UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
1315 East-West Highway
Silver Spring, Maryland 20910

James Powell
Chair, Atlantic Scientific Review Group
Clearwater Marine Aquarium Research
249 Windward Passage
Clearwater, FL 33767

Dear Dr. Powell:

Thank you for the letter to Janet Coit, Assistant Administrator for Fisheries, transmitting recommendations from the February 2023 annual meeting of the Atlantic Scientific Review Group (SRG).

The SRG has made many valuable recommendations to help guide NOAA Fisheries' marine mammal science and management, which are addressed in the enclosure. We appreciate the continued service and contributions by members of the Atlantic SRG in providing advice and support to NOAA Fisheries in accordance with the Marine Mammal Protection Act. We look forward to our continued partnership to improve the science supporting the conservation of marine mammals.

Sincerely,

Cisco Werner

Cisco Werner
Director of Scientific Programs and Chief Science Advisor

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Samuel D. Rauch III
Deputy Assistant Administrator for Regulatory Programs

cc: Evan Howell, Director, Office of Science and Technology
Kim Damon-Randall, Director, Office of Protected Resources

2023 Responses to Recommendations of the Atlantic Regional Scientific Review Group

1. The Atlantic Scientific Review Group (ATL SRG) thanks NOAA Fisheries staff for their presentation, considering the controversy surrounding humpback whale strandings that have occurred in the Mid-Atlantic since December. We are satisfied with progress made in determining the causes of the UME and are in general agreement with the NOAA Fisheries and MMC opinions that offshore wind site characterization and assessment survey activities are not responsible for the elevated number of strandings in that region. We **recommend** that NOAA Fisheries: 1) continue to broadcast information on the causes of the UME, 2) pursue measures that will reduce the likelihood of vessel strikes of humpback whales, and 3) support research (e.g., tagging) that can support such measures. Given the high number of humpback whale vessel strike mortalities found to be part of this UME, NOAA Fisheries should consider either an extension of the vessel speed restrictions in the proposed amendment to the North Atlantic right whale vessel strike reduction rule (87 FR 46921) to include protections for humpback and other large whales (if that can be accomplished without delaying issuance of this important rule) OR a separate emergency rule extending the existing (and proposed) vessel speed restrictions to protect humpback whales. We also recognize and appreciate NOAA Fisheries efforts to include NARW sublethal injuries in the UME framework, recognizing the significant impact these anthropogenic injuries may be having on the population's ability to recover. We **recommend** that such efforts (e.g. including sublethal anthropogenic impacts on NARWs) be continued and expanded within other aspects of the NARW management in order to more effectively manage the recovery of this population.

   Response: We thank the Atlantic SRG for their comments on Atlantic humpback whales and including sublethal injuries/illness in the North Atlantic right whale (NARW) Unusual Mortality Event (UME). As we have throughout the Atlantic humpback UME, we will continue communicating up-to-date information about the causes. While vessel strikes are one of the causes of the current Atlantic humpback UME, the proposed vessel speed regulations are specifically designed to provide protection for NARWs. That said, we anticipate that changes to the vessel speed regulations proposed in August 2022 would provide meaningful vessel strike mitigation benefits to other large whale species in areas and times when seasonal or dynamic speed zones would be in effect. Given the extensive overlap of humpback whale winter/early spring distribution (in U.S. waters) with the proposed seasonal speed zones, we expect humpback whales, in particular, to benefit from the proposed changes and experience a reduction in lethal strike risk. We anticipate taking final action on the proposed rule in 2023. Finally, we agree with the SRG that additional research on Atlantic humpback whales is needed, including that which will improve our understanding of vessel strike risk and will support such research as funding allows.

   We thank the SRG for acknowledging the significant and important efforts to include sublethal injuries and illness in the NARW UME. As recommended, now that these data are available and included in the UME, we are incorporating them into our overall

NARW management efforts as appropriate.

2. *Barataria Bay dolphins* – We thank SERO for their updates but remain concerned about NOAA's position with respect to the impact of the diversion project on the survival of this stock. As we commented in 2022, "This is a stock whose future viability has already been imperiled by the long-term impacts of the *Deepwater Horizon* oil spill. Based on the 2021 Stock Assessment Report (SAR), mean annual mortality and serious injury during 2015–2019 due to human-caused sources (fishery takes, fishery research, at-sea entanglements, gunshot wounds, and DWH oil spill) was at least 41 dolphins. This estimate exceeds the stock's Potential Biological Removal (PBR = 18 dolphins), leading the stock to be classified as strategic. Moreover, because this estimate of human-caused mortality and serious injury is greater than 10% of the calculated PBR the level of takes cannot be considered insignificant and approaching the zero mortality and serious injury rate goal." The ATL SRG believes that allowing the project to produce additional mortalities will result in extirpation of the stock and is inconsistent with the Marine Mammal Protection Act (MMPA) waiver condition that "To the extent practicable and consistent with the purposes of the projects, minimize impacts on marine mammal species and population stocks." As such, the ATL SRG **strongly recommends** that NOAA reconsider issuance of the waiver of MMPA moratorium and prohibitions for the project considering this recent information.

   Response: On February 9, 2018, Congress passed the Bipartisan Budget Act of 2018 (Budget Act), Public Law 115-123, which included a requirement that the Secretary of Commerce, as delegated to the Assistant Administrator of the National Marine Fisheries Service, issue a waiver of the Marine Mammal Protection Act moratorium and prohibitions for three projects included in the 2017 Louisiana Comprehensive Master Plan for a Sustainable Coast. The Mid-Barataria Sediment Diversion was identified as one of those projects. As required, NOAA Fisheries issued the waiver on March 15, 2018. More information on the waiver can be found at https://www.fisheries.noaa.gov/action/marine-mammal-protection-act-waiver-select-louisiana-coastal-master-plan-projects. In addition to requiring NOAA Fisheries to issue the waiver, Congress created a separate requirement in section 20201 of the Budget Act that, upon the issuance of the waiver, the State of Louisiana (State) shall, in consultation with the Secretary of Commerce: (1) To the extent practicable and consistent with the purposes of the projects, minimize impacts on marine mammal species and population stocks, and (2) Monitor and evaluate the impacts of the projects on such species and population stocks.

3. *Rice's whale* – Progress with Critical Habitat designation is encouraging, and the recent publications by Soldevilla et al. (2022) and Kiszka et al. (2023) have significantly improved our understanding of Rice's whale habitat use in the central and western Gulf of Mexico. We note, however, that the potential masking of sounds by seismic testing could mean that the existing passive acoustic monitoring (PAM) data may underestimate the actual occurrence of Rice's whales in those areas, a concern shared by agency staff. We strongly **recommend** that work to elucidate Rice's whale occurrence and habitat use be funded and continued.

   Response: The currently funded PAM studies end in 2024 or 2025. There is a potential

for a five-year renewal of the LISTEN GoMex project, but Rice's whales are not a primary focus of that study. We agree that there is an ongoing need for studies of habitat use, occurrence, and population status of critically endangered Rice's whales. We will continue to prioritize the collection of data on Rice's whales as resources allow, but there is currently no dedicated funding source to maintain a long-term research and monitoring program.

4. *Rice's whale*- The ATL SRG also **recommends** that before SERO decides on classifying the shark and reef fish bottom longline/hook-and-line fisheries to LOF Category II that they conduct a statistical analysis to determine how much observer coverage is needed in this fishery to detect a Rice's whale interaction with this gear.

   Response: The Southeastern U.S. Atlantic, Gulf of Mexico shark bottom longline/hook-and-line fishery is currently designated as a Category III on the 2023 List of Fisheries because there are no known mortalities or serious injuries from a marine mammal stock that exceeds 1% of PBR, including no known interactions with Rice's whales. Categorizations are based on fishery classification criteria (60 FR 45086, August 30, 1995) formulated from the number of fishery-caused serious injuries or mortalities in a population. Observer coverage is not included in the classification criteria. Even if a fishery is reclassified, higher categorizations (i.e., Category I or II) do not warrant additional mechanisms to increase observer coverage. Given this fishery overlaps with endangered Rice's whale habitat and has historically low observer coverage (currently, 4-6%), we conducted additional analysis of observer records to assess for Rice's whale interactions but found no evidence. NMFS will continue to explore methods that can capture any potential interactions of Rice's whales with the shark bottom longline fishery, such as photo-analyses for evidence of scarring or entanglement.

5. *Passive Acoustic Monitoring* – This was an excellent presentation by SEFSC staff and we strongly **recommend** that this work be funded and continued.

   Response: We thank the ATL SRG for being supportive of the PAM programs. The LISTEN GoMex program is funded by the NOAA RESTORE Science Program and is eligible for a 5-year renewal (starting in 2025). The ATL SRG's recognition of the value of this work is helpful in informing end users of the utility of these data and promoting the continuation of the project.

6. *Atlantic Marine Assessment Program for Protected Species(AMAPPs)* – Much has come out of this collaboration with BOEM, and the ATL SRG hopes the relationship can continue. We were intrigued by the research conducted this past year in the use of video cameras for "higher" altitude surveys. We **recommend** that NOAA continue these experiments, and that they find a robust approach for confirmations of sightings (even if they cannot fly two aircraft on the same track line.)

   Response: We thank the ATL SRG for being supportive of continuing the video camera experiments. In that spirit, we will be receiving air time on the NOAA Twin Otter for 2024 to trial a new hi-definition camera system that the Alaska Fisheries Center is using for seal work and compare it to the camera system we used in 2022. We are

planning to pay for this using a combination of NOAA/AOC funds and wind funds, as resources allow. We are also planning to hire a contractor to help develop the AI algorithm to help identify animals in the images and to test for false positives and false negatives, which could then be used to adjust for biases. Our longer-term plan is in 2025 to conduct a usual AMAPPS abundance survey at the standard 600 feet altitude, and for a portion of this survey to also fly some of the same track lines at nearly the same time using a separate NOAA Twin Otter that is equipped with the camera system that was determined to be best during the 2024 experimental flights at 1500 or 2000 feet altitude.

7. *NEFSC gray seals* – The low number of observer gillnet trips in 2020-21 as well as the potentially poorly allocated (nonrandom) sampling suggests gillnet bycatch of seals may be underestimated. Moreover, it is possible (perhaps likely) that fishermen on observed trips may have fished differently and in different areas than they normally would. This too would lead to an underestimate of seal bycatch.

   Response: For clarification, we did not use the 2020-2021 observer data to estimate bycatch. Instead, we estimated gray seal gillnet bycatch for 2020-2021 using bycatch rates calculated from pooled 2017-2019 observer data, due to the low number of observer gillnet trips in 2020-2021 and potentially non-random sampling. As such, we assumed conditions over 2017-2019 better represented the conditions in 2020-2021 than observer data in 2020-2021 would permit. To the extent that is a biased assumption, the bycatch could be over- or underestimated. Bycatch rates are stratified by area, so if the geographic distribution of fishing effort changed (if fishers were fishing differently in 2020-2021 than previously), that should be reflected in the commercial effort logs, and the geographically relevant 2017-2019 bycatch rates would be applied to the 2020-2021 effort.

8. *North Atlantic right whales* - The ATL SRG appreciates the considerable effort NOAA Fisheries has devoted to North Atlantic right whale science and recovery. We are, however, concerned with NOAA Fisheries independent development and/or lack of coordination between the four right whale population and risk modeling efforts – the "Mark Resight/Recapture" population model, the entanglement focused "Decision Support Tool" model(s), the "Ship Strike Risk Model", and the "Population Evaluation Tool" (PET model). Such independent risk modeling of the same species in the same time and space is prone to conflicting and/or incongruent results. As in previous ATL SRG responses, we **strongly recommend** that NOAA Fisheries harmonize the four modeling approaches. At the least, the Decision Support Tool and Ship Strike Risk models should be blended into a single model, given they are both using the same right whale density/distribution input and are simply exposing these whales to different threats (that are similarly modeled). We also **recommend** (as was recommended in the review of the Decision Support Tool) that all approaches explicitly identify the uncertainty in risk estimates and that model validation is undertaken as standard when empirical data is available to do so.

   Response: While we appreciate the value of having these various modeling efforts aligned and recognize the overlaps that exist, the efforts involve different objectives and critical focus areas. Both the Decision Support Tool and the Vessel Strike Risk

Model are spatially explicit, and while they both leverage the large body of research on whale distribution and density from Duke University, a significant portion of both efforts involves procuring, managing, and modeling the data pertaining to each of the respective risks (e.g., entanglement and vessel strike). The mark-recapture population model and Population Evaluation Tool are aligned already, though neither effort is spatially explicit and instead is focused on modeling the individuals in the population. There are lessons learned from the PET effort regarding the model structure that could be implemented in future versions of the population model used for stock assessment.

9. *Transboundary stocks*- The ATL SRG acknowledges the GAMMS IV policy Section 3.4.4 recommendation on the standardization of approaches to the estimation of transboundary stocks' N_{min} and PBR, and we appreciate Dr. Palka's presentation on the topic. The GAMMS IV guidance appears generally clear, and we have summarized in the attached document our interpretation of how range-wide N_{min} and PBR would be calculated for transboundary stocks with different types/qualities of data available (e.g., MRR vs transect, and stocks with complete or incomplete recent transect data). We do, however, suggest another method (beyond Dr. Palka's two solutions) for calculating range-wide values when one nation's recent survey was either not conducted or is otherwise unavailable for PBR calculation. We believe that imputation using ratio estimation of the missing survey (N_{min}) value needed to calculate a range-wide N_{min} might be a useful approach to calculating both the range-wide PBR and allocating PBR to separate nations (see Table 2 for an example). In the example shown, we have imputed the missing 2021 Canadian N_{min} estimate by calculating the ratio of the US N_{min} estimates for 2016 and 2021 and applying this to the Canadian estimate for 2016. Other approaches to imputation would also be valid. We **recommend** that if one element of the range-wide N_{best} or $N_{min}$is missing, that the F value for the range-wide PBR be set to 0.4 to account for the additional uncertainty in the N_{min} estimate. We urge NOAA Fisheries to continue to work with Canada's Department of Fisheries and Oceans to develop a policy of regular survey updates (to minimize the need for imputation of missing values) and for them to increase monitoring of bycatch of transboundary stocks in general. This will allow the proper assessment of stock status range-wide.

   Response: Thank you for the additional ideas about imputing a missing abundance estimate for part of the habitat and your suggestion for an Fr value in these cases. We will explore these ideas for all relevant stocks in the next SAR cycle.

10. *General comment*- We **recommend** that NOAA Fisheries Science Centers explicitly follow the GAMMS IV guidance and not submit SAR chapters to the SRGs for review when key supporting documents are still in preparation. This is particularly important for those assessments requiring Level 2 or 3 review. For those requiring Level 1 review only, the ATL SRG would be happy to provide peer review (intersessionally) of the manuscripts as part of the NOAA Fisheries RPTS manuscript review process, <u>prior to submission of the SAR chapter</u> for full ATL SRG review.

    Response: NMFS disagrees that all supporting documents need to be finalized at the time of SRG review of draft SARs. Our intention for the peer review language in the GAMMS IV was to provide a level of review of the draft SARs that is appropriate to meet the peer review requirements described in the Office of Management and Budget

(OMB) Bulletin on peer review and NOAA Information Quality Act (IQA) guidelines at the time of publication. We will adhere to these guidelines prior to publication of the draft SARs in the *Federal Register*, but we note that the SRG, as special government employees, are not the public; and thus, it is not feasible to have all documentation supporting the draft SARs finalized at the time of SRG review. We will work to ensure that all information supporting the draft SARs is provided to the SRG at the time of their review, but necessitating RPTS review of the documentation prior to SRG review, instead of concurrently, will create unnecessary delays in an already difficult timeline.

11. *Gulf of Mexico dolphin stocks*- We support the SEFSC's measured approach to providing new assessments for each of the Gulf of Mexico bottlenose dolphin stocks. We **recommend** extension of risk assessments to all "n" stocks to prioritize development of new assessments for all bottlenose dolphin stocks in the Gulf.

    Response: NMFS agrees that extending the Phillips and Rosel (2014) risk assessment process to all common bottlenose dolphin BSE stocks in the Gulf would be an important step forward for prioritizing which stocks should have individual stock assessments and identifying research needs for robust assessments of those stocks. However, prioritization for risk assessment may be similar to the approach of creating individual SARs for Gulf of Mexico BSE stocks in that we may prioritize areas for risk assessment when there is an emerging management need, such as a proposed major construction project within a BSE.

12. *Barataria Bay bottlenose dolphin*- We thank the SEFSC for providing an updated version of the Barrataria Bay bottlenose dolphin SAR. We **strongly recommend** that information be included in the "Status" section on the analysis suggesting that the Mid-Barataria Sediment Diversion would, by the year 2076, lead to a 96% decline in the median predicted stock size across all Barataria Bay. This addition could read as follows: *Recently, the final environmental impact statement for a proposed mid-Barataria sediment diversion (MBSD) project has been completed (USACE 2022). This project will divert substantial amounts of freshwater into the Barataria Basin in an effort to reduce wetland loss. Schwacke et al. (2022) cautioned that the MBSD project is likely to be detrimental to population survival for the common bottlenose dolphin stock in Barataria Bay (BBES). In addition, results of modeling work by Thomas et al. (2022) predict greater declines in population size resulting from the MBSD than those caused by the DWH oil spill, resulting in a catastrophic decline and functional extinction of the BBES Stock of common bottlenose dolphins.*

    Response: This information has been included within the Status of Stock section for the draft 2023 SAR per the recommendation and as discussed during the ATL SRG meeting.

13. *Small cetaceans*- Given the paucity of sightings of Frasier's dolphins, pygmy killer whales, pygmy sperm whales and dwarf sperm whales, we suggest NOAA review these "stocks" to evaluate the likelihood that there is only one (rather than two) stocks of each of these species in the Southeast region. Because these species are so rarely observed, we suggest SEFSC staff include sightings beyond NOAA Fisheries surveys.

    Response: In the absence of directed studies of the degree of demographic independence

between U.S. waters of the Gulf of Mexico and Atlantic Ocean, separately managing stocks from each area is consistent with evidence for population structure for stocks where data are available. Separate management is further supported because the stocks in question occupy distinct marine ecoregions, and is also in line with the GAMMS. We do not believe a lack of information on these rarely encountered species is grounds to support combining the stocks at this time, and the more conservative approach is to manage the stocks separately. We will include information on non-NMFS unpublished sightings available from OBIS-SEAMAP.

14. *Gray seals*- The Atlantic SRG **recommends** that the NEFSC change the F_r used in the gray seal SAR from 1.0 for "stocks of unknown status, but which are known to be increasing" to 0.5 for "unknown stocks." Based on the presented data, it is uncertain whether the stock is increasing and as such, an F_r of 0.5 is more appropriate. Additionally, we **recommend** that a minimum value of Serious Injuries (SI) be presented in the SAR as well as the number of cases for which SI was prevented by disentanglement, as is done for other species. The Martins et al. (2018) paper presents UAV survey data on seal entanglement prevalence at one haul-out site in Maine and four in Massachusetts during 2017 and 2018. The mean entanglement prevalence across sites could be applied to $N_{min}$to achieve an estimate of SI cases. Alternatively, a more geographically specific estimate of entanglement SI could be derived using the Martins et al. (2018) entanglement prevalence data, according to the % of the stock present in the various geographic regions if such data exist. At a minimum, the raw count of live seals with neck entanglements (n=21) across all surveyed sites should be included in the total observed M/SI for this stock. We **recommend** that further work is conducted to better estimate the number of gray seals with serious injuries due to entanglements.

    Response: Further discussion on the use of Fr=0.5 is warranted before changing it in the current SAR. Wood et al. (2022) showed high rates of increase in pup counts at the U.S. colonies. In Canada, the population is estimated to still be increasing despite a lower-than-expected pup production on Sable Island. Moreover, the ATL SRG recommended in 2021 to use an Rmax of 0.128 due to rates of increase measured in Canada. The NEFSC presented information on the difficulties of estimating and reporting SI for seals due to a variety of factors (such as lack of consistent and standardized reporting, duplicate sightings, repeated sightings across years, and inability to assign to source). We agree that further work is needed to better estimate the number of gray seals with serious injuries due to entanglements and have funded studies in 2023 to do so. We can report the minimum raw count of live seals observed with neck entanglements from Martins et al. (2018) but do not feel it is appropriate to apply the entanglement rates from Martins et al. (2018) to Nmin because rates vary by season and geographic region. We also do not have information on the percentage of stock present in different seasons and regions to produce a temporally and spatially specific estimate of SI.

15. *Blue whales*- As discussed in the meeting, the estimate of population size used in the draft blue whale SAR (i.e. photo identification catalogue entries through 2008) is inappropriate. We understand, however, that the blue whale catalogue maintained by

Dr. Sears continues to be updated. As such, we **recommend** that NOAA Fisheries consider using a "minimum number alive" approach, as was formerly used for North Atlantic right whales or work with Dr. Sears to develop an MRR-based approach like that adopted by NOAA Fisheries for right and humpback whales.

Response: We will refrain from updating this report until further notice. We have initiated contact with Dr. Sears and hope to develop a new approach using these data.

16. *Mesoplodon spp*- The ATL SRG recommends that NOAA Fisheries separately assess each stock/species of Mesoplodon whales. Unidentifiable individuals remain an issue, and we would be happy to discuss approaches to dealing with these sightings.

    Response: NEFSC and SEFSC have improved their ability to identify these animals to species at sea. However, due to their stealth behavior and brief time at the surface, we will always have groups of animals that could not be identified at the species level. To address this, we are investigating using the beaked whales identified to species by the passive acoustic arrays to assist in assigning a species to the visually unidentified groups. Complications include 1) multiple species of beaked whales are often found in close proximity to each other and 2) during an abundance survey, we rarely have the chance to see a group at the surface and also acoustically identify that exact same group when they are vocalizing which is when they are generally at least 100 meters or deeper. We are also investigating various ways to prorate the abundance of unidentified beaked whales using environmental factors and the localized ratios of acoustically detected species. We are interested in any approaches you may have for dealing with the unidentified beaked whale sightings.

17. *Humpback whales*- We remain concerned that we have not seen an updated humpback whale SAR since 2020. However, we understand that the SAR cannot be completed until the stock structure is defined and accepted by NOAA. To that end, we would appreciate the opportunity to provide early guidance on the approach (via webinar) and would be happy to chair an independent peer review of the proposed stock structure.We also ask for clarification on the approach NOAA Fisheries intends to take to estimate population size for the annual SAR. Will it be the Robbins and Pace MRR model we reviewed in 2022, the Palka strip transect estimate, or some combination of the two?

    Response: Thank you, we plan to engage the SRG according to the timeline in the Stock Designation Policy (NMFS 2019). If more input is needed, we will engage intersessionally via webinar. Since we are still working through the stock designation process, we have not decided on the best route forward for the population abundance estimation methodology.

18. *Membership considerations*- The ATL SRG appreciates that NOAA Fisheries allowed Drs. Pendleton and Sharp to join the ATL SRG a year early. Their knowledge, skills, and experience with North Atlantic right whales are very timely given the departure from the ATL SRG of Drs. Kenny and Moore. We now call to the agency's attention the departure of Dr. Read. It is very important that he be replaced in a timely fashion with a scientist with similar experience and skills.

Response: Thank you, we will work with the ATL SRG to ensure no major gaps in knowledge, skills, or expertise.