

**Silversea Cruises Ltd.**  
**MS Silver Explorer**

**Canadian Arctic Polar Bear and Bear Safety Plan 2017**

Background:

Silversea Cruises Ltd. (Silversea) has been operating voyages in the Arctic, and in particular the Canadian Arctic, since 2008 aboard MS *Silver Explorer*. The Company employs professional voyage planners that have extensive experience in planning and executing voyages in the area as well as professional Expedition Leaders, 'Bear Guides,' Lecturers, Naturalists and Field Staff.

Details of the Company's Emergency Response Arrangements for Incident Response, Self-sufficiency and Contingency Planning are found in a separate document. This document includes only the provisions of the Company's Polar Bear and Bear Safety Plan.

Silversea is a full (voting) Member in good standing of the Association of Arctic Expedition Cruise Operators ([www.aeco.no](http://www.aeco.no)). Members coordinate their itineraries, operate according to agreed guidelines and standard operating procedures and cooperate between themselves in the event of an emergency as a first-line of defense and to provide for self-sufficiency. AECO Members work to ensure there is adequate emergency equipment available on board Member-operated vessels, that vessel schedules and positions are frequently updated and exchanged, that an effective Communication Plan (using the GMDSS system) is in place and that a reporting schema is developed in the event of a possible event and to provide for medical evacuation support. Should a mechanical problem occur with the vessel occur then appropriate action will be taken and available AECO-Member operated vessels called upon for coordination, including also for Search and Rescue needs.

Shore Landings:

To facilitate shore-based landings, the vessel is outfitted with Zodiac-brand inflatable auxiliary boats for use during excursions and for shuttling passengers and field staff. The Zodiacs are used for sightseeing excursions and for shuttling passengers, field staff and crew to/from shore for landings. A trained Zodiac engine mechanic is on staff to service the outboard engines. Zodiac drivers are a combination of polar-trained individuals from the expedition staff and crew (deck department). All Zodiac drivers must complete a Zodiac Competency Test before being issued a ship-issued certificate. Zodiac drivers receive a copy of the company's Zodiac Standard Operating Procedures (which includes general advice for driving in polar waters) as well as Guidelines for Small Boat Operations in the Vicinity of Ice and Wildlife Watching Guidelines for General Wildlife, Cetaceans, Seals and Birds as well as the IMO/MSC's Guide for Cold Water Survival.

During landing and Zodiac operations, each expedition staff member carries hand-held VHF radios; continuous communication occurs between the expedition staff, the officers on watch and the Captain.

To deal with the highly unlikely event of an emergency resulting in a stranding ashore, an Emergency Shore Kit is taken ashore prior to every shore landing and returned to the vessel with the crew at the conclusion of the landing once everyone has been evacuated from the landing site. The contents of the

kit were determined by considering an emergency situation whereby approx. 50-100 individuals were stranded on shore for a time period of up to 12-24 hours.

The kit consists of labeled bags A, B, C, D and E containing the following:

Bag A:

1 Sleeping Bag  
36 Emergency Rations  
1 Inflatable Sleeping Mat  
1 Medical Kit  
1 Rope  
1 Nylon Tarp

Bag B:

1 Sleeping Bag  
1 Trowel  
40 Emergency Rations

Bag C:

84 Sachets of Water  
40 Hand Warmers  
2 Thick Balaclavas  
1 Inflatable Mattress/Sleeping Pad  
1 Tent  
50 Emergency Blankets

Bag D:

1 Sleeping Bag  
1 Tent  
2 Sleeping Mats  
Garbage/Waste Bags

Bag E:

100 Sachets of Water  
50 Emergency Blankets  
2 Sleeping Mats  
1 First Aid Kit  
1 Leatherman Multi-Tool  
1 Nylon Tarp  
40 Hand Warmers  
1 Balaclava

Garbage and human waste (liquid and solid) will be collected and returned to the vessel for disposal using waste bags. Urine will more than likely not be collected in garbage waste bags and will be directly discharged into the sea in a manner that does not adversely affect the environment.

The kit does not contain cooking stoves or fuel.

'Bear Guards' carry rifles, non-lethal deterrents and lethal rounds. (These items are not considered to be part of the emergency shore kit.) In addition, all other expedition team members also carry bear horns and flare guns as non-lethal deterrents.

Shore landings and activities will be carefully considered, and taking into account a number of factors, including any permits and/or accompanying guidelines that have been issued from Canadian Wildlife Service, Parks Canada, Government Nunavut Department of Culture and Heritage Class 1 Archaeological Permit, etc., advice received from Government Nunavut (including Department of Environment), the Nunavut Impact Review Board, other government agencies and/or others during the Review Board process, Hunter and Trappers Organizations, etc.

In addition, the following are also utilized: the Arctic Expedition Cruise Operators (AECO) guidelines ([www.aeco.no](http://www.aeco.no)) (see also below), company-specific standard operating procedures, and the previous experience of the Expedition Leader and lead 'Bear Guard' with the landing sites and activities being offered.

During shore landings the ship's doctor will accompany the group to provide assistance in the event of a medical incident. The doctor will carry a backpack with basic field supplies to tend to an injured person before return to the ship. A number of the Expedition Team are trained in First Aid, some are also trained in Wilderness Medicine.

#### Polar Bear and Bear Safety:

Polar Bear and Bear Safety forms an integral part of the *Silver Explorer's* Safety Plan while operating in the Arctic. Silversea's Expedition Team is highly-trained and well-versed in the art of conducting Arctic expeditions in remote locations.

All Expedition Team members receive a full manual detailing wildlife watching guidelines, and closely follow the AECO set of guidelines dealing with polar bear encounters and safety. These guidelines can be found on the Association's website at [www.aeco.no](http://www.aeco.no). In some cases, Government Nunavut guidelines are more restrictive than those of AECO such as:

- AECO Guidelines for Polar Bear Safety state *"In the event of a polar bear sighting, on land or on ice, from a Zodiac, the zodiac-driver shall make sure that he/she always keeps at least a distance of 30 meters between the zodiac and the land/ice/spot where the polar bear is present."* And *"This distance is only acceptable when it is absolutely clear that the bear shows no sign of stress or being disturbed from the presence. If the polar bear shows any signs of stress or starts walking away, never follow it but retreat from the area immediately."*

This distance is shorter than what Government of Nunavut recommends, which is 100 meters. We will instruct our staff to follow the latter (e.g. 100 meters).

Staff are also briefing on provisions of the following:

- Government of Nunavut's (Department of Environment) booklet on Bear Safety – *"Reducing Bear-People Conflicts in Nunavut"*:  
[http://gov.nu.ca/sites/default/files/bear\\_safety\\_-\\_reducing\\_bear-people\\_conflicts\\_in\\_nunavut.pdf](http://gov.nu.ca/sites/default/files/bear_safety_-_reducing_bear-people_conflicts_in_nunavut.pdf)

- “Safety in Grizzly and Black Bear Country” pamphlet (Northwest Territories Environment and Natural Resources):  
[http://www.enr.gov.nt.ca/sites/default/files/web\\_pdf\\_wd\\_bear\\_safety\\_brochure\\_1\\_may\\_2015.pdf](http://www.enr.gov.nt.ca/sites/default/files/web_pdf_wd_bear_safety_brochure_1_may_2015.pdf)
- Bear Smart Society resources and video on polar bear safety:  
<http://www.bearsmart.com/play/safety-in-polar-bear-country/>
- Parks Canada Website on bear safety:  
<http://www.pc.gc.ca/eng/pn-np/nu/quttinirpaaq/visit/visit6/d.aspx>
- Parks Canada Polar Bear pamphlet “Safety in Polar Bear Areas”:  
[http://www.pc.gc.ca/eng/pn-np/nu/quttinirpaaq/visit/visit6/~/\\_media/pn-np/nu/auyuittuq/pdf/shared/PolarBearSafety\\_English.ashx](http://www.pc.gc.ca/eng/pn-np/nu/quttinirpaaq/visit/visit6/~/_media/pn-np/nu/auyuittuq/pdf/shared/PolarBearSafety_English.ashx)

In addition to reviewing these resources, staff are offered training during the season both on board the vessel and ashore. Staff are also encouraged to participate in shooting and polar bear behaviour courses that are offered in Svalbard.

Silversea employs at least one dedicated ‘Bear Guard’ at all times during Arctic expeditions. For summer 2017 there will be two. Information on their background follows:

Our lead ‘Bear Guard’ for summer 2017 is Truls Kuhle. Truls holds a degree in outdoor education from the Norwegian School of Sport Science (NIH) in Oslo and is a graduate of the University of Svalbard’s ‘Arctic Nature Guide Studies’ program. He has also earned the highest guide degree awarded from the Norwegian Touring Association (DNT). A major focus of his career has been on guiding and safe travel in the Arctic regions addressing issues of avalanche danger, polar bear protection and safe weapon handling. For several years Truls lived in Svalbard where he worked as an instructor at the University on Svalbard teaching these exact topics. In all cases Truls has successfully removed himself and others from the environment prior to the need to use deterrents or lethal force by having himself and others dedicated to only keeping watch for bears during landings so as to take care of the situation prior to any problems whenever possible. In addition, he has worked all over the Arctic region from Northern Canada to Greenland Island as a guide and as Expedition Leader. Truls places high value on teaching his clients about nature conservation and Arctic history.

During Voyage 7619, “North Atlantic Adventure,” Truls will be assisted by Icelandic national ‘Bear Guard’ Fridrik Fridriksson who has had experience with firearms since childhood and has personally owned a rifle at home since 2012. He has spent the last five years living and working in the Arctic, in Svalbard, working mostly as a guide. As a guide he handles rifles daily, as they are a requirement when going outside the boundaries of the settlements. His main task is to keep people safe while out on excursions and be ready to act if needed as many come to Svalbard to see polar bears and many times they see them in the wilderness, but he always just maintain safe distance and readiness. He does target practice regularly throughout the year to keep his skills up and he also trains privately. He is required to maintain and take care of his personally-allocated rifle. Fridrik’s first experience with rifles and firearms was as a child with his stepfather, a policeman, as he took him out with him doing target practice with various rifles and shotguns. Fridrik has gone through extensive rifle training (duration of a couple of weeks) during his one-year guide study in Svalbard called ‘Arctic Nature Guide’ (2012/2013). There he did all kinds of shooting practices, in all kinds of positions and scenarios, all focused towards making them safe, reliable and accurate shooters in case of a polar bear attack. This training program was done through the University in Svalbard called UNIS. The whole year during the guide program was also focused around safety and keeping watch out for bears during excursions and expeditions, be it in snowstorms,

darkness, rain or shine. On a daily basis he handle rifles and has to deal with the potential of meeting a polar bear while out in the Arctic wilderness, be it with guests or out on a personal trip. He feels very confident he knows how to react and what to do in case of a bear encounter, but as a guide his number one focus is to not get into a dangerous situation and use deadly force as a last resort. In addition to rifle handling he has been practicing the last year with pistols. He has done a pistol safety course and regularly practices with his club 'Svalbard Turn Pistoltskyting' in Longyearbyen. He is personally not a hunter and has very little desire to hunt animals, but does enjoy shooting as a sport.

The rest of our expedition staff team ranges in experience from twenty plus years of Polar experience down to four or five.

Each season we have been pushed from landing sights due to polar bears. In each case action has been taken prior to there being a need for any use of deterrents or lethal force.

On approach to each landing the lead 'Bear Guard' is on the Bridge scouting the landscape for any signs of bears and prior to him giving any clearance for staff or guests coming ashore he scouts the landing area. Once cleared, the 'Bear Guards' remain in strategic locations offering them the best opportunity to have clear views of the surrounding areas and water (for polar bears) so as to make sure they will spot any bears prior to it surprising the 'Bear Guards' as well as leaving them in a position to keep close to shore operations. In the event of a bear being spotted, the decision is made to evacuate the landing based on behaviour, distance and direction of travel. Non-lethal deterrents will be used whenever possible to deter problem wildlife with lethal rounds only being used in defence of life or property.

Non-lethal flare pistols and/or air horns would be used as an initial deterrent in the event of an encounter. If it is deemed by our 'Bear Guards' that all guests would not be evacuated before an encounter could potentially become more serious they would begin this process. Deterrents would be used in the event that a bear is continuing its direction of travel towards the group but long before the chances of lethal force having to be used. It is our belief it is never too early to begin this process as long as it is deemed necessary and is not creating undo stress upon the animal, i.e., stress to the bear in a situation where it is actually not needed.

Once the bear has been deterred from approaching the area our evacuation of all guests and staff would continue, cancelling out the landing so as to not have another encounter. In the interest of protecting our clientele and staff from potential harm or death during an outing it is integral for us to maintain the ability too prevent lethal force from happening. Although this is the case, our 'Bear Guards' work under the premise that they are with us to initially protect the bears from us rather than us from the bear until it is deemed 100% necessary. It is under the direction of our 'Bear Guards' as to when lethal force must be used. Based on our working standards this would occur only if initial deterrents had been unsuccessful in pushing the bear away or changing its direction of travel leading to concern for human life. A point would be chosen, landmark, rock, etc., like a line in the sand, and if we are unable to continue our retreat this landmark would be the area given, once crossed by the bear as the time to use lethal force. If lethal force has been used we must be sure the bear has been put down and local authorities would be informed. (See section on Reporting.)

'Bear Guards' follow strict rules of no more than 1:20 guide-to-guest ratio. This, plus the procedure noted above is a standard practice that we use successfully in other areas such as Svalbard and the Russian Far East.

Interactions with polar bears will be avoided it at all possible.

As polar bear are roaming marine mammals it is virtually impossible to predict where and when an encounter will take place. We consider that we can encounter a polar bear at each of our chosen stops and therefore will treat each of these stops with the potential for high risk and implement our standard operating procedures.

Zodiac drivers are instructed to stay clear of any swimming polar bears and under no circumstances to approach them. If swimming polar bears are encountered, the Zodiac drivers are instructed to stop, move away, and allow the swimming bear(s) to proceed in the direction of their choosing.

It is noted that Government of Nunavut recommends maintaining a distance of 100 meters if a bear is encountered on land or ice from a Zodiac or other small craft.

#### Polar Bear Protection:

It is noted that polar bears in Nunavut are protected by the Nunavut Wildlife Act <<https://www.canlii.org/en/nu/laws/stat/snu-2003-c-26/latest/snu-2003-c-26.html>> and that, under the Act, “no personal shall otherwise molest, harm, or destroy a bear without a Government of Nunavut permit except in exceptional circumstances including clear and present threat to human safety.”

As noted above, ‘Bear Guards’ carry rifles, non-lethal deterrents and lethal rounds. (These items are not considered to be part of the emergency shore kit.) In addition, all other Expedition Team members also carry bear horns and flare guns as non-lethal deterrents.

#### Species at Risk:

Bear species under the *Species at Risk Act* (SARA) include Polar and Grizzly Bear, both of which are designated on the SARA Registry <[www.sararegistry.gc.ca](http://www.sararegistry.gc.ca)> as being of “Special Concern” in Nunavut and the Polar Bear as being “Vulnerable” in Newfoundland and Labrador (Torngat Mountains National Park).

#### Species at Risk Act:

Wildlife disturbance is required to be minimized to all designated species under the Act <<http://laws-lois.justice.gc.ca/eng/acts/S-15.3/index.html>>. Appendix A is a list of Species at Risk in Nunavut.

#### Wildlife Act:

The Act <<http://www.canlii.org/en/nu/laws/stat/snu-2003-c-26/latest/snu-2003-c-26.html>> contains provisions to protect and conserve wildlife and wildlife habitat, including specific protection measures for wildlife habitat and species at risk.

#### Reporting:

Any problems with wildlife or any interaction with carnivores will be reported immediately to the local Government of Nunavut, Department of Environment Conservation Office (Conservation Officer of Pond Inlet: (867) 899-8034 and Resolute Bay: (867) 252-3879).

Conclusion:

Office personnel organizing the expedition, as well as ship's command and the members of the expedition team are fully aware that cruising in a potentially dangerous and sensitive environment such as in the Canadian Arctic, demands special care and a carefully planned and organized operation.

Silversea has planned their activity to be fully self-sufficient and in compliance with Federal and Territorial requirements including appropriate contingency plans and sufficient arrangements for health and safety, search and rescue, and medical care and evacuation to ensure support from others is not required.

Available upon request is the company's Environmental Impact Assessment, conducted by an outside consultant, should further information be desired on the off-ship activities, including landing operations and site selection, potential impacts of the proposed activity and minimization and mitigation strategies to avoid environmental impact and risks to the health and safety of those participating.