



NOAA
FISHERIES

Distinguishing Serious from Non-Serious Injury of Marine Mammals

Office of Protected Resources

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Photo: NOAA Fisheries/James Watt. Permit No. 932-1489

Overview

- Determining Serious Injury – Why it Matters
- What Makes an Injury Serious?
- National Serious Injury Policy
- 5-Year Review: Policy and Procedures
- Themes Identified
- Small Cetacean Themes
- Policy Status and Timeline
- Questions



Determining Serious Injury – Why it Matters

- The Marine Mammal Protection Act (MMPA) directs NMFS to:
 - Estimate the annual levels of human caused mortality/serious injury (Section 117)
 - Categorize commercial fisheries based on their level of incidental mortality/serious injury of marine mammals (Section 118)



❖ **Serious Injury determinations are incorporated into Stock Assessment Reports (SARs) and marine mammal conservation management regimes**

What Makes an Injury “Serious”?

- It is important to clearly distinguish between “serious” and “non-serious” injuries
- Serious injury is defined in regulations as: “any injury that will likely result in mortality.” This definition could allow subjective interpretation and lead to inconsistencies.
- Workshop held in 1997 was basis for injury determinations through 2012.
- Recognized clearer guidance was needed to improve on 1997 guidance.



Photo: Virginia Aquarium. Permit No. 18786

Serious Injury Determination Policy & Procedure

Based on the results of the 2007 workshop, NMFS finalized:

- Policy of Distinguishing Serious from Non-Serious Injury of Marine Mammals, 2012 (NMFS PD 02-238; “National SI Policy”)
- Process for Injury Determination Distinguishing Serious from Non Serious Injury of Marine Mammals (NMFS PD 02-038-01; “Procedural Directive”)

These established a **consistent** and **transparent** process for NMFS to:

- 1) distinguish serious from non-serious injuries of marine mammals,
- 2) apply “criteria” to injury cases, and
- 3) document injury determinations.

The Procedural Directive

- Identifies the **annual process** for making and documenting injury determinations
- Specifies injury “**criteria**” for each taxa
 - Large whales (including sperm whales)
 - Small cetaceans
 - Pinnipeds
- Provides additional guidance on:
 - Assessing and documenting injury status after successful post-interaction mitigation efforts
 - Accounting for injury cases where the outcome cannot be determined
 - Pro-rating large whale injuries
- The policy and procedure were first applied to the 2013 SARs

The Procedural Directive: Process

1. Determination staff make initial determinations
2. Determination staff from each Science Center exchange preliminary injury determinations
3. Regional Office reviews preliminary determinations
4. NMFS scientists develop a written report documenting injury determinations
5. Regional Scientific Review Group reviews preliminary determinations
6. Determination staff complete the review and publication processes of the annual injury determination report
7. NMFS includes injury determinations in stock assessment reports and management regimes



Photo: National Marine Mammal Laboratory

5-Year Review: Policy and Procedures

Review Process:

- Directives to be reviewed every 5 years and updated as appropriate
- NMFS initiated an internal review in 2017
- **In general, the injury determination directives are providing for a consistent and transparent process for SI determinations;** however, enough substantive topics to warrant revising the Procedural Directive
- Established Serious Injury Policy Working Group (composed of NMFS OPR/region/science center staff), and subcommittees tasked with developing revisions based on best available information

Themes Identified

Issues Identified:

- Develop additional guidance on capture myopathy
- Update quantitative analysis of large whale known outcomes (survival/mortality) with more years of data
- Consider new injury types/expand existing sub-categories (e.g., harassment, use of seal bombs, vehicle (non-vessel) collisions)
- Clarify criteria associated with some small cetacean injury categories, including those involving lip and mouth hookings

Small Cetacean - Lip vs. Mouth Hooking

Topic: Clarify application of category S5a and S5b given limitations of observer data and variation in cetacean anatomy

- Consulted with four experts familiar with small cetacean injuries:
 - 1) What external indicators would confirm that an animal is hooked in the lip?
 - 2) If some part of the hook in the mouth is visible, is it possible to determine if the hook is in the jaw (or not) given the size of the hook, size/species of the animal, and location along the mouth?
 - 3) Is it possible for an animal to be mouth hooked while part of the hook is visible?
- If prescriptive guidance was not possible, experts were asked to identify factors for lip-hooking to be likely



Small Cetacean - Survival Following Mouth Hooking

Topic: Are there data to inform a reevaluation of the outcome of mouth hookings (S5a), including those involving trailing gear?

- Reached out to several researchers with long-term longitudinal data sets
- Conducted literature search of key relevant terms (e.g., cetacean, hook in mouth, mouth injuries, post-release survival)
- No significant additional information identified to inform reevaluation
 - Very few known outcome observations outside of the Wells et al. dataset
 - Wells et al. (2008) is still the only paper that addresses post-hooking survival

Serious Injury Determination Policy Status and Timeline

Timeline:

- Solicited input from FKWTRT and PLTRT, per their request (Oct 2021)
- Draft revisions (2018 - 2022)
- NMFS review - ongoing
- Informational webinar for FKWTRT & PLTRT- April 2022
- Webinars for Scientific Review Groups and Marine Mammal Commission - May 31 and June 2, 2022
- Seek public comment on proposed revisions ~Summer 2022
- Revise based on public comment and finalize ~ Fall 2022
- Implement revised directives for 2023 SAR cycle ~ Winter 2022/23

Questions

