ASSESSMENT OF THE ENVIRONMENTAL CONSEQUENCES OF GUIDELINES FOR THE SAFE DETERRENCE OF POLAR BEARS

Summary

The deterrence provisions of the 1994 amendments to the Marine Mammal Protection Act of 1972, as amended (MMPA) provide an exception to otherwise prohibited acts for the use of measures that may deter a marine mammal from, amongst other things, damaging private property or endangering personal safety [Section 101(a)(4)(A)(ii) and (iii), respectively], so long as such acts of deterrence do not result in the death or serious injury of a marine mammal. The amendments further instruct the Secretary to publish in the *Federal Register* a list of guidelines for use in safely deterring marine mammals. Section 101(a)(4)(B) further directs the U.S. Fish and Wildlife Service (Service) to recommend specific measures that may be used to nonlethally deter marine mammals, including marine mammals listed as endangered or threatened under the Endangered Species Act of 1973 (ESA). The Service listed the polar bear (*Ursus maritimus*) as a threatened species under the ESA on May 15, 2008 (73 FR 82212) and published a final special rule under Section 4(d) of the ESA for the polar bear on December 16, 2008 (73 FR 76249). At the time of the listing, the Service issued an interim final rule under section 4(d) of the ESA for the polar bear. That interim rule, later finalized at 73 FR 76249, provided that activities authorized or exempted under the MMPA may not be considered as violations under the ESA or its implementing regulations (50 CFR 17.40(q)(2)). Thus, in issuing these guidelines, persons conducting activities that comply with these guidelines would need no additional authorizations under the ESA, nor would we consider their activities a violation under the take prohibitions of either the MMPA or the ESA. This Environmental Assessment considers the environmental consequences of the guidelines and identified alternatives to the guidelines.

1.0 Purpose of the Action

The MMPA requires the Secretary of the Interior, through the Service, to publish a list of guidelines for use in safely deterring marine mammals and, for marine mammal species listed as threatened or endangered under the ESA, to recommend specific measures that may be safely used to nonlethally deter these animals. The guidelines set forth provisions that the Service finds are appropriate for safely and nonlethally deterring polar bears from damaging private and public property and endangering the public. Use of these measures are voluntary but should a person adopt any or all of the measures they will reduce occurrences of bear–human interactions and result in no more than minor, short-term behavioral effects on polar bears.

2.0 Need for the Action

The MMPA allows for people to deter marine mammals from damaging fishing gear or catch, damaging private property, and endangering personal safety. However, the use of deterrence measures may not cause the animal serious injury or death, and the measures may only be directed at marine mammals that are a threat to human activity, private property, or land

that has been modified for human use. For example, polar bears may not be deterred from unmodified property, such as a rock ledge, a beach, or an undeveloped barrier island where they are resting. Where bears are not interacting with human activity or damaging personal property they may not be deterred. By allowing the deterrence of polar bears from damaging private property, these provisions may increase the occasions in which people inexperienced with bear behavior may interact with polar bears. It is conceivable that someone, inexperienced with polar bears, might injure a polar bear while deterring an animal in an approved manner. As the public may be unacquainted with what constitutes a serious injury to a marine mammal, the guidelines for deterrence must temper the means that are allowed to be used to deter marine mammals.

An existing regulation, 50 CFR Section 18.22, allows government officials and employees, acting in their official capacity, to harass and even to lethally take a marine mammal, if such harassment or taking is for the health and welfare of the general public or the animal. Additionally, the Service authorizes the nonlethal incidental or intentional take of polar bears through Letters of Authorization (LOAs) issued under Sections 101(a)(5)(A) for incidental take, or 109(h) and 112(c) for intentional take. Using these programs' highly effective protocols for working with and training authorized individuals in bear deterrence, we reduce the possibility that a bear and human interchange will escalate into a potentially lethal encounter. The Service does not intend today's guidelines to replace or supersede existing protocols or programs, but rather, consistent with the MMPA, to supplement those efforts by allowing any person to undertake actions to minimize potential interactions with polar bears. Thus, we believe that the guidelines for safe deterrence of polar bears will serve as a benefit to the polar bear population.

3.0 Public Participation

The Service has considerable experience in mitigating polar bear–human interactions, and the draft guidelines were developed based on that internal expertise and experience. Building on that existing knowledge, the Service consulted with experts in the field, as well as the general public, as directed by Section 101(a)(4)(B) of the MMPA prior to finalizing these guidelines. Specifically, the Service consulted with the State of Alaska's Department of Fish and Game; the Alaska Nanuuq (Polar Bear) Commission, who have local knowledge of polar bear habitats and behavior; and the North Slope Borough, including providing information and receiving feedback at a North Slope Borough's Council hearing, where we received insight from those with local knowledge of polar bear habitats and behavior. We also provided notice to the public of the draft Environmental Assessment in our Federal Register notice of April 26, 2010 (75 FR 21571). In addition to comments received regarding the proposed guidelines the Service also received a comment on the draft environmental assessment. The commenter recommended that the Service explore reasonable alternatives including additional deterrence measures as well as the alternative of making the guidelines mandatory.

The Service disagrees with this recommendation. The purpose of the final rule is to provide guidelines to the public for the safe and lawful deterrence of the polar bear consistent with the allowances of the MMPA. The law itself allows individuals to take actions to deter a polar bear, and, provided the actions are consistent with the MMPA as stated in Section 101(a)(4), they are not considered violations of the MMPA's prohibitions against take.

The inclusion of additional actions under the guidelines was considered in preparing our proposed rule, and our reasons for not incorporating those actions are explained in both the proposed and the final rule. Thus, the potential listing of additional specific guidelines would not be an alternative action; under this rule, such additional specific guidelines were considered but not accepted. Further, the inclusion of additional proactive actions the public might choose to take is not, per se, an alternative action; the action subject to this Environmental Assessment is issuing guidelines. Finally, while Section 101(4)(C) of the MMPA does provide the Service with the ability to prohibit from use certain forms of deterrence, there is no corresponding provision that provides a legal requirement for an individual to take a specific action in deterring a polar bear.

4.0 Alternatives Including the Proposed Action

4.1. Alternative 1. Proposed Action. The proposed action is the development of guidelines for use in safely deterring polar bears in certain situations and as long as the act of deterrence does not result in the serious injury or death of a polar bear. Specifically, the measure will allow a citizen to safely deter a polar bear from damaging private property and from endangering personal safety. The purpose of the guidelines is to provide guidance to the public regarding actions that will safely deter polar bears in a manner that will minimize bear–human interactions as well as cause no serious injury or mortality to polar bears. Further, the Service has determined that use of these guidelines does not result in any course of action which would involve an unresolved conflict concerning alternative uses of available resources per NEPA Section 102(2)(E).

4.2. Alternative 2. No Action. The provisions in the 1994 amendments that instruct the Secretary to establish guidelines for the safe deterrence of marine mammals and to develop a list of prohibited measures are mandated by Congress and approved by the President. Additionally, and as part of a settlement agreement in the United States District Court – Northern California District, the Service is directed to publish in the *Federal Register*, final guidelines for use in safely deterring polar bears, including specific measures which may be used to nonlethally deter polar bears, by September 30, 2010. Legally, the alternative to take no action is not available.

5.0 Affected Environment

The Affected Environment includes any public or private property within the range of the polar bear in the United States.

6.0 Environmental Consequences

6.1. The Proposed Action. The guidelines allow persons living in, working in, or travelling through, areas where polar bears may occur to use certain measures to safely deter bears.

Below we establish two levels of deterrence guidelines (Passive and Preventive) that a person may follow in order to nonlethally deter a polar bear. Each type of measure includes a suite of appropriate actions that may be used.

Passive Deterrence Measures

(1) *Passive deterrence* measures are those that prevent polar bears from gaining access to property or people. These measures provide for human safety and do not increase the risk of serious injury or death of a polar bear. They include:

(i) Rigid fencing. Rigid fencing and other fixed barriers such as gates and fence skirting can be used around buildings or areas to limit bears from accessing community or industrial sites and buildings. Fencing areas 5 acres (~2 ha) and smaller can be used to limit human–bear interactions. Industry standard chain-link fencing material can be used. Chain-link fencing can be placed around buildings on pilings as fence skirting to limit access of bears underneath the buildings.

(ii) Bear exclusion cages. Bear exclusion cages provide a protective shelter for people in areas frequented by bears. Cages erected at building entry and exit points exclude polar bears from the immediate area and allow safe entry and exit for persons gaining access to, or leaving, a building should a polar bear be in the vicinity. Additionally, they provide an opportunity for people exiting a building to conduct a visual scan upon exit. Such a scan is especially important in areas where buildings are constructed above ground level due to permafrost because bears may be resting underneath. These cages can be used at homes or industrial facilities to deter bears as well. Cages can be used in remote areas where bear use is not known, and along bear travel corridors, e.g., within 0.5 mile from coastline, to deter bears from facilities. Cages must be no smaller than 4 ft (width) by 4 ft (length) by 8 ft (height). Bars must be no smaller than 1 inch wide. Distance between bars must be no more than 4 inches clear on stairways and landings or when otherwise attached to a habitable structure; they may be no more than 5 inches clear for use in cages not attached to any habitable structure. A 4 inch distance between the bars would be sufficient to prevent a bear from reaching through, while providing visible space between bars. The ceiling of the cage must be enclosed.

(iii) Bear-resistant garbage containers. Bear-resistant garbage containers prevent bears from accessing garbage as a food source and limit polar bears from becoming food-conditioned or habituated to people and facilities. The absence of habituation further reduces the potential for bear–human interactions. Bear-resistant garbage cans and garbage bins are manufactured by various companies and in various sizes. Commercially designed residential bear-resistant containers (32–130 gallons) can be used. Two- to 6-cubic yard containers can be specifically designed by commercial vendors as bear-proof containers or have industry-standard lid locks to prohibit bear entry, depending on the need and location. For remote seasonal camps, garbage can be temporarily stored in steel drums secured with locking rings and a gasket, and removed from the site when transportation is available.

Larger garbage containers, such as dumpsters or "roll-offs" (20 to 40 cubic yards), can limit bear–human interactions when the containers have bear-proof lids. Lids must be constructed of heavy steel tubing or similarly constructed with heavy expanded metal. The Interagency Grizzly Bear Committee (IGBC) has published minimum design and structural

standards, inspection and testing methodology for grizzly bear resistant containers. Bear-resistant products approved for use on public lands can be reviewed as well (website: http://www.igbconline.org/FinalBearResistantContTestingMay2008-09.pdf). The IGBC bear-resistant standards can be used as a resource when selecting appropriate bear-resistant containers.

(2) *Preventive deterrence* measures are those that can dissuade a polar bear from initiating an interaction with property or people. These measures provide for safe human use and do not increase the risk of serious injury or death of a polar bear. These are:

(i) Acoustic device: Acoustic deterrent devices may be used to create an auditory disturbance causing polar bears to move away from the affected area. The reasonable use of loud noises, e.g., vehicle engines, automobile sirens or horns, and air-horns, where such auditory stimuli could startle a bear and disrupt its approach to property or people, is authorized. This authorization is limited to deterrent devices with a sound strength of no greater than 150 dB SPL. The use of commercially available air horns or other audible products used as perimeter alarms, which create sounds that fall below this upper limit, is acceptable.

(ii) Vehicle or boat deterrence: Patrolling the periphery of a compound or encampment using a vehicle, such as a truck or all-terrain vehicle (e.g., a snowmobile or a four wheeler), and deterring, but not chasing, polar bears with engine noise, or by blocking their approach without making a physical contact with the animal, is an acceptable preventive deterrence. Similarly patrolling an area in a small boat using similar methods is acceptable.

The deterrence guidelines are passive or preventive in nature. Any action to deter polar bears that goes beyond these specific measures could result in a taking and, unless otherwise exempted under the MMPA, would require authorization. The Service acknowledges that there will be numerous new techniques developed, or new applications of existing techniques, for deterring bears. The Service will work to establish a system for evaluating new bear deterrence applications and techniques that can be incorporated, and will update this set of guidelines with examples of future approved methods. Deterrence actions that do not result in serious injury or death to a polar bear remain permissible. Prior to conducting activities beyond those specifically described in these guidelines, or, should the polar bear be listed as endangered under the ESA, persons should contact the Service's Alaska Regional Office's Marine Mammal Program for further guidance [for the location of the Alaska Regional Office see 50 CFR 2.2(g)].

6.2. The Deterrence of the Polar Bear

The guidelines provide for the deterrence of polar bears from damaging property and endangering personal safety while minimizing injury to the bear. The implementation of these guidelines will not negatively impact the environment or polar bear populations. The Service recognizes that, if during an interaction with a polar bear all possible means of deterrence have been attempted and have proven unsuccessful, and the threat of danger to a person is real and immediate, a person may harass, injure, or even kill the animal in self-defense or to save the life of another human. These guidelines are unlikely to increase the interactions in which humans harass, injure, or kill marine mammals. In past human-bear encounters persons have acted to abate or to escape the perceived danger in whatever manner necessary. We anticipate this will continue to be the case regardless of these, or any, guidelines. However, effective use of these

guidelines may reduce the chance of bear-human interactions that escalate into a situation where a bear must be injured or killed.

These guidelines implement the law and protect a person from potential prosecution should the taking of a polar bear occur pursuant to that person following one of the measures set out in the guidelines. Under the guidelines, owners of private property, their employees, bailees, or agents are allowed to take measures to deter polar bears to minimize risks to people and bears as well as to minimize private property damage. Although the guidelines specifically outline measures that would allow for the safe, nonlethal deterrence of polar bears, in the unlikely event a polar bear is seriously injured or killed as a result of a person implementing one of the specified guidelines, that taking would not be a violation under the MMPA.

6.3. Assumptions for the Guidelines

The standard by which a deterrence measure is deemed safe is whether or not it may be safely carried out by an individual and whether or not it has the potential to cause the serious injury or death of a polar bear when used properly by any individual. To assess this, we analyzed polar bear–human interactions described and reported by the oil and gas industry in conjunction with their LOAs and we examined probable means of deterring polar bears. The documentation of these interactions (approximately 2,079), during the period from 1993 to 2009, were a requisite for issuing LOAs. A large percentage of these interactions were passive. For example, in 2008, seventy-three percent of recorded polar bear sightings consisted of observations of polar bears traveling through or resting near the monitored areas without a perceived reaction to human presence. Twenty-seven percent of polar bear sightings involved Level B harassment, where bears were deterred from industrial areas with no injury. Using this database of reported polar bear–human interactions and observations, we also considered whether a proposed measure potentially compromises human safety, or poses enforcement quandaries.

Because polar bears are highly curious and potentially dangerous animals and the guidelines address the actions of all persons regardless of their experience in dealing with bears, the guidelines are narrow in scope. The guidelines do not assume that a person can assess the activity or temperament of a particular polar bear and therefore provide guidance for activities that may be safely conducted by any citizen and are not likely to result in injuries to polar bears

6.4. Guidelines for Safe Deterrence

The guidelines for safe deterrence were drafted recognizing that no act of deterrence of a polar bear should result in the serious injury or death of the animal. The guidelines should in no way be considered a license to use the described measures in excess or with impunity. Though the authorized deterrence measure may be deemed safe, if the force applied is excessive and potentially injurious, the act of deterrence could be considered as a violation under the MMPA.

6.5. Cumulative Effects

The proposed guidelines cover a category of activities that are largely baseline in nature, i.e., activities that are already in use. Therefore, we do not anticipate that the continued or refined use of these activities will result in additional effects on polar bears or their habitat.

Furthermore, because of the nature of these types of activities, we do not project that there will be any substantial effects on polar bear behavior or habitat use.

6.6. The No Action Alternative

Because it is mandated by the MMPA, the alternative of taking no action is not available. Certain deterrence of marine mammals is provided for in the MMPA and, therefore, is in effect even without implementation of these guidelines. In addition, however, the MMPA mandates that guidelines, and prohibitions if warranted, be developed and implemented. If the alternative of taking no action were available, persons using deterrence measures on a marine mammal would have no guidance on how to do so without causing serious injury or death to the animal. Without the guidelines, the consequence of uninformed actions to deter bears might result in an increase in the risk of polar bear injuries and mortalities.

7.0 Finding of No Significant Environmental Impact

The guidelines authorize the deterrence of polar bears by individuals living in, working in, or traveling through areas where polar bears may occur. The guidelines for safe deterrence provide that such deterrence may be accomplished safely and will not likely result in serious injury or death to polar bears. The environmental consequences are negligible.

Based on this summary of effects, I have determined that the implementation of marine mammal deterrence guidelines to safely deter polar bears will not have significant effect on the human environment. For this reason, no environmental impact statement needs to be prepared.

Acting Regional Director
U.S. Fish and Wildlife Service

30 SEP 2010
Date

8.0 LIST OF PREPARERS

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