



# MARINE MAMMAL COMMISSION

31 August 2022

Ms. Jaclyn Taylor  
National Marine Fisheries Service  
Office of Protected Resources  
Marine Mammal and Sea Turtles Division  
1315 East-West Highway  
Silver Spring, MD 20910-3226

Dear Ms. Taylor:

The Marine Mammal Commission (the Commission), in consultation with its Committee of Scientific Advisors on Marine Mammals, has reviewed the National Marine Fisheries Service (NMFS) Office of Protected Resources (OPR) draft revisions to the NMFS Serious Injury Determination Policy: Process for Distinguishing Serious from Non-Serious Injury of Marine Mammals (NMFS Procedural Directive (directive) 02-038-01; 87 Fed. Reg. 43247). The directive is designed to provide a consistent and transparent process for NMFS to distinguish between serious and non-serious injuries of marine mammals, document injury determinations, and incorporate information regarding serious injuries into Stock Assessment Reports (SARs).

The Commission appreciates NMFS's efforts to update and improve this directive and the opportunity to review the proposed revisions. In general, the Commission believes the proposed revisions are appropriate, and for the most part, NMFS is applying the criteria and procedures for determining and documenting serious injuries as set forth in the directive consistently across regions. The Commission continues to be concerned that NMFS is neglecting to follow this process in documenting and assessing pinniped injuries along the U.S. East Coast. The Commission offers the following comments and recommendations to clarify and improve the proposed revisions.

## Background

The Marine Mammal Protection Act (MMPA) (16 U.S.C. § 1361 *et seq.*) requires NMFS to estimate the annual levels of human-caused mortality and serious injury (M/SI) to marine mammal stocks (Section 117) and to classify commercial fisheries based on their level of incidental M/SI of marine mammals (Section 118). Section 118(e) requires owners or operators of commercial fishing vessels to report all incidental mortality and injury of marine mammals in the course of fishing operations, leaving it to NMFS to distinguish between those injuries that are serious and those that are not. To promote national consistency in determining and documenting serious and non-serious injuries, NMFS held a Serious Injury Technical Workshop in 2007, which formed the basis of both a Policy Directive and a Procedural Directive to describe the process for making and documenting serious injury determinations.

The NMFS Policy Directive specifies that NMFS should review both the Policy and Procedural Directives at least once every five years, or more frequently if relevant new information becomes available, to determine whether any revisions to the directives are warranted. In 2017, NMFS initiated a review of the Policy and Procedural Directives and invited subject matter experts from within NMFS to propose revisions based upon the best scientific information available. The

review suggested that, in general, the national guidance was meeting its objectives of providing a consistent, transparent, and systematic process for assessing severity of injury and distinguishing serious from non-serious injuries of marine mammals. However, there were enough substantive comments to warrant revising the Procedural Directive.

NMFS's proposed revisions primarily focused on the pinniped and small cetacean sections and included the creation of a new case-specific harassment category (P16) for pinnipeds and the expansion of existing small cetacean subcategories (S15a and S15b). NMFS also proposed clarifying changes to the criteria associated with some small cetacean injury categories, including those involving lip and mouth hookings. In addition, NMFS included risk factors that may lead to capture myopathy in certain individuals, and a list of observable external physical signs that may be indicators of oncoming capture myopathy.

### **Ensuring consistency in documenting, assessing, and reporting pinniped injuries**

The Commission remains concerned about the under-reporting of human-caused injuries to pinnipeds in the northeast United States, particularly the western North Atlantic gray seal stock, as noted in previous Commission comments on NMFS's draft 2020 Stock Assessment Reports (SARs)<sup>1</sup>. The Commission noted that known injuries of gray seals were not being summarized in the SARs and the severity of injuries was not being assessed. As a result, animals observed with serious injuries from entanglement were not accounted for in the estimates of total human-caused M/SI in the SARs. In its response to the Commission's comments on the draft 2021 SARs (87 Fed. Reg. 47385, comment #13), NMFS noted that (1) "estimates of gray seal bycatch mainly reflect mortalities because [fisheries] observers rarely document live animals," (2) "data derived from observer coverage do not reflect the numerous animals that are seen living with entanglement and may die as a result," and (3) "currently, there is not a system in place to document seals that are living with entanglements." The objective of the directive is to establish a consistent process for NMFS to document, assess, and report all known cases of human-caused injury to marine mammals. Neglecting to account for these known human-caused injuries and relying only on fisheries observer reports is not an acceptable approach to assessing levels of human-caused injury and mortality to this stock. Pinnipeds with constricting entanglements that are opportunistically observed and reported are accounted for in the NMFS reports of injuries in Alaska (e.g., Freed et al. 2022), in the Pacific Islands (e.g., Mercer, 2021), and on the U.S. West Coast (e.g., Carretta et al. 2021) and are added to the total human-caused M/SI reported in the appropriate SAR. A similar, consistent approach should be applied to document, assess, and report pinniped injury events on the U.S. East Coast.

Precoda and Orphanides (2022) reported on the estimates of cetacean and pinniped bycatch in the 2019 New England sink and Mid-Atlantic gillnet fisheries, with an estimated M/SI for those fisheries of 2,019 and 18 gray seals, respectively. The total estimated M/SI of gray seals in these two fisheries in 2019 of 2,037 animals does not include extrapolations from 22 unidentified seals observed, and therefore likely underestimates total M/SI. The estimates of M/SI in U.S. commercial fisheries reported in the SAR are extrapolated solely from observed deaths, as no serious injuries of gray seals were observed or reported in those fisheries. However, Iruzun Martins et al. (2019) found that one to four percent of live animals observed at haul-out sites in Massachusetts and the Isles of

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<sup>1</sup> See the Commission's [9 March 2021](#) and [24 January 2022](#) letters on the 2020 and 2021 draft SARs, respectively.

Shoals in Maine had either a tight constricting entanglement around the neck or body or a circumferential wound around the neck or body. Twenty-two percent of these entanglements involved monofilament net, with the remaining 78% involving material that could not be identified from the images. Those serious injuries are not being documented, assessed, and reported in the SARs.

Considering that the total M/SI of gray seals in U.S. commercial fisheries for the five-year period of 2015-2019 reported in the SAR (1,169 animals) is just under the PBR level of 1,458 calculated for this stock., combined with the under-reporting of serious injuries, the Commission reiterates its concern<sup>2</sup> that the true total human-caused M/SI for gray seals likely exceeds the PBR level for this stock. This would be the case if all seals observed with constricting entanglements (pinniped injury category P8a) were included in the M/SI estimates, as reported in the SARs. The Commission recommends that NMFS Northeast Fisheries Science Center (NEFSC) and Greater Atlantic Regional Fisheries Office (GARFO) collaborate with their counterparts at other science centers and regional offices to ensure that pinniped entanglements are being documented, assessed, and reported consistently nationwide, in accordance with the subject Procedural Directive. Adding to the Commission's concern is the impact that COVID-19 has had on observer coverage in U.S. commercial fisheries. Low coverage over the past two years likely has led to the underestimation of M/SI resulting from fisheries, as noted by Northeast Fisheries Science Center scientist D. Palka at the February 2022 Atlantic Scientific Review Group (SRG) meeting. Given the lack of fisheries observer coverage in 2020 and the 48% reduction in coverage in 2021 from 2019 (observed trips declined by 71 to 76 percent in 2021 compared to 2019) in commercial gillnet and trawl fisheries, numerous deaths of, and injuries to, seals likely were undetected and unreported. Therefore, it is important for NMFS to review its procedures for documenting, assessing, and reporting serious injuries of gray seals, particularly live animals observed with entanglements, in order to gain a more nearly complete understanding of the level of impact that gillnet and other fisheries are having on the stock.

### **Improving availability, accessibility, and integration of M/SI data**

The Commission was pleased to see the positive response from NMFS regarding its comment on the draft 2021 SARs pertaining to the value of creating and maintaining a centralized database on vessel strikes. The Commission also appreciates the enormous effort that NMFS is dedicating to compiling data on marine mammal deaths and injuries from all sources, including the Marine Mammal Health and Stranding Response Program, commercial fisheries observer programs, fisherman self-reports, opportunistic reports from the public of injured animals, and Alaska Native subsistence harvest reports. Given the significant amount of effort required of NMFS to compile and summarize all available mortality and injury data, evaluate the seriousness of injuries, prepare injury determination reports, summarize data annually for the SARs, and conduct the annual List of Fisheries tier analysis, the Commission encourages NMFS to integrate all marine mammal injury and mortality data into a centralized database system. Such a system would allow for queries across stocks, and allow NMFS to answer questions such as “how many large whale vessel strike M/SI events occurred along the U.S. west coast over a 5-year period?”, or “how many large whales were entangled in U.S. commercial pot fisheries in 2020?” while retaining information on the source of the data. The Commission notes that D. Palka mentioned at the 2022 Atlantic SRG meeting an

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<sup>2</sup> See the Commission's [24 January 2022](#) letter on the 2021 draft SAR.

effort to develop a database for all GARFO data and all NEFSC data so there would no longer be two separate datasets of observer and M/SI data. The Commission thinks this would be an excellent step toward creating a national integrated database system. Such a collaborative effort would aid our understanding of the immediate and long-term impacts of various sources of human-caused marine mammal M/SI across stocks.

### **Timely reviews of marine mammal serious injury Policy and Procedural Directives**

The original 2012 marine mammal serious injury Policy Directive specified that NMFS would review both the Policy and Procedural Directives at least every five years, or when new information becomes available that warrants more frequent review, to determine whether any revisions to the directives may be warranted. Accordingly, NMFS initiated a review of both directives in 2017, inviting subject matter experts within NMFS to determine whether revisions to the directives were warranted. That review resulted in the current proposed revisions to the injury categories and criteria for pinnipeds and small cetaceans. The Commission recommends that NMFS conduct more timely and regular reviews of both the Policy and the Procedural directives, in accordance with the requirement that reviews be conducted at least every five years, instead of the current ten-year schedule.

### **Further revisions to the directive reflecting large whale injury assessment methodology**

The Commission understands that NMFS is in the process of developing a statistical methodology for the assessment of large whale injuries using an expanded and updated dataset that includes information on known outcomes of large whale injury events from 2004-2008 used in the original directive, as well as new information on large whale injury events collected since that time period. In addition, NMFS is currently seeking public comments on a proposed rule, “Amendments to the North Atlantic Right Whale Vessel Strike Reduction Rule” ([87 Fed. Reg. 46921](#)), which proposes changes that would expand mandatory speed restrictions to include most vessels greater than or equal to 35 ft (10.7 m) and less than 65 ft (19.8 m) in length. In the original directive, NMFS chose the vessel length (65 feet) and speed (10 knots) thresholds for large whale vessel strike injury categories L6a, L6b, L7a, and L7b because these are the vessel length and speed currently regulated under NMFS’s Final Rule to Implement Speed Restrictions to Reduce the Threat of Ship Collisions with North Atlantic Right Whales (vessel speed rule, 73 Fed. Reg. 60173). In its assessment of the vessel speed rule (NMFS, 2020), NMFS reported on North Atlantic right whale M/SI events that involved vessels less than 65 feet in length, suggesting that revisions to the large whale injury categories in this directive are needed.

Given that the proportions of serious injury outcomes for each large whale injury category have not been recalculated annually, as required under the 2012 Procedural Directive, and in light of the deferral of revisions to the large whale injury determination process, the Commission agrees with the deletion of this guidance directing NMFS to recalculate prorated values for the large whale injury categories pending the development of the new statistical method to assess large whale injury events. Development of this statistical methodology has delayed any major revisions to section VII of the directive, which pertains to injuries of large whales, in this round of review. Further revisions to this directive are anticipated once the new methodology has been peer-reviewed internally and finalized. The Commission will welcome the opportunity to review revisions to the large whale injury


categories, criteria, and injury assessment approach and anticipates that any such revisions will reflect any changes made by NMFS to the vessel speed rule, particularly for large whale injuries involving vessels less than 65 feet in length.

Finally, the Commission recommends that the following changes be made to the proposed revised text before it is finalized—

- Add “or musculo-skeletal deformity” in addition to “fat and muscle loss” on page 29, S1 and on page 47, Table 3.
- Change “skin discoloration” to “hair abnormality” on page 47, Table 3.
- Remove “fins” from pinniped sections P8a, P11, and P13.
- The sentence concerning “pituitary release of cortisol” on page 19 is not accurate; the pituitary itself does not release cortisol but rather secretes adrenocorticotrophic hormone (ACTH) which in turn stimulates the adrenal glands. This sentence should be removed.

The Commission appreciates the opportunity to provide comments on the revised procedural directive. Please contact me if you have any questions regarding the Commission’s rationale or recommendations.

Sincerely,



Peter O. Thomas, Ph.D.,  
Executive Director

cc: Dr. Sean Hayes, Chief, Protective Species Branch, NEFSC  
Ms. Colleen Coogan, Marine Mammal & Sea Turtle Branch Chief, GARFO

## References

- Carretta, J.V., J. Greenman, K. Wilkinson, J. Freed, L. Saez, D. Lawson, J. Viezbicke, and J. Jannot. 2021. Sources of human-related injury and mortality for U.S. Pacific West Coast Marine Mammal Stock Assessments, 2015-2019. NOAA Technical Memorandum NMFS-SWFSC-643. 157 pages.
- Freed, J.C., N.C. Young, B.J. Delean, V.T. Helker, M.M. Muto, K.M. Savage, S.S. Teerlink, L.A. Jemison, K.M. Wilkinson, and J.E. Jannot. 2022. Human-caused mortality and injury of NMFS-managed Alaska marine mammal stocks, 2016-2020. NOAA Technical Memorandum NMFS-AFSC-442. 116 pages.
- Iruzun Martins, M.C., L. Sette, E. Josephson, A. Bogomolni, K. Rose, S. Sharp, M. Niemeyer and M. Moore. 2019. Unoccupied aerial system assessment of entanglement in Northwest Atlantic gray seals (*Halichoerus grypus*). *Marine Mammal Science*, 35:1613–1624.
- Mercer, T.A. 2021. Summary of documented human-caused mortality, serious injury and non-serious injury in Hawaiian monk seals: Supporting documentation for the 2021 Stock

Ms. Jaclyn Taylor  
31 August 2022  
Page 6

Assessment Report. PIFSC Data Report DR-21-008. 19 pages.

<https://doi.org/10.25923/p7ys-sk67>

National Marine Fisheries Service. 2020. North Atlantic Right Whale (*Eubalaena glacialis*) Vessel Speed Rule Assessment. National Marine Fisheries Service, Office of Protected Resources, Silver Spring, MD.

Precoda, K., and C.D. Orphanides. 2022. Estimates of cetacean and pinniped bycatch in the 2019 New England sink and Mid-Atlantic gillnet fisheries. NMFS Northeast Fisheries Science Center Reference Document 22-05. 21 pages.