



HEALYTINST 16151.1
11 March 2009

USCGC HEALY INSTRUCTION 16151.1

Subj: CGC HEALY POLAR BEAR INTERACTION PROGRAM

Ref: (a) Ordnance Manual, COMDTINST M8000.2C

1. PURPOSE. This instruction is CGC Healy's Polar Bear interaction program, which includes policies, tactics, and training, for interacting with Polar Bears (*Ursa Maritimus*).

2. ACTION. This instruction is intended for the groups on board and deployed from CGC Healy identified below.

a. Officers of the Deck (OOD) – this instruction provides directions while conning in the ice, at an on-ice station, and response to Polar Bear sightings while conducting seismic operations.

b. On-ice science groups – this instruction is to be used by both Coast Guard and science personnel working near the cutter or boat, or as an autonomous operation.

c. Helicopter pilots – this instruction guides autonomous activities while airborne or temporarily waiting on ice.

d. Chief Scientists – this instruction is to be used in planning helicopter, boat, and on-ice activities, and seismic surveys.

Internet release authorized.

3. PRIORITIES. CGC Healy's overall objective is to complete assigned science missions without negatively impacting Polar Bears, their habitat, people, and equipment. To meet that objective, CGC Healy operations will be guided by the following priorities:

a. CGC Healy will avoid Polar Bear interactions. The cutter, its science equipment and boats, and embarked helicopter will be operated to minimize the chance of a Polar Bear interaction.

b. CGC Healy will attempt to avoid Polar Bear interactions before setting out onto the ice. Once on the ice, CGC Healy's reactions to Polar Bear sightings will lessen the chances of an interaction

c. When an interaction occurs, CGC Healy will attempt do as little harm to Polar Bears as possible while maintaining the safety of personnel. Injuring or killing a Polar Bear is the last

step in defending persons from injury or death. Other tactics and techniques described within this instruction shall be attempted prior to deadly force.

d. CGC Healy will only harm Polar Bears in defense of people. Injuring or killing a Polar Bear is not authorized to protect materials or equipment. The only exception is when doing so is necessary for the safe return of persons to the cutter.

4. POLICIES. The following policies should be used in planning and preparing for operations. Situations not covered should be addressed to the command in ample time to analyze and mitigate risks.

a. While making way through the ice, OODs shall not steer towards sighted Polar Bears, and will attempt to maneuver to avoid endangering a Polar Bear.

b. Protocol for operating seismic equipment from CGC Healy will in all cases be in accordance with appropriate externally defined protocols such as Incidental Harassment Authorizations.

c. CGC Healy and its boats will not conduct on-ice operations in an area where Polar Bears are present.

d. Helicopters deployed from CGC Healy shall not land in areas where Polar Bears are present, and shall not approach Polar Bears within a quarter mile for any reason unless operating under an approved protocol.

e. After sighting a Polar Bear in the vicinity of on-ice activities, operations will cease. Personnel will return to the cutter, with their equipment if possible, so that the probability of a Polar Bear interaction is eliminated.

f. CGC Healy provides qualified armed deterrence of and protection from Polar Bears in the vicinity of the cutter and its boats.

g. CGC Healy does not provide weapons or ammunition to non-Coast Guard personnel.

h. Groups conducting work autonomously from the cutter it's boats must provide means to deter and to kill a Polar Bear. CGC Healy will review the qualifications of shooters during the cruise planning process. Weapons and ammunition brought to CGC Healy will be stored in the cutter's armory, and issued out for each on-ice event.

5. ASSIGNMENTS. Everyone is on bear watch. Although CGC Healy provides a specific person for armed deterrence duty, all those near the science work site shall keep their eyes and ears tuned for signs of Polar Bear. The OOD shall ensure the bridge watch is monitoring the site from the bridge or aloft conning station. The Rescue Swimmer, or the designated on-ice person responsible for safety, and personnel on deck shall periodically scan the horizon for Polar Bear. Science Personnel should report any tracks, kill, or scat in their work area.

6. USE OF FORCE. Use of force against Polar Bears is limited to deadly force with a weapon. Deterrence methods, primarily by making noise, will be used before deadly force. Pepper spray, flares or smoke signals, and other non-lethal munitions may be considered as deterrence against damage to property, but only from positions where persons are not at risk of injury. Figure 1 summarizes the methods described in the following paragraphs. Additional information about the Polar Bear and its behavior is provided in enclosure (1).

a. Staying together in groups is the best and easiest deterrence on the ice. No one is authorized to work alone beyond the effective range of lethal force. The larger the group, the less likely a Polar Bear will approach.

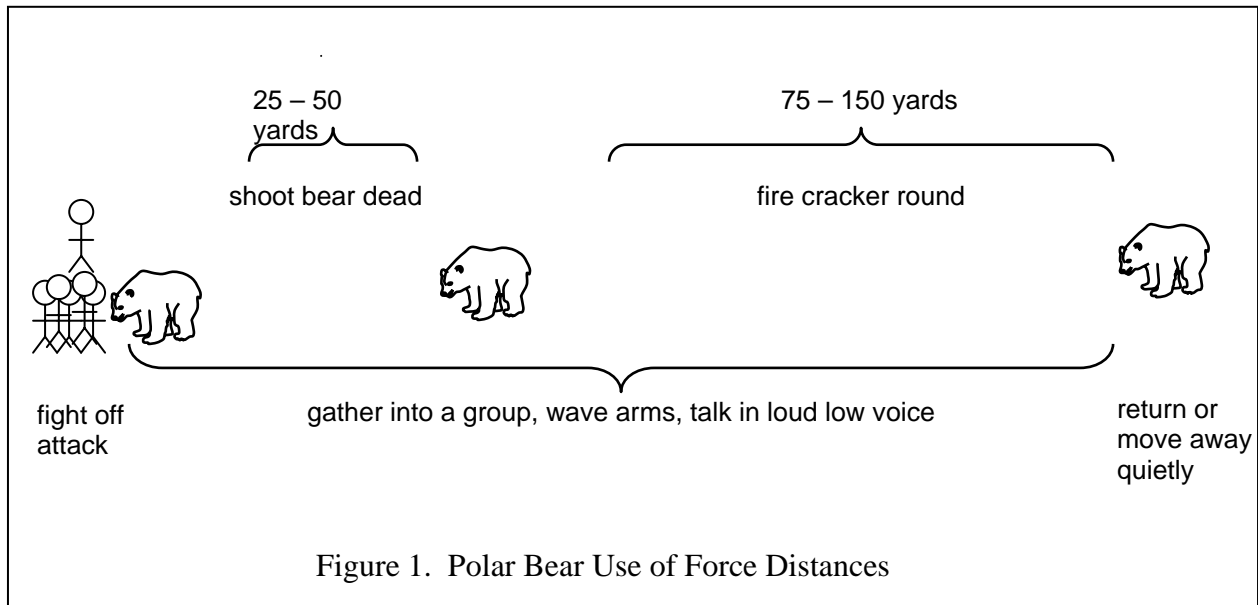
b. If the group detects a Polar Bear first, everyone will move slowly away, preferably back to the cutter, boat, or helicopter as applicable, the way they came. Maintaining visual contact with the Polar Bear during the retreat is critical.

c. A group that is approached by a Polar Bear will huddle together, wave their arms, talk in loud low voices; staying together in a group is essential. Only after the Polar Bear has departed will the group begin to leave the work area.

d. Warning shots with a rifle or shotgun slugs have limited range and are significantly less effective than cracker shells. Cracker shells are effective between 25-75 yards away. Don't wait for a minimum range before deterring a bear with noise.

e. A charging Polar Bear will travel 25 yards in about 2 seconds. Deadly force is authorized and should be used before this distance.

f. If attacked by a Polar Bear at close range without a weapon, attack back as best you can. Strike the nose if possible. Remaining as a group is critical to lessening injury or death to group members.



7. **TRAINING.** All action groups listed previously shall periodically review this instruction. In addition, all Coast Guard personnel carrying the high power rifle or shotgun with slugs shall qualify to carry the weapon per reference (a). Personnel carrying the shotgun shall have become familiar with and fired at least one cracker round for training prior to deploying to the ice.

8. **EQUIPMENT.** The minimum equipment for Coast Guard personnel designated to provide on-ice armed deterrence duty is listed below. Other equipment used to tend to a Rescue Swimmer is addressed separately. Personnel Protective Equipment (PPE) for others on the ice is addressed in a separate policy. Equipment carried with a helicopter will be addressed on a case-by-case situation. Autonomous groups deploying from CGC Healy are also required to have the following equipment.

a. A Coast Guard boat crew approved dry suit and cold weather gloves, boots, face shield, head gear, and suitable insulation layers under the drysuit. The cutter has a limited number of dry suits for autonomous groups.

b. .375 H&H high power rifle with 3 rounds or 12 gauge shotgun with at least 1 cracker shell and 3 rifled slug rounds. Cracker shells will be kept ready to load directly into the loading port – they shall not be stored inside the shotgun magazine tube. Autonomous groups will supply their own weapons and ammunition.

c. Handheld VHF-FM radio. CGC Healy will supply radios to autonomous groups.

d. Sunglasses or goggles.

9. **DIRECTIVES AFFECTED.** None.

10. ENVIRONMENTAL ASPECT AND IMPACT CONSIDERATIONS. Environmental considerations were examined in the development of this Instruction in consultation with the U. S. Department of the Interior.

11. FORMS/REPORTS. None.

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Enclosures: (1) Introduction to Polar Bear and Their Behavior
(2) Ursa Maritimus Armed Deterrence Duty (AMADD) Directions

Introduction to Polar Bear and Their Behavior

Polar bears are the world's largest land predators. They top the food chain in the Arctic, where they dine primarily on seals. Adult male polar bears weigh from 775 to more than 1,700 pounds. Females are considerably smaller, normally weighing 330 to 550 pounds. Polar bears range throughout the Arctic in areas where they can hunt seals at open leads. The five "polar bear nations" where the ice bears are found include the U. S. (Alaska), Canada, Russia, Denmark (Greenland), and Norway.

Polar bears walk, at an average speed of three to five miles per hour, more often than they run. Females with small cubs slow their speed to one to two miles per hour. Polar bears are well known for their slow, plodding gait. Though able to gallop as fast as a horse for a short distance, they prefer a leisurely amble to a brisk pace. Polar bears can run as fast as 25 miles per hour, but only for short distances. They are so well padded with fat that they quickly overheat, even in cold weather. Younger, leaner bears are the best runners. They can cover two kilometers without stopping. Older, larger bears, however, quickly become too hot.

Polar bears are usually solitary except for female-cub groups, during mating season, and at abundant food sources. Bears have an exceptional sense of smell; they are known to be able to smell a seal up to 20 miles.

Polar Bears have excellent eye sight and hearing. Polar Bears hunt and travel mostly in the evening and at night. Polar Bears continue to learn throughout their lives and have excellent memory. Pregnant female Polar Bears go inland to den during the winter. Male and non-pregnant female Polar Bears only den to conserve energy or escape severe weather. Dens may be used along pressure ridges. Young Polar Bears may be more dangerous due to their inexperience and curiosity. Polar Bears are most often found near pressure ridges, ice bergs, or the edge of open water (flow edge or leads).

Continuous noise making will lessen the likelihood of surprising a Polar Bear. As an example, the sound of an ice auger may be enough to deter a Polar Bear. Avoid being in areas where fresh Polar Bear tracks or scat is present, and always avoid areas where carcasses have been found. Travel closely in a group, this will help a Polar Bear see you earlier and will be more intimidated.

A Polar Bear staring at you or that stands is only trying to get a better understanding of what you are – standing is not a form of aggression.

A Polar Bear may circle downwind to pick up your scent – human scent is often a very effective deterrent. Likewise, moving upwind of a bear will assist the bear in determining that you are not prey.

After a Polar Bear has left your area, do not stay there.

A Polar Bear approach will be one of three types:

1. Curious – head up, frequent stops, stares, stands up, ears up or to the side. If a Polar Bear becomes curious at you, stand up, wave your arms, and talk in a low tone, this will clearly identify you as not prey.
2. Intent on attack – intense focus, ears erect, and mouth open. Stand your ground for an attacking bear, use low firm talk and wave your hands. Your best defense is to make it clear that you are human (and not a seal, walrus, or another bear). Use noise deterrence.
3. Threatened (especially if cubs are present) – will appear stressed or agitated, may use grunting or panting, keep its head low and swing it from side to side to make you stop. A threaten Polar Bear may also lay its ears back and make a short charge in your direction (a bluff charge). Move slowly away. If it continues to charge, then stand your ground like being attacked (described above).

Ursa Maritimus Armed Deterrence Duty (UMADD) Directions

As the bear watch you are the Coast Guard person in charge on the ice. You are responsible for the safety of all persons on the ice. You must know where everyone is at all times. Do not let people (science or Coast Guard personnel) get out of your sight. People are inclined to wander off to take photos.

Position yourself at the edge of the work area, keeping watch over the Buffer Zone for Polar Bears as described in Figure 1. Keep a sharp lookout. Be Alert. Vigilance in being able to see the Polar Bear first is your best defense. Polar bears are unpredictable, and seeing one early decreases chances of a dangerous encounter.

If you spot a bear or get a report of a bear in the area, have everyone return to the ship. Science can wait. If the bear is close, have all the equipment left on the ice, don't waste time.

Do not bring snacks on watch.

Be careful around open water leads, or mammal carcasses—places where you may encounter a bear.

Know the ice, where the thin ice is and let everyone know where it is. Pay even closer attention when working around open water as people may fall in.

Do not let people climb on pressure ridges. They are unstable and slick. You may not be able to see people behind them.

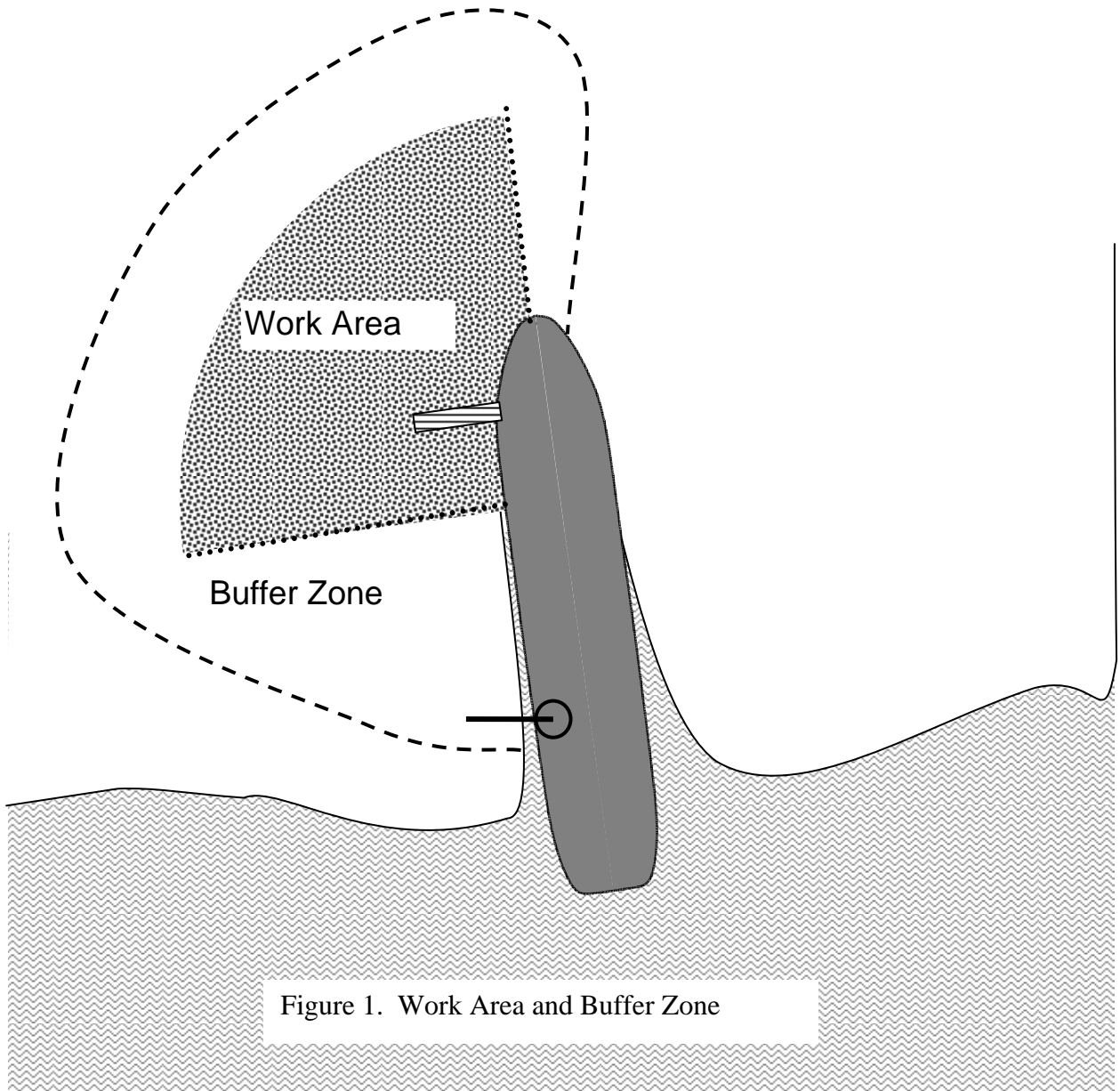


Figure 1. Work Area and Buffer Zone