$92,391	$217,038	$125,597	$98,404	$224,000
MD	$0	$3,406,445	$3,406,445	$965	$190,453	$191,418	$173,538	$751,980	$925,518	$174,503	$4,348,878	$4,523,381
MA	$97,438	$805,077	$902,515	$8,156	$42,619	$50,775	$593,737	$444,612	$1,038,349	$699,330	$1,292,308	$1,991,639
NJ	$630,220	$1,127,260	$1,757,481	$73,242	$71,843	$145,086	$2,415,986	$590,626	$3,006,612	$3,119,449	$1,789,729	$4,909,178
NY	$1,111,411	$1,487,398	$2,598,809	$19,627	$13,254	$32,881	$3,180,964	$1,366,066	$4,547,030	$4,312,002	$2,866,717	$7,178,720
NC	$0	$0	$0	$22,557	$70,106	$92,663	$337,677	$284,944	$622,621	$360,234	$355,050	$715,284
RI	$157,819	$106,692	$264,511	$3,614	$3,853	$7,467	$67,018	$92,954	$159,972	$228,451	$203,498	$431,949
SC	$0	$0	$0	$6,700	$21,986	$28,686	$131,308	$73,424	$204,731	$138,007	$95,410	$233,417
VA	$0	$1,154,026	$1,154,026	$6,044	$1,276	$7,320	$490,382	$415,889	$906,271	$496,426	$1,571,190	$2,067,617
All States	**$2,044,463**	**$8,582,833**	**$10,627,296**	**$301,820**	**$565,648**	**$867,468**	**$9,100,657**	**$5,929,675**	**$15,030,331**	**$11,446,940**	**$15,078,156**	**$26,525,096**

Southwick Report Appendix 2: Assumptions Made to Calculate Recreational Fishing Impacts

Allocating Fishing Effort Within Months

Some of the proposed seasonal restriction dates split the months of November or April. To estimate the fishing effort impacted by the proposed speed restrictions in these cases, it was assumed that half of fishing trips in a state occur in each half of the month. For example, if there were 5,000 estimated fishing trips in November, it was assumed that 2,500 of these trips occurred from November 15th- 30th. This assumption was necessary because NOAA's Marine Recreational Information Program (MRIP) dataset only contains recreational fishing effort estimates at the monthly level.

Allocating Fishing Effort to Boats of Different Sizes

NOAA does not collect or publish the size of the fishing vessels used for recreational fishing trips in the fishing MRIP database. Therefore, several assumptions were needed to estimate the impact of restricting the speed of vessels 35-65 ft in length. The following assumptions were used:

1. All fishing trips made by "headboats" or "party boats" were made by vessels of 35 feet or longer. Most of these vessels are much larger than 35 feet, sometime approaching 100 feet or longer.
2. Saltwater fishing boats 35 feet or longer are twice as likely to make offshore fishing trips as smaller vessels, given the demands of the open ocean. For example, if saltwater fishing boats 35 feet or longer accounted for 2.5% of all boat registrations in a state, it was assumed those boats accounted for 5% of offshore fishing trips taken in that state.

Allocating Fishing Effort Within States with Partial or Multiple SSZs

Several of the proposed Seasonal Speed Zones (SSZs) cover only portions of states coastlines. Because MRIP reports fishing effort at the state level, some assumptions were needed to estimate the number of trips impacted in states with partial SSZ coverage (Florida and Massachusetts), or states where multiple SSZs affect the state's coast (Georgia and North Carolina). The following assumptions were used:

1. Offshore fishing effort is distributed evenly along each state's coast.
2. 30% of Atlantic offshore fishing trips taken in Florida between November 15th and April 15th are impacted by speed restrictions. No Gulf Coast Florida fishing trips are impacted.
3. The Georgia coast is split nearly evenly by the "Southeast" and "South Carolina" proposed SSZs. Therefore, half of offshore fishing trips taken in Georgia during April are impacted by speed restrictions, since the "Southeast" SSZ is enforced from November 15 – April 15th, and the "South Carolina" SSZ is enforced from November 1st – April 15th. Following the same logic, three-quarters of offshore fishing trips taken in Georgia during November are impacted.
4. North Carolina is impacted by three SSZs, the "South Carolina" zone which is enforced from November 1st – April 15th, the "North Carolina" zone which is enforced from November 1st – April 30th, and the "Atlantic" zone which is enforced from November 1st – May 15th. It was assumed that 80% of offshore fishing trips in April and 20% of offshore fishing trips in May are impacted by speed restrictions.

5. Roughly 80% of the Massachusetts coast is covered by the "Atlantic" SSZ. It was assumed that 80% of offshore fishing trips taken during the seasonal restriction periods were impacted.

Estimating Impacted Recreational Fishing Trip Spending

To translate the number of offshore recreational fishing trips impacted by proposed SSZs to a dollar value, it was necessary to make additional assumptions. A NOAA report (NOAA, 2017) estimated angler spending for recreational fishing trips at the state-level in 2017. That report was used along with MRIP monthly trip data from 2019-2021 to provide an estimate of angler spending on offshore trips impacted by proposed SSZs.

The following assumptions were used so that angler spending impacts could be estimated:

1. Angler spending is equal for all recreational fishing trips, whether they occurred inshore or offshore. This assumption was necessary because angler spending was only reported in total for "For-Hire" and "Private Boat" trips, and no breakouts for offshore versus inshore fishing were provided. This approach is intentionally conservative, as angler spending for an offshore fishing trip is likely more than for an inshore trip on average, especially considering the amount of fuel required for offshore fishing in a large vessel.
2. Similarly, angler spending for fishing trips in boats of 35 feet or longer is the same as for trips made in smaller vessels. Again, this is a conservative approach since larger vessels require more fuel to operate. However, no reliable estimates for recreational angler spending by vessel size currently exist.
3. Angler spending on recreational fishing trips does not vary by month. Fishing trips taken in December have the same level of spending as trips taken in June. This assumption is necessary because NOAA does not report recreational angler spending by month.
4. "For Hire" boat trips reported by NOAA (NOAA, 2017) include both trips on "headboats" or "party boats" as well as trips on charter boats. However, these two modes of fishing are reported separately in the MRIP database. It was assumed that angler spending for each mode was proportional to the number of trips reported in MRIP in each month. For example, if 30 headboat trips and 70 charter boat trips were reported in a given month in a particular state, then it was assumed that 30% of angler spending for "For Hire" boat trips in that month was for trips on "headboats" or "party boats" and the remaining 70% of spending was for trips on charter boats.

Appendix B

Recreational Fishing Season Overlap with Proposed Right Whale Seasonal Speed Zones Including Average Percent of Total Year Catch 2017-2021. (OCEAN ONLY EXCLUDING SHORE MODE)

Species	November	December	January*	February*	March	April	May†	Total
Atlantic Cod	5%		*		6%		22%	33%
Haddock	0%		*		20%		19%	39%
Bluefish	16%		3%		8%		9%	37%
Black Sea Bass	14%		2%		6%		11%	33%
Fluke	0%		*		0%		8%	9%
Scup	3%		*		5%		5%	14%
Striped Bass	31%		*		1%		10%	42%
Tautog	57%		*		9%		2%	68%
Cobia	5%		6%		8%		19%	39%
Red Drum	17%		12%		7%		9%	46%
False Albacore	6%		3%		6%		9%	25%
Spanish Mackerel	18%		12%		5%		13%	48%
King Mackerel	7%		3%		5%		17%	32%
Dolphin	2%		1%		7%		13%	23%
Wahoo	11%		12%		12%		4%	40%
Yellowfin Tuna	3%		2%		2%		9%	16%
Snapper/Grouper								

ONSEASON CONFIRMED WITH MRIP CATCH

OFFSEASON MINIMAL CATCH

*Wave 1 MRIP sampling is limited

†Percents are half of Wave 3 total (assumes equal catch in May and June)