



Threatened and Endangered Species Human-Polar Bear Safety and Interaction Plans

Site-specific human-polar bear safety and interaction plans are an essential project component for those working in polar bear habitat. Goals of these plans are to 1) minimize the occurrence of human-polar bear interactions at a particular camp or work site; 2) minimize the chance that human activities interfere with the essential life functions of polar bears (e.g., breeding, feeding, denning); 3) minimize the severity of interactions should they occur; and 4) ensure the safety of humans and polar bears (*Ursus maritimus*).

What legal statutes protect polar bears?

In the United States, the polar bear is protected under the Marine Mammal Protection Act (MMPA). Additionally, due to threats to its sea ice habitat, on May 15, 2008 the Service listed the polar bear as threatened throughout its range under the Endangered Species Act (ESA). The polar bear also receives protection under the Convention on International Trade in Endangered Species of Wildlife Fauna and Flora (CITES) of 1973.

When and where do polar bears occur most frequently on land in Alaska?

In Alaska, polar bears occur on land and barrier islands most frequently during fall and winter when some abandon melting sea ice, search for food, (e.g., whale carcasses), or search for suitable den sites (pregnant females). Most polar bears occur along the coasts of the Beaufort and Chukchi Seas, but polar bears can occur infrequently along the Bering Sea south of Nome and on Saint

Lawrence Island. Polar bears may remain along the coast or on barrier islands for several months until sea ice returns. From about October through April, snow drifts on bluffs and in drainages within approximately five miles from the Beaufort and Chukchi Sea coasts provide denning habitat for females and their offspring

What factors influence the likelihood and severity of human-polar bear interactions?

A *human-polar bear interaction*, defined as an occurrence when a person and polar bear are mutually aware of each other, can occur at any time within polar bear habitat. Several factors such as project location, timing, and duration contribute to the likelihood of a human-polar bear interaction occurring. The likelihood is greatest for long-term activities occurring on the Beaufort and Chukchi Sea coasts or barrier islands during autumn. Other factors that may influence the likelihood of interactions are the breeding status, age, and health of a bear.

If a polar bear does not avoid humans it has detected, a *human-polar bear conflict* could occur. A *human-polar bear conflict* is defined as a situation in which when a polar bear exhibits stress-related or curious behavior that causes a person to take extreme evasive action, makes

physical contact with a person, exhibits clear predatory behavior, or is intentionally harmed or killed by a person. This is especially true of polar bears that have learned to associate humans with food. Human-polar bear interactions can escalate to conflicts in situations where bears approach people that cannot shelter in hard-sided structures, such as while camping in a tent.

Who needs a human-polar bear safety and interaction plan?

We recommend those working within five miles of the Alaskan arctic coast from the Canadian border to Point Hope or one mile of the western coast from Point Hope to Nome develop a human-polar bear interaction plan; those working on the coast of St. Lawrence Island should also form a plan.

Components of a Human-Polar Bear Safety and Interaction Plan

The goal of a human-polar bear safety and interaction plan should be to *first* minimize the likelihood of



interactions occurring, *then* to minimize the severity of such interactions should they occur. Implementation of these plans, therefore, can help minimize the frequency and consequences of human-polar bear interactions.

Effective plans consider appropriate site/camp placement and design, best management practices for operations/activities, and polar bear interaction and deterrence procedures. Plans should be developed for each work or camp site and provide direction for safely performing on- and off-duty activities. Potential plan components are described below.

Site Placement

- Place camps and work areas one mile from polar bear high-use areas such as coastal beaches and barrier islands. If camps have to be placed on the coast, develop a site design that minimize human-bear interactions (see below).
- From October through April (denning season), place camps one mile from river drainages with

steep banks and bluffs.

Site Design

- Have a designated safe area to gather if a bear approaches camp or work areas.
- If work and camp activities are co-located (e.g., on a pad) ensure living quarters are centrally located.
- Avoid creating corners and areas where bears may feel trapped or workers may become trapped by a bear.
- Design and orient pads to minimize snow drifts.
- Devise snow management and lighting strategies that ensure good visibility and facilitate early bear detection.
- Use electric or other fences that exclude bears from work and living areas, but recognize that fences are not fail-safe and awareness within or outside fences is necessary.
- Store food (camp pantry) in a protected area away from the living quarters.
- Locate incinerator outside of

living area, and incinerate appropriate trash on site.

Best Management Practices

Attractants management

- Sewage/waste, garbage, food, deliberate feeding, animal carcasses, and oil/fuel/anti-freeze can attract polar bears.
- To minimize attractants:*
- Maintain a clean camp and/or worksite;
 - Devise an attractants management strategy such that their storage, handling, and disposal minimizes access by bears (on-site incineration, use of bear-proof containers, dumpsters, etc.);
 - Fly unnecessary attractants out on a regular basis (i.e., garbage, animal carcasses, excess anti-freeze or petroleum products); and/or
 - Avoid carrying bear attractants (such as strongly scented snacks, fish, meat, or dog food) while away from camp; if you must carry attractants, store them in air-tight “bear-resistant” containers.

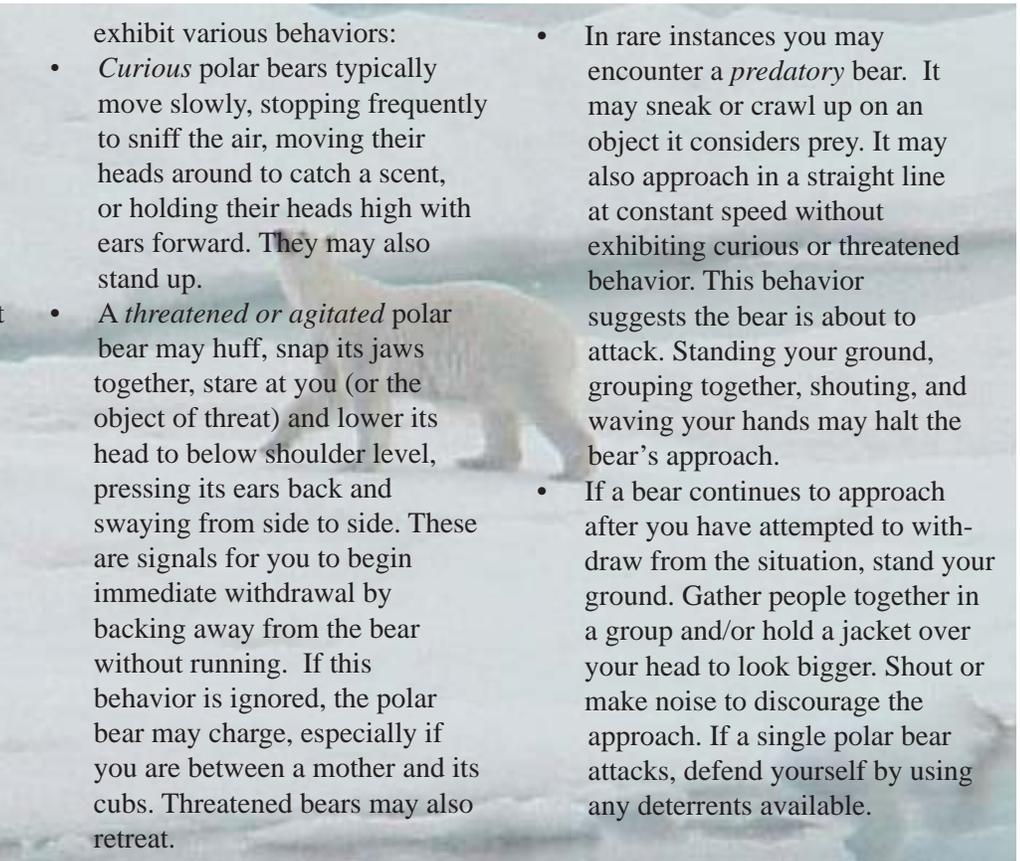
If a polar bear is encountered:

- Do not approach polar bears. Remain calm and avoid making sudden movements. Seek the shelter of a hard-sided enclosure such as a vehicle or building. Stay downwind if possible to avoid allowing the bear to smell you. Allow bears to continue what they were doing before you encountered them. Slowly leave the vicinity if you see signs that you’ve been detected. Generally, the closer you are to the animal, the more likely you are to change its behavior, and “safe” distances will vary with each bear and situation. If a polar bear detects you, observe its behavior. Polar bears that stop what they are doing to turn their head or sniff the air in your direction have likely become aware of your presence. These animals may

exhibit various behaviors:

- *Curious* polar bears typically move slowly, stopping frequently to sniff the air, moving their heads around to catch a scent, or holding their heads high with ears forward. They may also stand up.
- A *threatened or agitated* polar bear may huff, snap its jaws together, stare at you (or the object of threat) and lower its head to below shoulder level, pressing its ears back and swaying from side to side. These are signals for you to begin immediate withdrawal by backing away from the bear without running. If this behavior is ignored, the polar bear may charge, especially if you are between a mother and its cubs. Threatened bears may also retreat.

- In rare instances you may encounter a *predatory* bear. It may sneak or crawl up on an object it considers prey. It may also approach in a straight line at constant speed without exhibiting curious or threatened behavior. This behavior suggests the bear is about to attack. Standing your ground, grouping together, shouting, and waving your hands may halt the bear’s approach.
- If a bear continues to approach after you have attempted to withdraw from the situation, stand your ground. Gather people together in a group and/or hold a jacket over your head to look bigger. Shout or make noise to discourage the approach. If a single polar bear attacks, defend yourself by using any deterrents available.





In spring, females create “push ups” when emerging from dens. Family groups may use den sites for several weeks before abandoning them.

Increasing Awareness in Polar Bear Habitat

- Devise protocols for safely performing on- and off-duty activities in polar bear habitat.
- Polar bears typically rest during day and become more active during dusk, night, or dawn. Plan activities with this in mind.
- Avoid surprising a bear. For example, prior to landing/docking on barrier islands or other coastal areas, survey the area to ensure polar bears are not present. Be vigilant, especially on barrier islands, in river drainages, along bluffs, near whale or other marine mammal carcasses, or near fresh tracks.
- Develop a site-specific safety education/training program for all site/camp members with a guide to bear behavior (curious, predatory, defensive, etc.). Plan components can include:
- A buddy system for activities away from buildings or outside of fences for on- and off-duty activities;

- Guidelines/protocol or flow chart for a specific site/camp on “what to do if you encounter a bear” (individual responsibilities, buddy system, camp communication plan, audio warnings, safe meeting place, etc.); and
- Polar bear safety drills.

Detection and deterrence

- Service guidelines for passive (e.g., rigid fencing, bear exclusion cages, bear-resistant waste containers) and preventative deterrence measures (e.g., use of acoustic devices and vehicles) are described in the Federal Register (See link in Other Resources section below) are appropriate for safely and non-lethally deterring polar bears, and can be performed by anyone without written authorization or supervision.
- While the passive and preventative measures mentioned above can be performed by anyone, use of other deterrence tools (e.g., projectiles from a firearm, pepper spray) require training to ensure effective use and safety of humans and polar bears. See Agency contact below.
- Incorporate polar bear detection into camp and work site design.
- Detection types/tools include human monitors or “bear guards,” physical barriers, trip wire systems, alarms, and/or motion detectors/cameras. Prepare to respond appropriately during human-polar bear interactions.
- Devise a communication plan for camps and other locations that



An electric fence can help minimize the chance of a human-polar bear conflict from occurring at camp.

- alerts people when a polar bear is nearby. Communication plans should include a means of contacting outside help (e.g., a satellite phone), if needed.
- Because each individual animal's reactions will vary, leave the vicinity if you see signs of disturbance. Polar bears that stop what they are doing to turn their head or sniff the air in your direction may have become aware of your presence.
- Carry bear spray for an interaction that may turn into a conflict.
- From October through April special care is needed to avoid disturbance of denning bears. If activities are to take place during this time within five miles of the Beaufort or Chukchi Sea coasts, contact the Marine Mammals Management (MMM) Office to determine if any additional mitigation is required to avoid active den sites. Generally, no activities should take place within one mile of active dens.

Other Resources

- Polar Bears and Humans Safety Guidelines Factsheet: http://www.fws.gov/alaska/fisheries/mmm/polarbear/pdf/factsheets/pb_safety_09_final.pdf

Videos and descriptions of electric fences at camp sites:

- <https://www.youtube.com/watch?v=hDBjDVyclic>,

- <https://www.youtube.com/watch?v=3txRsJ-15cI>,
- <http://adventures-in-climate-change.com/cooperis-land/2011/07/good-electric-fences-make-good-neighbors/>

Agency Contacts

Contacts for reporting incidents:
 Office of Law Enforcement:
 907-786-3311 or Marine Mammals Management: 907-786-3800 or 907-786-3810
 Marine Mammals Management contact for information on polar bear harassment authorizations:
 907-786-3479