



# MARINE MAMMAL COMMISSION

14 January 2015

Ms. Kristy Long  
Office of Protected Resources  
National Marine Fisheries Service  
7600 Sand Point Way Northeast  
Building 4, Room 2122-4  
Seattle, WA 98115

Dear Ms. Long:

The Marine Mammal Commission (the Commission), in consultation with its Committee of Scientific Advisors on Marine Mammals, has reviewed the National Marine Fisheries Service's (NMFS) 16 December 2014 notice of intent (79 Fed. Reg. 74710) to prepare guidelines for safely deterring marine mammals under its jurisdiction (whales, dolphins, seals, and sea lions). The draft national guidelines would be circulated for public review and comment at a later date.

## Background

Section 101(a)(4)(B) of the Marine Mammal Protection Act (the MMPA) directs NMFS to prepare guidelines for safely deterring marine mammals, including specific measures for species that are listed as endangered or threatened under the Endangered Species Act. Subsection (C) authorizes NMFS to issue regulations prohibiting any forms of deterrence that are determined to have a significant adverse effect on marine mammals. The Commission understands that NMFS has yet to publish such guidelines or regulations regarding the use of safe deterrent methods under section 101(a)(4) but has posted guidance for some species on its various websites<sup>1</sup>. It is not clear whether NMFS intends to publish any regulations on prohibited deterrents in conjunction with the national guidelines that currently are under development.

As background in preparing national guidelines, NMFS has requested input on which deterrents should be considered and evaluated for approval. Specifically, NMFS asked stakeholders to identify deterrent devices or techniques to be considered and to provide information on (1) the targeted marine mammal species or species groups, (2) the nature of the interaction and how it causes damage to gear, catch, or property or endangers humans, (3) the manner in which the deterrents are deployed or used, (4) relevant research/data on the deterrent and its effects on targeted and non-targeted species, and (5) other implementation considerations.

## Recommendations

In previous correspondence commenting on a proposed rule regarding the use of deterrents (enclosed letter of 30 August 1995), the Commission made a number of general and specific

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<sup>1</sup> For example, [http://www.westcoast.fisheries.noaa.gov/protected\\_species/marine\\_mammals/detering\\_qa.html](http://www.westcoast.fisheries.noaa.gov/protected_species/marine_mammals/detering_qa.html).

recommendations to NMFS. Some of those recommendations are reiterated herein to inform the development of draft guidelines, including the need to:

- explain how imminent the perceived damage to fishing gear, catch, or private property or the threat to human safety must be before deterrence actions can be taken and how severe the damage to property must be to warrant intervention;
- limit the use of deterrents to protect private property when pinnipeds are in well-established haul-out or rookery sites (i.e., ensure adequate protection of important marine mammal habitat before conflicts occur);
- define clearly “serious injury”—as noted in the *Federal Register* notice, NMFS has since developed criteria for distinguishing serious from non-serious injuries; and
- address concerns about the unrestricted use of noisemakers and explosives as deterrence measures, including the need to specify the type and intensities of noise that may be used.

Regarding the third bullet, the Commission notes that NMFS has defined a serious injury<sup>2</sup> as one that is more likely than not to lead to the death of the marine mammal. Although section 101(a)(4)(A) specifies that deterrence measures are acceptable “as long as they do not result in the death or serious injury of a marine mammal,” the Commission questions whether deterrence practices that could have up to a 50 percent likelihood of causing fatal or serious injuries satisfy the requirement under section 101(a)(4)(B) that they be “safe.”

In response to NMFS’s request for input on which deterrents it should consider under the planned national guidelines, the Commission recommends that NMFS review deterrents currently in use in the United States including:

- underwater acoustic devices (i.e., pingers in gillnet fisheries, seal scarers at fish farms, and the “Orca Saver” device in the Alaska longline fishery<sup>3</sup>);
- seal bombs and other underwater explosives;
- in-air noise makers (e.g., horns, whistles, bells, sirens, and other acoustic devices);
- electrified wires and devices to prevent pinnipeds from hauling out at dangerous or unwanted locations or from accessing fish farms and ladders;
- water jets, hoses, sprinklers to prevent pinnipeds from hauling out in dangerous or unwanted places;
- rubber bullets and other sub-lethal projectiles fired by guns, bows, slingshots, etc.;
- crowding boards; and
- netting and other types of physical barriers.

In addition to deterrents needed to protect human safety, the Commission recommends that NMFS consider deterrents that can safely prevent endangered or threatened marine mammals (particularly pinnipeds) from gaining access to areas where they are exposed to risks from human activities, hazardous substances, machinery, equipment, or installations that could cause physical harm or prompt behavioral modifications that lead to animals becoming nuisances. As a general

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<sup>2</sup> [www.nmfs.noaa.gov/pr/pdfs/serious\\_injury\\_policy.pdf](http://www.nmfs.noaa.gov/pr/pdfs/serious_injury_policy.pdf).

<sup>3</sup> [http://mustadautoline.com/products/orcas\\_saver](http://mustadautoline.com/products/orcas_saver).

matter, the Commission believes that the guidelines should classify approved deterrent techniques into several categories relative to their availability for use and their expected effectiveness. For example, categories could include devices or methods which are readily available for use by the public, those requiring specific training or authorization before deployment, those that should not be used except in cases of immediate threat of personal injury or safety, and those requiring further research.

The Commission also recommends that NMFS undertake actions necessary to ensure adequate outreach on the use of deterrents and establish monitoring and research programs capable of rigorously assessing their effectiveness and effects on marine mammals, particularly in the case of fisheries. For example, Palka et al. (2008) noted an increase in pinger use in the Northeast gillnet fishery as a means of reducing harbor porpoise entanglement in nets following an outreach program by the regional NMFS office. In addition to outreach, observers and at-sea and in-port inspection measures should be part of monitoring compliance and proper use of acoustic devices. Observers often are the best source of reliable information on the use of active deterrents (particularly for pingers, seal bombs, water spray, or other physical contact) to ensure that the deterrents are not administered in a fashion that is harmful to marine mammals. As noted in Palka et al. (2008), the use of pingers has proven to be very effective in reducing harbor porpoise bycatch when properly used and maintained but may be ineffective when not used as prescribed, which highlights the need for outreach and enforcement of proper use.

Palka et al. (2008) indicated that because the relationship between bycatch rates and characteristics of the marine environment and gear (e.g., mesh size) are still not fully understood, the use of deterrents merits more data collection and analysis. In addition, Schakner et al. (2013) called for research to determine whether deterrent stimuli that promote “anxiety” in marine mammals prompt them to learn to avoid fishing gear, rather than merely causing an immediate response to the stimulus. They also called for research to ascertain that the prescribed use of deterrents affects the targeted marine mammals in the smallest area possible and does not impede their use of alternative habitat and forage resources. For these reasons the Commission recommends that NMFS continue to focus efforts on improved data collection (particularly observer data), analysis, and research on marine mammal deterrents.

The Commission appreciates being invited to participate in the NMFS workshop on deterrents in February 2015 and looks forward to the discussion of the comments received during this process. Kindly contact me if you or your staff has questions.

Sincerely,

A handwritten signature in blue ink that reads "Rebecca J. Lent". The signature is fluid and cursive, with the first name being the most prominent.

Rebecca J. Lent, Ph.D.  
Executive Director

Enclosure

## References

- Palka, D.L., M.C. Rossman, A.S. VanAtten, and C.D. Orphanides. 2008. Effects of pingers on harbour porpoise (*Phocoena phocoena*) bycatch in the U.S. Northeast gillnet fishery. *Journal of Cetacean Research Management* 10:217–226.
- Schakner, Z.A., and D.T. Blumstein. 2013. Behavioral biology of marine mammal deterrents: A review and prospectus. *Biological Conservation* 167: 380–389.

MARINE MAMMAL COMMISSION  
1825 CONNECTICUT AVENUE, N.W. #512  
WASHINGTON, DC 20009

30 August 1995

The Honorable William W. Fox, Jr., Ph.D.  
Director, Office of Protected Resources  
National Marine Fisheries Service  
1315 East-West Highway, Room 8268  
Silver Spring, MD 20910-3226

Dear Dr. Fox:

Thank you for providing the Marine Mammal Commission with the 5 May 1995 Federal Register notice (60 Fed. Reg. 22345) proposing regulations and guidelines for the deterrence of marine mammals under section 101(a)(4) of the Marine Mammal Protection Act. The Commission, in consultation with its Committee of Scientific Advisors, has reviewed the proposed rule and offers the following comments.

General Comments

For the most part, the proposed rule accurately reflects the provisions of section 101(a)(4). The proposed regulations, however, do little to clarify some of the uncertainties inherent in the statute. For example, as discussed in greater detail in the specific comments, the regulations do not explain how imminent the perceived damage to fishing gear or catch or private property must be before deterrence actions can be taken. Similarly, there is no discussion as to how severe the damage to property must be. Would any type of damage or perceived potential damage to any type of property be adequate justification for deterring a marine mammal?

On a related point, it does not appear that any consideration has been given to situations involving well-established haul-out or rookery sites. Under the proposed rule, it would appear that a property owner could construct a structure at such a site, knowing full well that the area is frequented by marine mammals, and then use passive deterrence (e.g. build a fence) to prevent the mammals from returning to the area or could actively deter the animals from approaching and damaging the structure. In such instances, the proposed rule should, but does not, provide adequate protection to important marine mammal habitat before conflicts between marine mammals and property owners are created. Further, the proposed rule does not seem to consider that driving marine mammals away from haul-outs and



rookeries could adversely affect marine mammal populations by resulting in decreased survival or productivity, but not result directly in the death or serious injury of individuals.

Under the statutory provisions and the proposed regulations, deterrence measures could be taken in certain situations, provided that they do not result in the death or serious injury of a marine mammal. When read in light of section 216.29(c)(2) of the proposed rule, it would seem that any injury that broke the skin of an animal, or any injury of the head or eyes, would be considered serious. Nevertheless, to avoid any confusion, it would be useful if the Service provided more precise guidance on what it would consider to be a "serious injury" under this section.

The proposed rule also sets forth specific types of deterrence measures that can or cannot be used. Section 216.29(c)(2) would allow active deterrence measures, including, but not limited to, mechanical or electrical noisemakers, water sprayed from a hose, blunt objects to prod animals, large shielding objects to herd animals, and hazing maneuvers by boat operators. Section 216.29(d) would prohibit the use of any firearm or other device used to propel an object resulting in, or possibly resulting in, injury to a marine mammal. Such devices would include crossbows, spearguns, bangsticks, archery gear, harpoons, javelins, and spears. The use of any explosive device to deter a cetacean and the use of any explosive more powerful than a seal bomb to deter a pinniped would also be prohibited.

The Commission is concerned about the unrestricted use of noisemakers as deterrence measures. Without any specifications as to the types and intensities of noises that may be used, it is difficult to judge whether noisemakers, in all cases, would be a safe means of deterring marine mammals. The Commission is further concerned that certain types of noises, either individually or in combination with other sources of sounds, might have significant adverse effects on marine mammals, *e.g.*, by causing them to abandon important habitats.

From the proposed regulatory provision, it is not entirely clear whether any and, if so, what firearms may be used to deter marine mammals. Arguably, the prohibition only applies to firing projectiles that could result in injuries. The bounds of this prohibition need to be clarified.

The Commission agrees that the use of explosives to deter cetaceans is not warranted. We are concerned, however, about allowing the unrestricted use of certain types of explosives for deterring pinnipeds. In this regard, it is not clear that the referenced studies, which suggest that injuries to pinnipeds from "light" explosives are unlikely, are comparable to the study by Myrick *et al.* for cetaceans. That is, are they a sufficient



basis to conclude that a seal bomb detonated near a pinniped is not capable of inflicting moderate or serious injuries (e.g., eye injuries from the flash or sand or other particles dislodged by the detonation)? If not, the Service should further consider prohibiting or restricting their use. Among other things, the Service might consider setting a distance limit for using seal bombs and prohibiting their use on land. The Commission concurs that the use of taste aversion or tainted bait is not an appropriate deterrence measure.

#### Specific Comments

Page 22345, col. 1, Summary -- The first sentence of the summary suggests that authority to take marine mammals by non-lethal deterrence under section 101(a)(4) of the Marine Mammal Protection Act is limited to U.S. citizens. However, there is no such limitation, either in the statute or in the proposed regulations. The provisions of section 101(a)(4) were intended to apply to all persons subject to United States jurisdiction, as long as they meet the criteria set forth in the Act, e.g., if they own fishing gear or catch or private property that may be damaged by marine mammals, or are an agent, bailee, or employee of the owner. Reference to "citizens" in the summary and elsewhere in the preamble should be deleted. In addition, to avoid any confusion, the final rule should clarify that section 101(a)(4) and the implementing regulations apply to all persons subject to United States jurisdiction, not just U.S. citizens.

Page 22345, col. 2, second full par. -- The first sentence of this paragraph notes that the proposed rule would apply only to marine mammal species not listed as endangered or threatened under the Endangered Species Act. Similar statements are made elsewhere in the preamble and in the rule itself. It would be helpful if somewhere the Service included a list of threatened and endangered marine mammals, or at least referenced the appropriate sections of the Code of Federal Regulations where such information may be found (i.e., 50 C.F.R. §§ 17.11, 222.23, and 227.4).

Page 22345, col. 2, third full par. -- The third sentence in this paragraph states that "intentional lethal taking is now explicitly prohibited, except in the defense of human life...." Although it is true that intentional lethal taking is allowed during commercial fishing operations only in defense of human life, intentional lethal taking of marine mammals may be permissible in other instances, e.g. for subsistence by Alaska Natives, under a scientific research permit, pursuant to a waiver of the Act's moratorium, or euthanasia under section 109(h)(1). This sentence should be revised accordingly by inserting the phrase "in the course of commercial fishing" after the word "taking."



Page 22345, col. 3, first full par. -- The last sentence in this paragraph states that "[a]ctions by the public to deter non-ESA listed marine mammals consistent with such guidelines would not be a violation of the MMPA." This discussion should be expanded to clarify that any taking that results in the serious injury or death of a marine mammal, even if the person were following the guidelines and death or serious injury were unexpected, would constitute a violation of the Act.

Page 22346, col. 1, third full paragraph -- The first sentence in this paragraph sets forth "four additional instructions" to aid in the proper use of active deterrence measures. For these instructions to be enforceable, the word "should" in the fourth line needs to be replaced with the word "must."

Page 22346, col. 2, first full paragraph -- The penultimate sentence in this paragraph states that translocation of marine mammals would be prohibited except when done by "Federal, state, and local officials as authorized by section 109(h) of the MMPA." To reflect the flexibility provided by section 109(h), the Service should also note that translocation can be carried out by any other person designated by the Service under section 112(c), whether or not a government official.

Page 22347, col. 2, Section 216.29(b)(1)(i) -- This section provides that owners of fishing gear or catch, or their employees or agents, may deter marine mammals from damaging their gear or catch, provided that death or serious injury does not result. This accurately tracks section 101(a)(4)(A), the underlying statutory provision. What is missing from the rule and the discussion in the preamble, however, is additional guidance on when deterrence measures may be initiated -- *i.e.*, how likely or imminent must the possibility of damage be? For instance, may deterrence measures be taken by fishermen any time their gear is in the water and marine mammals are in the vicinity or must the marine mammals be in the act of interfering with fishing operations or attempting to remove catch? Does it matter if marine mammals in the area, or identifiable individuals, have a history of interfering with fishing operations by damaging gear or catch? These and similar questions should be addressed in the final rule.

Page 22347, cols. 2-3, Section 216.29(b)(1)(ii) -- Consistent with section 101(a)(4)(A)(ii), this section would authorize owners of private property (or their agents, bailees, or employees) to deter a marine mammal from damaging private property, so long as death or serious injury to the animal does not result. As with the provision concerning actions by fishermen, additional guidance would be useful. For example, it is not clear whether the provision applies to all types of private property or just real property. Reference to "unimproved private property" in section 216.29(c)(2)(iv) suggests the



latter. Also, it is not clear what would constitute damage to private property. Must there be a likelihood of physical damage to the property before deterrence measures can be taken? If so, how severe must the actual or possible damage be before deterrence is appropriate -- e.g., would transitory damage to landscaping or damage to a temporary structure be sufficient justification? If not, would a marine mammal preventing or impeding the owner's access to a part of the property constitute damage?

Page 22347, col. 3, Section 216.29(b)(2) -- This section provides that government officials and employees may, consistent with regulations at 50 C.F.R. § 216.22, deter a marine mammal from damaging public or private property. First, the provision should be expanded to include those persons designated by the Service under section 112(c), as well as government employees. Second, the rationale for allowing the protection of private property, as well as public property, under this section should be explained. In this regard, the Commission notes that section 101(a)(4)(A)(iv) of the Act, which relates to deterrence by government employees, only authorizes action to deter a marine mammal from damaging public property. Authority for government officials to deter marine mammals from damaging private property might also come from section 109(h), but the Service needs to explain the connection between the statutory provisions and the regulation -- e.g., does the Service consider the authority for government officials protecting private property to come from the public health and welfare aspect of section 109(h)? The Commission believes that section 109(h)(1)(C), which allows for the nonlethal removal of nuisance animals by government officials and designees, would likely provide adequate authority for deterring marine mammals from damaging private property in some instances. However, for whatever reason, this element of section 109(h) is not reflected in the referenced regulatory provision (§ 216.22), with which deterrence actions by government officials must be consistent. Perhaps a conforming change to section 216.22 is also needed.

Page 22347, col. 3, Section 216.29(c)(2) -- The discussion of active deterrence measures provides that such measures should not separate a female and its offspring, break the skin of an animal, be directed at the head or eyes of an animal, or be used on pinnipeds hauled-out on unimproved property. As written, this provision may be unenforceable. It needs to be redrafted to clarify that deterrence measures with such results are prohibited.

Page 22347, col. 3, Section 216.29(c)(2)(iv) -- Under this provision, measures to deter pinnipeds from hauling out on unimproved property are not permissible. Additional guidance as to what is meant by "unimproved property" is needed. For example, would any kind of alteration, such as landscaping or

erecting a temporary structure (e.g. a duck blind), be sufficient to warrant deterrence actions? Would an improvement, such as a road, that is not likely to be damaged by the presence of marine mammals, be sufficient to overcome this prohibition?

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Please call if you have any questions regarding these comments.

Sincerely,

  
John R. Twiss, Jr.  
Executive Director