



EXPEDITION OPERATIONS MANUAL



Version 2.
Updated in November 2018

STANDARD OPERATING PROCEDURES

These instructions provide common guidelines and Standard Operating Procedures (SOPs) for activities that are key parts of Silversea Cruise's expeditions.

A copy of this manual is to be retained on the Bridge and in the Expedition offices and cabins aboard each Expedition ship.

It is the responsibility of each Expedition Team member and Bridge Officers to read and understand the relevant sections of the manual as part of their job responsibilities. Any questions can be directed to the Expedition Leader for clarification.

Furthermore, and hand-in-hand with the implementation of these SOPs, is the agreement by all parties involved, that all incidents related to the environment, wildlife and safety, in whatever realm of expedition operations, will be reported through appropriate channels. Reports are for internal use and training development, as well as for reporting to regulatory agencies and permitting authorities such as IAATO, AECO and any relevant governmental authorities when applicable by law or regulation. Informal reports to authorities also ensure open communication regarding issues that may arise. Deceased animals and wildlife entanglements should also be documented and reported to local authorities with GPS data and photographs to assist in researching and/or rescuing the animal where applicable.

A digital copy of this manual will also be distributed to each Expedition Team member prior to embarkation. All Expedition Team members are to read the manual and sign a form once aboard stating they have read and understood the relevant sections.

**This document (including any attachments) is meant exclusively for the attention and use of Silversea Cruises and is confidential.*

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Standard Operating Procedures

1. ZODIAC OPERATIONS

1.1 Zodiacs – A General Overview

Most Silversea Expeditions rely on Zodiacs to transport staff, crew, local officials and guests to and from the vessel, and to take guests on Zodiac cruises in remote destinations. The boats and the people who operate them are a critical part of the Silversea Expedition product and are to be treated with the respect, care and attention they deserve.

1.2 Responsibility And Authorization

- The Chief Officer/Staff Captain has overall responsibility for Zodiac operations, the drivers, and driver training.
- The Zodiac driver is responsible for safe driving and the safety of the passengers, whether guests, crew or officials. Under no circumstances should these be compromised. The driver is in command of the Zodiac and passengers should not be allowed to influence his or her decisions and if needed can be instructed in a firm, polite manner.
- The Expedition Leader (EL) is to communicate with the Captain or Chief Officer/Staff Captain prior to a landing or excursion to determine logistics dependent on present conditions in accordance with the VMS instructions.
- An entry about the completion of the pre-operation meeting is to be entered into the ship's logbook.
- Directions from this communication are to be followed until conditions, daylight, or sea state factors etc. require a re-evaluation of the procedures by the EL and/or Captain, Staff Captain or Bridge Officer on duty.
- For Zodiac operations, the Expedition Leader will perform a daily briefing of the expedition team and the zodiac drivers before the start of the operations for the day.
- Authorization of Zodiac Drivers is the responsibility of the Staff Captain and/or EL who both act as Assessors using the checklist of skills provided on form "saf108 Zodiac Operator Competence Checklist" in the ships' VMS (Vessel Management System). Please note this form states: "The Assessor shall check each point below and confirm that the required knowledge, understanding and proficiency has been satisfactorily demonstrated to confirm competence as a Zodiac operator." Every expedition driver taking guests independently must have a completed and signed Zodiac Driver Certificate from Silversea.
- If a driver joins the ship without the company-issued certificate he/she needs to be tested as outline above for Zodiac driving proficiency. Under no circumstances is any crew

member allowed to operate a Zodiac without having this test done or having a valid Zodiac driving certificate as part of their joining documents.

- When a staff member joins a ship, regardless of how many times they have been with Silversea or that ship, he/she needs to be re-familiarized with the Zodiac operations and SOP's pertaining to the company and the ship. Before the first Zodiac operation the Expedition Leader or AEL needs to do a familiarization induction on Zodiac operations. In some cases, we have video for staff to watch, and will have this on all ships soon.
- Staff must sign a log proving they have received familiarization for the ship Zodiac operations before starting to drive. This log of signatures is to be posted in the expedition office aboard each vessel.
- Unauthorized persons are not permitted to drive Zodiacs independently with guests, however new or inexperienced drivers may drive with an assigned trainer to build and develop skills, experience and knowledge on the water.
- All drivers responsible for guest transits must be responsible, professional and qualified.

1.3 Expedition Program & Itinerary

- Before the start of each voyage, the Expedition Leader is to prepare and discuss with the Captain a tentative itinerary of destinations and planned activities.
- The Bridge and relevant engineers are to receive a copy of the daily Chronicles for reference.
- The Captain must approve all Zodiac cruising, tendering, landings etc.
- On a daily basis, the Expedition Leader is to discuss with/inform the Chief Officer/Staff Captain/Engineers and Bosun as needed, of planned Zodiac operations. The Staff Captain is to keep the Captain informed of planned operations as needed.
- In planning, Zodiac operations, the EL and Staff Captain are to consider:
 - A detailed Zodiac program including the number landings or cruises to be conducted, the number of boats, drivers and time required for each activity
 - Staffing requirements for disembarkation and shore party
 - Anticipated problems in boarding and landing guests
 - Any laws in ports, or permit conditions in national park areas regarding speed limits, wake restrictions or restricted areas
 - The weather forecast and possible implications of change in weather
 - Tidal and other geographical conditions such a depth of water near a glacier

1.4 Types Of Zodiacs & Engines

Silver Discoverer – total of 12 Zodiacs

- 10 x MK5 Zodiacs with tiller arm, electric start 60hp Yamaha engines
- 2 x MK6 Zodiacs with center console steering – one with electric start 80hp Yamaha engine and one with electric start 90hp Honda engine

Silver Explorer – total of 10 Zodiacs

- 8 x MK5 Zodiacs with tiller arm, electric start 60hp Suzuki 4-stroke engines
- 2 x MK6 Zodiacs with center console steering wheel, electric start 80hp Suzuki engines

Silver Cloud – total of 18 Zodiacs

- 18 x MK5 Zodiacs with a combination of tiller arm, electric start 60hp Yamaha engines and center console Yamaha 80hp engines

1.5 Pre-Operation Check-List

Upon taking command of a Zodiac the driver ensures the following:

Lowering/Lifting the Zodiac

- When involved in lowering or lifting Zodiacs be sure to be aware of and stay clear of the free-swinging lifting hook at all times.
- Never place your fingers or hand between the hook and the lifting rings.
- Transfer the driver (and any other staff members) from one Zodiac to another in a safe and secure manner.
- Never drive under a boat that is being lifted or lowered

Engine

- Before being released the engine needs to be running
- Make sure that the engine is securely clamped and bolted to the boat

Fuel

- Make sure your tank is filled and depart the ship at the start of operations with a full second tank. Make sure you have enough fuel for your intended trip and some in reserve. For more fuel radio the crew at the disembarkation area, Expedition Leader, or the Officer on watch.
- Open vent screw on tank when in use to allow proper fuel flow
- Check fuel hose and line are properly connected and not obstructed, to allow good flow of fuel from the tank to the engine

Throttle Controls & Steering

- Make sure the controls operate properly
- Turn the steering wheel if MK6 and the tiller arm if MK5 from one side to the other
- Shift the throttle from ahead to astern

Propeller

- Make sure that the propeller and drive leg are free of debris
- Ensure the propeller is not damaged prior to operations. If driver identifies significant damage to the prop it should be reported with the driver's initial call into the Bridge.
- Be sure to check that the prop is clear when you start the engine – pay special attention to the location of your bow/stern lines – these need to be in the boat away from the prop

Cooling System

- Once engine is on, check if cooling water is discharging forcefully from the engine
- If it is not, or the stream is weak clear the discharge outlet with wire and try again
- If not working properly radio for mechanical assistance

Kill Cord

- It is required that all drivers wear a kill cord when operating the Zodiacs

Pontoons

- Make sure that all isolating valves are turned to “NAVIGATION”
- Check pressure of all chambers
- If the chambers need inflation radio for assistance
- Cover the pontoons in hot weather so guests don’t get burned sitting on them

Cleanliness of Zodiac

- Remove any rubbish
- Boats should be clean and the pontoons wiped off prior to boarding guests
- Check that all lines are inside the boat and properly secured

Safety Equipment

- Check that the following equipment is aboard your Zodiac or with the driver
 - Anchor, chain & rope
 - Paddles (x2)
 - Pump/Bailer
 - Tool kit
 - Fire extinguisher
 - Radio
 - GPS/compass
 - First aid kit
 - Flares and sound signaling device
 - Boat Hook
 - Water cooling wire pin
 - Radar reflectors (if required)
 - Torch (if doing night operations)
 - Full spare fuel tank
 - Spare kill chord

Zodiacs with AIS

- Please note, each AIS beacon is programmed with a number specific to a particular Zodiac.
- Before every operation each beacon should be taken from charging station and installed in its unique bracket by the deck team preparing the boats for operations. The beacon will activate automatically once in place, but only if it is in the correct bracket.
- At the end of Zodiac operations for the day, all beacons have to be taken out for charging by the deck team. Drivers are responsible to remove the beacon, it will deactivate automatically, and the deck team will return the unit to its charging station aboard.

Report to the Bridge

- Once the Zodiac driver has completed his/her safety check and pre-operation procedures he/she is to call the Bridge via radio to report any safety or mechanical issues, otherwise the driver relays that the Zodiac is, “All checked and all OK” for operations.
- The Bridge is to acknowledge this call and log who is driving each Zodiac by name at the time of the call.
- The ‘check-in’ to Bridge also acts as a radio check between each Zodiac and the Bridge

1.6 Issues, Missing Equipment and Zodiac Maintenance

- **Zodiac maintenance should be preventive**
- Reporting details of issues with the engine and/or boat performance to Expedition Admin staff is of the utmost importance. Each entry should contain:
 - Date and time
 - Engine number
 - Driver’s name
 - Defect/problem/missing safety equipment
- It is the responsibility of the Assistant Expedition Leader to ensure the Staff Captain is notified of maintenance/repair issues so that the Deck & Engine Departments can make repairs or conduct maintenance work as needed.

1.7 Personal Buoyancy & Clothing

- You **must** wear a lifejacket or float coat. No crew, guest, or local official is to board a Zodiac, even a Zodiac that is tied up alongside the ship or a dock, without a lifejacket.
- All persons on the embarkation/disembarkation platform **MUST** also wear a lifejacket.
- Make sure you are properly dressed for the conditions you operate within. In the event of an emergency or change in operations, drivers may be required to spend significant time in the outdoors while exposed to the local weather conditions.

Hot Weather

- Standard Silversea (SS) uniform codes apply
- Guests and crew must wear suitable, close-toed footwear (no bare feet)

Cold Weather

- Standard SS uniform codes apply.
- You will receive standard SS outdoor gear, which you should wear on the Zodiacs although your own foul weather gear is suitable in addition as needed

1.8 Guest Embarkation into the Zodiac at the Ship

- Always follow instructions from the EL, Staff Captain and/or Bridge Officer on watch
- Place the tiller arm of a MK5 in the upright position (perpendicular to the deck of the boat) so that it cannot swing freely with the engine and potentially hit someone in the Zodiac
- Ensure that guests use the sailor’s-grip and have their hands free at all times

- Drivers should help with the loading of guests if conditions allow, otherwise the driver is to stay near the engine (MK5) or at the center console (MK6) and be ready to make alterations with the throttle and/or tiller arm as needed to counteract wind/swell at the disembarkation/embarkation point.
- Direct guests to sit down immediately and slide along the pontoon to their seats, rather than walking in the Zodiac
- With the MK6 boats, when loading or unloading guests ensure the engine is switch OFF and the throttle is pulled back in the reverse position so that no-one can accidentally grab hold of an active throttle as they move around the Zodiac.
- Keep watch for ice, logs or marine debris floating towards the Zodiac and be ready to drive away from the platform in case of danger. Be alert at all times!
- Before leaving the gangway, double-check lifejackets are properly donned
- Leave the gangway slowly, ensuring you do not create a wake until you are clear of any local traffic or other Zodiacs
- Zodiac drivers should never load or unload guests without assistance

1.9 Guest Behavior Onboard Zodiacs

- Guests should remain seated unless embarking or disembarking from the boat, or unless the boat is stopped and permission is obtained from the Zodiac Driver
- There should not be more than one guest standing while embarking or disembarking
- Secure equipment and belongings to avoid losing items overboard

1.10 Driving Procedures

- **All drivers must use a kill cord when the engine is in gear.**
- When driving with guests, always adapt to the conditions to make sure the ride is as smooth and comfortable for the guests as possible
- It is better to go too slow than too fast
- Avoid sudden alternations to speed or course. If you must turn suddenly to dodge an obstacle in the water, if possible warn your guests verbally before you do so.
- Communicate with your guests and ask them if they are comfortable throughout the trip
- Be constantly aware of sea and tide conditions. Get information from the Bridge, your Expedition Leader and/or the scout boat about conditions as needed.
- When conditions degrade, good practice depending on your direction of travel relative to the waves, is to weight either the stern or one side of the Zodiac with extra passengers in order to raise the bow, or opposite side of the boat. This will generally provide protection from the on-coming waves and a smoother ride. Guests with back or balance problems should sit in the back of the Zodiac where it is most stable.
- Guests will be reassured when the driver remains calm and confident in rougher conditions. Drivers are encouraged to continually communicate with their guests any anticipated choppy or uncomfortable conditions, or changes of passenger loading

patterns. Regular communication is a technique for managing the group and their expectations in a tricky situation.

- The 4-stroke hydraulic engines are always in the locked position. Serious damage to the engines can be caused by hitting the engines on rocks, reef or ice. It is extremely important to drive slowly and carefully with the engine tilted up when in shallow or foul waters.
- Be aware of floating hazards in the water – e.g. fishing nets, lobster buoys or ice.

1.11 Zodiac Tours

- Zodiacs on tour must ALWAYS travel in pairs (or triples as needed)
- Zodiac cruises are a team effort. Share sightings with other drivers to optimize everyone's experiences, while keeping radio chatter to a minimum or switching channel.
- Be aware of the location of the other drivers and assist each other as needed
- Be aware of any local traffic conventions and tidal action
- Be aware of guests who wish to take photographs and ensure all have taken their pictures before moving on - within reason.
- Remember not to favor one side of the boat. Whenever possible, ensure that guests on one side of the boat do not have the scenery to their backs.
- In rough weather guests are susceptible to back injuries in a pitching or bouncing Zodiac – do not sacrifice safety or comfort for speed. Generally, it is not recommended to allow guests to sit on the floor of the Zodiac as they may be more likely to sustain injuries in that position.
- Be aware that during long Zodiac cruises in tropical or polar destinations it is possible for guests to get over heated or cold respectively. Be aware of their comfort and monitor your passengers for any signs of hyper- or hypothermia.
- Laser Range Finders should be used during Zodiac Operations to regularly check distances to wildlife and/or potential hazardous features including ice fonts, cliff faces, and rocky outcrops. Trained expedition staff member(s) can have the range finder and communicate distances via VHF radio to the rest of the Zodiacs.

1.12 Shore Landings

- On shore, instruct guests as to the safest way to disembark appropriate to that specific landing site, whether it is a beach, a jetty, rocks, or a muddy bank
- On approach to the landing, drivers must instruct guests to stay seated and listen for instructions upon arrival.
- Approach the landing slowly and tilt the engine to avoid rocks, reef or submerged objects that may damage the engine
- Be aware that the shore party may call you with specific instructions regarding the landing on approach

- Always keep an eye on the swell and surf when approaching a landing and use these varying conditions to aid your approach.
- When a stern landing is needed, it is preferable to approach bow-first and have the shore party spin the Zodiac to place the bow facing seaward and the stern facing to the beach.
- When the Zodiac's stern is closest to the beach, it is critical that no guests, crew, or staff disembark over, or stand behind, the transom. It is possible to be knocked over by the surf in that position and have the full weight of the boat and engine land on top of you.
- During difficult landings, drivers should wait for a signal from the lead shore party person that it is safe to approach the shore, and the driver should be in agreement that this is the right time to approach.
- If lifejackets are removed onshore, they need to be stored inside a bag/bin. Dirt, sand or grit may jeopardize the automatic inflation mechanisms of the lifejackets.
- Any crew assisting with bringing Zodiacs alongside at a pier/jetty must wear a lifejacket or float coat. Stepping on and off the Zodiac to help with loading/unloading of passengers is a time when floatation is especially important in case the crew member were to fall and sustain a blow to the head that could cause him/her to be left unconscious and vulnerable to a subsequent fall into the water.

1.13 Returning To The Ship

- Pay attention to “all aboard/last Zodiac” times given by the Expedition Leader and return to the ship at or before that time so as not to delay the ship's departure. Punctuality may be critical and a late departure may jeopardize the next outing.
- If muddy conditions were encountered on shore, have guests scrub their footwear before re-embarking the Zodiac to return to the ship.
- Show consideration for other drivers returning to the gangway and avoid overtaking them or creating a wake near the side gate or kayaks. Remember that you are working as a team.
- Follow instructions from the Bridge Officer in charge of gangway operation.
- In a briefing as you return to the ship, explain to guests the disembarkation procedures and remind guests to remain seated until the Zodiac is secure alongside the platform and the Able Bodied seamen (ABs) can assist with embark/disembarkation. Ensure that guests only stand up one-at-a-time and use the Zodiac-grip and have their hands free at all times.
- Assist the ABs with guest disembarkation. Disembark guests from alternate sides so that the boat is always balanced.

1.14 Radio Operations

- Be familiar with your radio and comfortable with basic functions including volume control, charging/changing the battery, unlocking, changing, and relocking channels. Seek training from the EL if needed for any of the above radio operations.

- Always carry and monitor your radio both in the field and aboard the ship. Your safety, and that of others may depend upon it. Any exceptions to this rule can only be made by the Expedition Leader on a case-by-case basis.
- Keep radio conversations short and to the point
- Be aware of the location of other Zodiacs and share information if appropriate
- Keep the EL informed should you, for any reason, deviate from the original plan.
- Stay off the radio while the ship is anchoring, maneuvering or practicing a safety drill, except in an emergency. This allows the Bridge to communicate as needed.
- Always remember that everyone, including guests, can hear radio transmissions.

1.15 Man Overboard (MOB)

It is recognized that as with most expedition operations there is no single perfect way to handle a situation. Drivers are to make decisions with a MOB that are the most prudent using the resources at their disposal and according to their situation.

Best practices are to:

- Call for help by radio and/or by shouting MAN OVERBOARD!
- Have someone in the boat point to and keep an eye on the MOB, never losing sight of the person in the water.
- Retrieve the MOB quickly if you are able and safe to do so. Otherwise, wait for help to arrive keeping contact with or a close eye on the person in the water and maintaining communication with him/her as is possible.
- Document the event, especially with timings and actions taken, as best as you are able to immediately after the event.

1.16 Natural Hazards To Consider

Wind

- Wind speeds that are outside safety limitations conducive to Zodiac operations are to be established by the Captain, Staff Captain, and/or EL on a case-by-case and ship-by-ship basis recognizing that each ship has different safety parameters and that sometimes local conditions are not consistent with those a short distance away.
- Wind speeds, subsequent conditions, the skills of the drivers and the continuation of Zodiac operations must be assessed using the sound judgement and experience of the Captain/Staff Captain/EL as appropriate with the safety and comfort of the guests as a priority.
- An empty Zodiac driving upwind in high winds is a hazard and should only be attempted by experienced drivers and/or with extra ballast, or a staff member in the boat to act as ballast.

Coral and Rock Reefs

- In the tropics water color will tell a driver much about the depth of the water around coral reefs. As a rule of thumb remember, “Blue, Blue – Sail on Through” and “Brown, Brown – Run Aground.”
- Reefs are both a hazard and a sensitive marine habitat. Keep your distance and never anchor your Zodiac on coral. Look for sandy sea floor for anchoring.

Cliffs, Caves & Falling Rocks

- Avoid driving Zodiacs close to cliffs where there is evidence of hazardous falling stones, ravines with loose sand/stones and ice or snow that could be breaking up.
- If Zodiac cruising in or around caves keep your time in close proximity to overhangs as brief as possible
- If entering caves, watch the swell very carefully to see the effect of surges. Often it is safest to enter caves stern first as this allows for a speedy exit.

Ice Conditions

- When driving avoid ice with sharp edges that can rip a hole in your Zodiac
- Ice is dense and causes severe propeller damage – just like hitting a rock
- Always travel through ice slowly and look for a route with the least amount of ice
- In the event of glaciers calving, be aware that the newly broken off ice can float great distances and surround your Zodiac very quickly

Drift Sea Ice

- Be aware of the ice drift before the Zodiac operation begins
- Note what the tide is doing, how the ice is shifting and how quickly
- Drift ice moves with wind, tides and sea currents. You might suddenly be enclosed when driving in drift ice. ALWAYS be aware of how the ice is moving.

Icebergs

- Always try to determine if an iceberg is grounded or floating. Stay a greater distance away from a floating iceberg.
- Icebergs are all potentially unstable. All icebergs can suddenly flip over, causing huge waves and sending ice chunks flying through the air at great speeds
- Keep your distance at all times
- Never approach an iceberg closer than two times the height of the iceberg above water. Even at this distance extreme caution should be used.
- Notify fellow drivers on the radio when they are too close to an iceberg
- Remember that 90% of the iceberg is under water
- Never drive over the underwater ‘footprint’ of an iceberg where you can see the light blue water color indicating there is an ice ledge below
- Listen for cracks, groans, and the rumble of internal ice collapses. These are indications of ice shifting and the activity means you should stay further back!

Glacier Fronts

- Never approach closer than ten (10x) times the height of the tidewater glacier front. It is recommended to stay a minimum of 500m from the glacier front
- At some glacier fronts even this is too close – the EL will determine how close to approach.
- In addition, the Bridge Officers are encouraged to mark, monitor and check the Zodiacs' distance from the glacier front with assistance from the charts, the ship's radar, and AIS in Zodiacs as appropriate.
- Glacier fronts may calve, causing flood waves, flying ice and floating ice that can block your route to or from the site. Keep your distance!
- Avoid being trapped by islands close to the glacier front if a calving should occur
- It is best to pass over waves generated by a large calving head-on, and then easing off the throttle on the backside of the wave as needed.
- Stay away from shallow areas as waves are more likely to break there
- Factors that might affect the probability of a calving:
 - Glacier front height
 - Gradient of the glacier on the shore
 - Degree of fracturing in the glacier front
 - Sea and current dynamics under the glacier front
 - High temperatures and rain
- Be aware of 'poppers' or 'shooters' – pieces of ice that dislodge underneath the ice – they can come up under your Zodiac and burst the pontoon or tip you over
- As above, listen for noises indicating internal glacial ice collapses and potential calving activity

1.17 Wildlife viewing from Zodiacs & Zodiac Tours

- Follow all AECO & IAATO guidelines when operating in the Arctic & Antarctic
- Follow relevant rules and regulations regarding interactions with wildlife
- Regardless of regulations, it is SS policy to avoid disturbing animals at all times

No Disturbance Distance

- To avoid disturbing animals, avoid provoking a reaction in the first place.
- It is the responsibility of the Zodiac drivers to avoid interactions/disturbance of animals and to define how disturbance will be avoided
- It can be difficult to establish exact distances from wildlife to ensure no disturbance. Different animals, or even the same animals in different situations, will react differently to a given situation. Thus, always err on the side of caution.

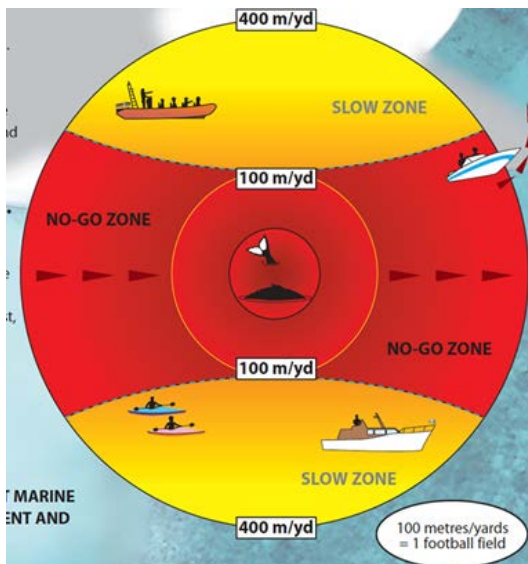
Avoid Disturbing Wildlife with Noise

- Keep radios on a low volume setting and keep conversations low and calm
- On board, suspend announcements on outer decks whenever wildlife is nearby and use the Quietvox system aboard the ship instead
- Avoid excess engine use, gear changes, conversation, maneuvering or backing up to the animals as these movements produce sudden, large changes in underwater noise levels, which may startle, agitate or drive the animals away

Proper Speed Near Wildlife

- Drive slowly and carefully whenever operating near breeding colonies or large congregations of wildlife
- Accidental strikes could happen and ultimately are each individual driver's responsibility

Driving Around Whales (refer to diagram below)



- All Zodiac drivers must work as a team
- Keep to the side of the animal(s) and take turns for the closest watching opportunities
- Do not 'box-in' animals or cut off their travel or exit routes
- Do not go closer than 100 m to whales
- Avoid having too many boats near one animal at any one time or for too long
- Avoid scattering groups of dolphins, seals, whales etc.

Approaching Birds or Seals on Ice or Land

- Watch behavior carefully for signs of disturbance (head waving, moving away, opening mouths).
- If you are disturbing them, move off slowly
- Often you can use wind or current to drift past wildlife on shore or ice with your engine off. This provides a quiet way to view wildlife. When you do then need to start the engine do so carefully and wait before engaging the engine to head off.

Viewing Polar Bears

The follow is a summary only.

Please see Chapter 6 of this Manual dedicated to Polar Bear Safety for more detail.

- Always drive quietly and slowly in the vicinity of bears

- Do not get close to polar bears on ice or rocks, they can leap up to two Zodiac lengths. A minimum of 30 meters' distance is required between a boat and polar bear.
- Stop immediately if a bear enters water – back off slowly to give it full right of way
- Move away from polar bear(s) if your presence is causing any disturbance or if you notice signs of behavioral change in the bear.
- Never follow or pursue a bear(s) in the water.
- Never switch off the engine to maximize your options for moving away if need be

Driving with Walrus

- Walrus can pose a hazard to Zodiacs
- With groups in the water there is usually a large bull patrolling the perceived Zodiac 'threat.' There have been incidents in which bulls try to climb into Zodiacs and/or puncture the pontoons.
- Do not allow these animals to come too close to the boats
- Never come between walrus and their haulout, or by blocking their access to land
- Never switch off the engine to maximize your options for moving away if need be

1.18 AECO & IAATO Guidelines

- For some animals AECO and IAATO do give specific recommendations as to distances to the animals as a basic starting point
- Check and familiarize yourself with these distances and any local regulations
- For reference:
 - <https://www.aeco.no/wildlife-guidelines/>
 - <https://iaato.org/wildlife-watching-guidelines>

ALWAYS FEEL COMFORTABLE IN THE BOAT.

**If you do not feel that your abilities match the requirements of the conditions
THEN DO NOT DRIVE.**

Inform the Expedition Leader or Staff Captain and ask to be replaced with another driver. Your own honest assessment of your abilities will always be appreciated and respected by the working professionals aboard.

Standard Operating Procedures

2. REMOTE LANDING OPERATIONS

2.1 Remote Landings – General Guidelines

- The EL and/or AEL must always check and abide by the legal requirements of the area being visited. Some regions and sites have species-specific wildlife viewing distance requirements, permit requirements, reporting requirements and restricted areas.
- All staff are to review and understand the contents of their personal and collective shore side medical and emergency equipment kits prior to undertaking any landing.
- Other ships at the same landing site are to be avoided if possible.
- The landing is to be planned in advance by the EL and/or AEL based on knowledge of the site, regulations, restrictions, forecasted weather, avoidance of wildlife aggregations, maximum group sizes, and any safety considerations.
- The EL and/or AEL must brief the Expedition Team in detail about the planned landing and provide instructions, maps, GPS coordinates, tidal information, and job assignments for the execution of the landing as needed.
- If any staff member is not familiar or comfortable using a handheld GPS unit he/she can seek training from the EL to be delegated to another trainer on the team as appropriate.
- The EL/AEL and lead hike guides are responsible to brief guests before a landing, upon arrival at the site, and again as applicable at beginning a walk, about any restricted areas, any areas with sensitive plant-life and how to avoid it, the wildlife you expect to view, the approaching/avoidance procedures and viewing distances for local wildlife as applicable, and inform them to always follow the directions from the Expedition Team.
- A proper debrief of the landing by the Expedition Team is encouraged afterwards to assist the EL/AEL in capturing input to improve the operation, especially to be recorded in the company's Landing Report (LR).
- An LR is to be completed in detail after each landing of guests.
- In case the landing was canceled, the LR should include the reason for the cancellation.

2.2 Environmental Considerations on Landing Sites and Hikes

- It is company policy not to remove anything from any site that is not clearly garbage, and this must be relayed to guests and crew during site briefings.
- Be aware that while beach cleanups and garbage removal is generally a good thing, there may be situations like in Svalbard where trash collection cycles are being studied.

- Sites are also not to be altered, and guests and crew are not allowed to partake in cairn-building, graffiti creation of any kind, picking flowers, removing plants, taking rocks and fossils, or other such disturbances to the physical environment unless staff are doing so in manner compliant with local regulations and for educational purposes back aboard.
- Silversea Expedition Teams will do their utmost via communications and actions to ensure that visitors, staff and crew do not leave anything behind onshore (or in the water).
- When possible, Silversea Expeditions will remove garbage found on the shores and support local cleanup initiatives such as the “Cleanup Svalbard” project.
- All Silversea visitors will be considerate to other visitors, local people and nearby activities including the avoidance of landings near camps, hunters and trappers, or others unless contact is established and the landing is agreed to in advance.
- Responsible wildlife watching is the norm and Silversea and its employees will adhere to a “No Disturbance Principle” to avoid disturbing wildlife. Avoidance minimizes disturbance and should prevent:
 - Displacement from important feeding areas;
 - Disruption of feeding;
 - Disruption of important behaviors or movement, and habitat;
 - Stress or injury from interaction;
 - Increased mortality or decreased productivity
 - Alteration of habitat
- Please note that wildlife viewing guidelines may vary from agency-to-agency within a single region. If cases like this, Silversea will always adopt the more conservative of the regulations.
- Expedition Staff leading hikes must choose hiking routes that avoid or minimize disturbance of animals, cultural remains or erosion of vegetation and landscape
- Avoiding walking on stream banks and wet ground where more damage to ground cover can occur, and avoiding stepping or holding onto lichen-covered rocks.
- Approach and depart wildlife with caution and respect, watching for any signs of disturbance from our presence.
- Avoid noise and keep radio volumes low, voices low and discussions calm.
- Never feed wildlife or leave food behind at a landing site.
- Hiking groups should be kept small with the best guide to guest ratio possible and organized according to ability, language, and/or duration of the outing as is best suited to the clients.
- Hikers must use prepared or marked paths whenever possible to avoid ecological damage especially in muddy, boggy or eroding areas.
- Be aware of hazards caused by areas of loose rock, thermal wells, geothermal features and vulnerable geological structures.
- Be familiar with local regulations in regards to the presence of cultural remains and pay

due respect to any visited or found sites including proper recording of discovered sites.

2.3 Shore Side Wildlife Viewing – Nesting Birds and Colonies

- Many species of birds nest on the ground or on cliffs and can be easily disturbed from nesting due to human activity.

To minimize potential for disrupting nesting activities:

- Maintain a distance of at least 5-10 meters from nesting seabirds (IAATO Birdwatching Guidelines unless other, stricter regulations apply).
- Keep required distance from bird cliffs
- This is especially with penguins, but where otherwise applicable, avoid blocking walkways in colonies, and access to water entry and exit points.
- If there is an observed change in behavior, then move away

2.4 Shore Side Wildlife Viewing – Burrowing and Ground-dwelling Animals

- For ground dwellers such as small mammals, reptiles and some seabirds, there are several species that live and nest in underground burrows that are vulnerable to damage from people walking. For example, some bird and small mammal species nest in burrow networks, and reptiles and amphibians live in decaying logs or under bark and slabs of stone.
 - Staff arriving at landing site prior to guests should identify areas or likely areas of burrows and therefore will be able to point out to guests and crew areas to be avoided.
 - Staff should keep visitors to established tracks, and avoid areas of tall grass or areas where footing is less visible
 - Lead groups of hikers in single file lines rather than spreading out over a larger area.
- Reptiles, including snakes, lizards and turtles, may be encountered in open areas and trails where they can gather heat energy.
 - Wear boots and long pants in areas where reptiles such as snakes may be encountered.
 - Maintain distance of about 2 meters from any reptiles encountered.

2.5 Shore Side Wildlife Viewing – Seals, Sealions or Walrus Hauled Out

- Seals, sea lions and walrus frequently haul out on land, rocks or ice to rest between feeding, to moult their fur, and come ashore to rookeries during breeding periods. Disturbance at these sites can cause animals to return to the water and create stress on animals during these critical periods.
- Expedition Staff must know local wildlife viewing distance restrictions and watch for behaviors and changes in behavior that indicate animals have been disturbed. If this occurs the group must cautiously and quietly leave the area.
- Measures can be taken to avoid and minimize impacts to animals:
 - Pups are often left alone onshore when mother seals out feeding in the water. They

- are not abandoned and must be left alone.
- For single or a few individual animals hauled out to rest near landing sites, a perimeter around the animal should be established, demarcated, and monitored by a staff member to ensure visitors do not approach.
- Do not walk up to the animals from different directions – the visitors should approach from only one side of a group.

2.6 Shore Side Wildlife Viewing – Large Mammals Including Black & Brown Bears

Please note there is another section of this manual dedicated to working in Polar Bear regions – that is not the topic of discussion herein.

- When landing in regions/sites within brown and black bear ranges, bear defense (noise maker, bear spray) should be carried and readily accessible by all Expedition Guides (i.e. not carried inside backpacks, but clipped to the outside of clothing or a bag, carried in holsters, or carried in hand).
- It is recommended to make consistence noise with song or conversation in bear country to alert any bears to your presence and therefore avoid surprising an animal.
- Maintain distance of 100m from any bears
- Musk oxen must not be approached closer than 100 m and no-one must ever pass between a mother and calves.
- If staff suspect fox and/or wolf dens are in an area, it is recommended to keep guests as far from the area as possible especially when they have pups between June and August.
- Never feed or have food in the vicinity of a fox or wolf. These animals are clever and will learn to beg.
- Be aware all mammals can carry rabies and be aware of the signs of a sick animal. Retreat immediately with your group if you have any doubt about the health of a wild animal and no-one may touch a live or wild animal. Authorities must also be alerted of suspicions.
- Monkeys, especially macaques can be aggressive and are known to bite. In areas where macaques are socialized and used to humans it is best practice to talk to them in a loud, affirmative voice with commands as you would with a dog. They will tend to back down.
- Do not make eye contact with primates or other aggressive animals such as dogs or bull sea lions, as it can be interpreted by the animal as a challenge
- Dogs outside settlements are potentially dangerous and a safe distance must be maintained
- Generally, if animal(s) move closer to you and/or your group, keep calm, do not run, and move everyone away to maintain safe distance.

2.7 Shore Side Wildlife Viewing – Intertidal Life

Animals within intertidal zones need to retain moisture during periods of low tide. Other intertidal features, such as smaller rocks and seaweeds provide shelter and shading from sun during low tide and are important habitat during high tides.

- Avoid stepping on snails, limpets, or anemones attached to intertidal rocks.
- Replace any rocks, logs or other substrates that are moved for viewing.
- Avoid remove any attached seaweeds and animals from rocks

Sources consulted in generating these Remote Landing SOPs include:

- IAATO General Information for Wildlife Watching. www.iaato.org
- IAATO Birdwatching Guidelines
- AECO Arctic Wildlife Guidelines. www.aeco.org
- AECO's Guidelines for Expedition Cruise Operators in the Arctic
- Silversea Cruises Ltd. IEE Antarctic Peninsula Cruise Program
- American Hiking Society (Snake Safety)
- Yellowstone National Park, Wildlife Viewing Guidelines (Bears)

Standard Operating Procedures

3. KAYAKING OPERATIONS

3.1 Kayaking – A General Overview

On selected voyages, SCL will offer guided kayak excursions. These kayak excursions will be offered in locations where the Kayak Guides and Expedition Leader feel risk can be appropriately managed, to guests who fit the set criteria as outlined below. The excursions will be optional for guests and may run at the same time as other ship excursions, only during daylight hours. Kayak excursions will be guided and supervised by professional Kayak Guides with relevant experience as per the job descriptions. These excursions will take place when the weather, logistics (ship and port where applicable), and site conditions are appropriate and the kayak excursion does not hinder other ship operations.

- The main purpose of the kayak program is to enhance the guest experience by offering a unique alternative to other scheduled excursions, an adventurous way in which to view scenery and wildlife. On occasion, a landing may be possible as part of the kayak excursion. This should be discussed and agreed upon in advance with the EL. In this case, all company landing and shore operation procedures for Zodiacs apply and where relevant based on area guidelines and laws.
- Due to safety concerns, English proficiency is required unless prior, special arrangements are made.
- A Kayak Report is to be completed by the Kayak Guides and submitted to Silversea home office at the end of each voyage.

3.2 Program Leadership – Kayak Guides

- The kayakers safety is the guide(s) first priority. The Kayak Guides will be suitably experienced and skilled, with qualifications and proficiency at the minimum that is described in the approved Silversea job descriptions.
- Due to the expertise needed, the Kayak Guides will oversee all aspects of the kayaking program, but the Expedition Leader will ultimately approve where and when kayaking excursions are offered.
- The decision to paddle or not to paddle will be made in consultation between the kayak team and the Expedition Leader. If either party feels that risk cannot be adequately managed, no kayak excursion will occur.
- It is the Kayak Guides' responsibility to report all issues and submit any reports needed to the expedition leader in a timely manner.
- Silversea staffing management will establish one designated Lead Guide, an Assistant Guide and a Kayak Safety Zodiac Driver.

- The Lead Guide will coordinate with the other guide, Kayak Safety Zodiac Driver and other expedition staff to effectively deliver the kayak program as per these Standard Operating Procedures (SOPs).
- In case the Lead Guide is sick or not fit for duty, the Assistant Kayak Guide can take the lead role if he/she is comfortable and experienced enough to do so, and has other team members with sufficient kayak guiding and kayak Zodiac experience to be in support roles. Fewer guests may join the paddle if needed.
- In polar bear areas the safety driver and one kayak guide must be rifle handler

3.3 Equipment

- The Kayak Team is responsible for issuing kayaking gear and ensuring all gear is returned. Lost or damaged gear must be reported to the Staff Assistant on a cruise-by-cruise basis for inventory.
- The Kayak team is responsible for ensuring they have the equipment needed to run their program.
- All equipment will be regularly inspected and maintained by the Kayak Safety Zodiac Driver to ensure kayakers have a safe and enjoyable experience.
- A suitable competent staff member will complete any service or maintenance done on equipment.
- New equipment will be chosen in consultation with the Kayak Guides.
- Signing off Kayak Guides will hand over to incoming guides an accurate inventory.
- Inventory and ordering will be done in accordance with Silversea shipboard policies.

3.4 Safety and Criteria for Kayakers

- At all times safety will take priority.
- Staff accompanying the kayak excursion must maintain radio contact with the vessel.
- A kayak specific safety kit containing equipment to manage paddler capsizes and changing conditions will accompany the kayak team.
- The kit will include a minimum of 2 bailing pumps, 2 throw bags and further safety gear deemed appropriate by the guides.
- Each kayak guide will be equipped with a special long-range GMDSS VHF Radio, GPS, watch, rescue knife, and some form of tow system.
- At all times kayak guides will be responsible to adhere to relevant area guidelines for travel and wildlife viewing including IAATO, AECO and any other regulations and laws applicable to the geographical area in which the kayak program is operating.
- Guests and guides must always wear a well-fitting personal flotation device (PFD).
- The Kayak Safety Zodiac will carry additional safety gear to assist the program and in case kayakers capsize.

- Prior to each paddle, the Kayak Guides will check each paddler's clothing and paddling attire to be sure it is in good condition and properly worn to minimize risk. Paddlers will also check their gear and confirm with the guides that they understand the use of all gear and it is fitting properly and comfortably.
- Each kayaker will be required to fill out and sign a liability release waiver as well as a pre-kayaking experience form in order to participate in the kayak program.
- Potential paddlers must affirm via the "Experience Form" that they know how to swim, have some watersports experience and are of suitable health and fitness before joining the kayak program. These conditions are to minimize any problems should the kayak team encounter challenging paddling conditions or a guest capsizes.
- This is not an instructional program, which will be stated clearly in the initial briefing.
- In order to participate in the kayak program, participants must be 16 years or older. Anyone that is 16 or 17 must be accompanied by an adult in their kayak.
- Both the legal guardian/parent and the minor participant are to sign the kayak waiver form.
- If the kayak team feels a guest's participation will result in a breach of safety for the individual paddler or the group as a whole, the paddler will be refused to join the program initially, or will be directed to join the safety Zodiac mid-paddle as appropriate.
- Silversea Cruises management on ship and shore side will support the decision by the kayak team to refuse a kayaker to participate in the activity.

3.5 Kayak Briefings

- Paddlers are required, for the safety and comfort of all involved, to attend all relevant briefings, and to listen to, understand, and comply with any and all instructions given by the staff.
- The briefings will provide guests with information regarding safety guidelines, relevant wildlife and operating regulations, set realistic expectations, recommend dress and other information deemed necessary by the kayak team.

3.6 Group Size

- A guide-to-paddler ratio will be, 2 guides for 16 kayakers or 1 guide for 8 kayakers.
- Even when the group size is below eight participants, whenever possible two Kayak Guides will be on the water with guests to provide the higher level of customer service and care that Silversea guests expect.

4.7 Kayak Safety Zodiac Driver

- A support Zodiac, operated by a driver trained in the procedures of the kayak program will always accompany the kayakers, to provide support and assistance, and to monitor the operation from the Zodiac and ensure compliance with established protocols.
- The Kayak Safety Driver will be trained in the procedures of the kayak program, and maintain a position on the water suitable to react quickly if needed in an emergency or directed by the Kayak Guides.

- The Kayak Safety Zodiac Driver will be suitably skilled and appropriately trained for the geographical area in which they are working.
- The Kayak Safety Driver job description is a baseline to ensure a suitably skilled driver.
- The Kayak Safety Zodiac Driver will maintain radio contact with the ship and Kayak Guides at all times. If appropriate, the driver will run a 2-radio system, with one radio always on the same channel as both the ship and expedition team and a second radio working on a separate channel with only the Kayak Guides.
- Once each voyage, the Kayak Safety Driver must organize a washing of the kayaks with fresh water. He/she is also responsible for checking that all kayaks are in good working order in terms of maintenance, hatch covers secure, no leaks etc.

3.8 On the Water

- Guides will maintain a non-disturbance ethos when paddling around wildlife, and will alter the excursion should there be negative encounters with wildlife based on their prior experience.
- The kayak program will take place in areas where conditions, (including but not limited to swell, wind, current, ice), allow, and also offer enhanced experiences for guests in terms of wildlife, scenery or other distinguishing factors.
- It is the responsibility of the Kayak Guides to keep the kayak group together. No kayak should stray out of eyesight or voice command at any time.

3.9 Kayaking in Polar Regions

General Polar Considerations:

- It is imperative that at least one of the Kayak Guides has extensive experience in the Polar Region in which the group is paddling in order to make informed decisions regarding kayaking.
- In Polar Regions guests will be issued and required to wear dry suits.
- Kayakers must always wear a well-fitting personal flotation device.
- All relevant guidelines and laws, concerning travel in Polar areas and amongst ice in any form, will be followed. This includes but is not limited to SOPs outlined in the Zodiac section of this Manual, region specific regulation, IAATO and AECO guidelines.
- The paddling group will move amongst icebergs, glacial faces and all other forms of ice following a conservative route based on the experience and judgment of the Kayak Guides.
- Management strategies to minimize risk in icy environments will be discussed amongst the kayak team and guests prior to the start of any excursion involving ice.
- The kayak excursion will only be conducted during daylight and in good visibility. The kayak guides will determine the length of each excursion and cancel should conditions change.

Antarctic Considerations:

- Sites ideal for kayaking in Antarctica offer protected waters away from glacier faces where katabatic winds may occur, generally suitable sea, ice, wind and weather conditions, and are sites that offer wildlife viewing opportunities.
- All kayak excursions in Antarctica will be operated in accordance with the Antarctic Treaty, notably a provision of Annex V to the Environmental Protocol, the Antarctic Specially Protected Area (ASPA).
- When in the vicinity of orcas or leopard seals, guides will take extra precautions and if the animals are exhibiting any aggressive behavior, Guides have the authority to call off the kayaking excursion.

Arctic Considerations:

- Walrus – In accordance with current AECO guidelines, no kayaking will occur in “walrus waters.” Kayak Guides will operate in areas deemed low risk for walrus encounters based on conservative decision-making, guide experience and judgment.
- Polar Bears – When operating a kayak program in areas known to have polar bears guides will make conservative decisions. Should a polar bear be encountered in the operating area of the kayak program Guides will alter the paddling program as they see fit, following AECO guidelines and incorporating strategies to minimize risk in accordance with experience and judgment.
- Kayak Safety Driver – In the Arctic, the Kayak Safety Driver must maintain a lookout for polar bears and walrus in the operating area of the kayak program before the operation begins and during the kayak excursion.
- Firearms – Firearms will be carried in accordance with Silversea firearms SOPs. Kayak Guides and drivers will coordinate with firearms specialist on board with regards to all matters involving firearms.

3.10 Kayaking in Tropical and Temperate Regions

General Considerations:

- Outside of the Polar Regions it is at the Kayak Guides discretion whether or not guests are required to wear dry suits and/or spray skirts based on water temperature, conditions, guide experience and judgment.
- Guides may use their own discretion to increase the number of paddles to 20 guests with a 10:1 guest-to-guide ratio in tropical and temperate regions.
- It may also be appropriate if conditions and the group skill level allows to establish a “free roam area” for guests to explore independently. In this case, one Kayak Guide will be on the water supervising and assisting, while the other will be helping dress the guests with the specific kayak gear, putting them into the kayaks, and checking they have signed a waiver.
- During “Free Roam” kayak activities, two safety Zodiacs (one being the designated Kayak Safety Driver) will be stationed off shore to act as a boundary as well as on-water safety.

- Be aware of weather conditions and monitor changes in the weather closely. Passing squalls can bring lightning, visibility obscuring rain and unexpected high winds.
- Guides must return the group to the ship or have a planned “escape route” as an alternative place to get off the water and take temporary shelter if weather conditions dictate.
- Safe practice is to leave the water when lightning and thunder are cause for concern.
- Especially in tropical areas where dry suits are not necessary, ensure guests wear appropriate sun protection including a wide-brimmed hat, polarized sunglasses if possible, and sunscreen.
- Guests and Guides need to be properly hydrated and bring drinking water.
- Be aware of local boat traffic and fishing activities, obey the rules of the road, and give locals a wide berth and plenty of respect on the water.
- Guests and Guides must always wear close-toed shoes or booties while paddling in temperate and tropical regions in the event that they may need to wade through shallow water unexpectedly.
- Paddling in surf zones, and around high-current or tidal river mouths should be avoided as these areas are higher risk.
- Guides must bring/study nautical charts or similar accurate maps of the regions they are paddling.

Tropical Considerations

- Paddling directly over shallow coral reefs is discouraged as paddles can easily damage fragile corals, damage the kayaks themselves, and waves can surge over reefs unexpectedly putting paddlers at risk.
- Guides must be familiar with local plants that can cause skin irritation such as poisonwood. Paddling under these trees or taking shelter under them if it is raining invites the toxic sap can drip down onto boats and people below.
- Tropical areas are home to dangerous marine organisms such as jellyfish, cone snails, and crocodiles. Guides must be aware of these risks and keep guests in their kayaks in regions where these animals are present, in addition to avoiding jellies with paddles.
- Insects in the tropics will be a nuisance to kayakers at times and guests should be instructed to be prepared, as well as insect repellent to be carried by the Kayak Guides.
- When paddling in mangrove creeks ensure that close attention is paid to the route taken and the local tidal schedule. A clear exit route is to be easily found at all times.
- Handheld GPS units are to be left on while paddling in mangroves so that the track can be followed if needed. Ideally, Kayak Guides will study closely aerial photos of the mangroves like those available on Google Earth and determine a route prior to entering narrow mangrove channels.

3.11 Kayaking Biosecurity

- It is the Guides' responsibility to ensure relevant regional biosecurity measures are followed at all times.
- When paddlers embark or disembark from shore, regional boot washing protocols such as those for IAATO and AECO will be followed.
- When the kayaking program is transitioning from one region to another, all relevant local boot washing protocols, clothing and gear inspection, and visual inspection of the kayaks (including washing of the kayaks if necessary) will happen after the activity takes place.

PLEASE NOTE: See Appendix 2 for detailed instructions on conducting the kayak program aboard Silver Cloud as written in July 2018.

Standard Operating Procedures

4. POLAR PLUNGE OPERATIONS

4.1 Prior to Starting Polar Plunge

- Polar Plunge waiver forms need to be signed by each participant (including crew members) and checked/collected by the doctor prior to cold water swimming.
- For minors the legal guardian/parent and participant need to sign the waiver.
- A list needs to be produced of all that have signed the waiver and this list is to be checked off against participants on the day of the event.
- Additional forms should be available for late deciders and the doctor needs to check the form(s) before the plunge takes place.
- Plenty of towels need to be on hand to warm and dry swimmers as they return from the water.
- Bring a muster list to the event in order to mark participants for records as needed and to award certificates after the event.
- Crew are welcome to participate in a polar plunge, but required to wait until the majority of guests have already done their swim.

4.2 Polar Plunge from the Ship

- Ensure there is a safety Zodiac in the water with a driver and another staff member to act as spotter and lifeguard ready to assist a swimmer in the water. This boat can be supplied with extra towels, blankets, rescue gear such as a ring buoy with floating line, and first aid equipment as needed.
- In polar bear areas a second Zodiac with a driver and a bear guard with rifle should be in the water as well.
- Ensure there is at least one ladder rigged directly to the ship, or on a Zodiac fastened alongside, for swimmers to quickly and easily climb out of the water.
- The doctor and/or nurse should be on standby with any medical equipment he/she deems necessary as a precaution.
- All swimmers will use a safety harness and line worn around the waist with the buckle on the front side of the body so that if a swimmer is towed by this line, he/she will be hauled face up.
- Swimmers are encouraged to return to the ship right away and not attempt to stay in the water for prolonged periods of time.

4.3 Polar Plunge from the Shore

- When swimming from shore, ensure there are plenty of towels on hand and that at least one staff member is assigned to monitor and oversee the event.
- The doctor and/or nurse should be present throughout the event and carrying appropriate medical equipment for the plunge.
- In Whalers Bay it is not allowed to dig a hole for the polar plunge.
- Polar Plunges from the Shore in Polar Bear regions is prohibited.

Standard Operating Procedures

5. SNORKEL OPERATIONS

5.1 Prior to Starting Snorkel Ops

Waiver Forms

- Guests must sign a waiver form to be kept for the duration of time the guests remain on board
- During equipment handout be sure to mark on the form what gear has been borrowed
- Include sizes, numbers or other ways of identifying the gear for collection purposes

Mesh Bags and Mask/Snorkel Sets

- Make sure all bags are clean and empty of gear and trash
- The Snorkel Master(s) to be assigned to the role by the Director of Field Staff at time of hiring and/or by the EL aboard for a particular voyage must ensure all masks and snorkels are washed and free of sand, smudges and sunscreen prior to gear distribution
- Snorkel Master and his/her team make sure all masks and snorkels are in good condition (no tears or broken pieces) and snorkels are properly attached to the masks

Fins & Other Gear

- Fins are to be clean and free of sand and in good condition (no tears or holes)
- Arrange and store fins by size groupings

5.2 Snorkeling

The Snorkel Master and EL will discuss and agree to a plan for snorkel operations considering the following prior to the start of snorkel operations:

- Determine the best entry and exit – whether beach or Zodiac platform taking into consideration swell, current, wave action and tides etc.
- Define the snorkel area boundaries to all snorkelers
- When possible anchor 2 – 3 Zodiacs each about 100m apart to act as snorkel platforms with ladders and towels in place and ready to use and a staff member on each platform to assist guests as needed throughout the operation.
- Life Ring/tow line ready to throw to snorkelers and tied onto the boat
- Have a Snorkel Lookout/Safety Zodiac Driver ready on-site before any guest goes into the water.
- Be sure to have a selection of extra gear on shore or in the Zodiac platforms for guests:
 - Masks & snorkels & snorkel keepers
 - Mixed sizes of fins

- Snorkel vests & noodles
- First aid kit & large bottle vinegar & whistle
- Baby shampoo
- A Safety Zodiac with ladder, ring buoy on floating line, safety equipment, snorkel gear, radio and competent driver/snorkel rescue staff member is highly encouraged whenever possible. The exception is when the snorkel area is too shallow or confined for a Zodiac to safely maneuver around snorkelers. In this case one person can be designated as Safety Lookout to stand at the shoreline and monitor the snorkelers from that vantage point.
- Check waters for evidence of jellyfish. If there are lots of zooplankton (gelatinous 'jellies') in the water column, consider cancelling the snorkel
- Inform guests of any chance of getting stung by jellyfish
- NOTE: there have been cases of serious Irukadji stings in the areas we operate – it is always preferred to err on the side of caution in deciding whether to run a snorkel operation or not.
- Please note, it is safe practice for Zodiacs passengers and snorkelers to leave the water when lightning and thunder are cause for concern.

Shuttle Zodiacs

- Drivers taking guests back and forth to the beach or the Zodiac snorkel platforms should check with staff members on the Zodiac platform before arriving with guests to determine that the approach is clear and appropriately timed.
- Drivers must approach with extreme caution, slow speeds and looking out for snorkelers in the water
- Always shut the engine off when guests are transferring between Zodiacs

Completion of Activity

- Radio the Bridge and confirm all guests are out of the water and the snorkel operation is completed

5.3 Snorkel Lookouts & Safety Zodiac Duties

This is very serious! It must be undertaken with care and attention.

- A designated Snorkel Lookout/Safety Zodiac Driver must be on duty at all times.
- He/she will have a whistle handy, sunglasses (preferably polarized), a radio and a set of snorkel gear close by and at-the-ready (not in a bag) in case a snorkeler requires assistance.
- He/She will keep a close eye on all persons involved in water activities at all times
- A lookout must ONLY do lookout duties continuously scanning the snorkel area. If he/she is required to assist a snorkeler, then another staff member should take over lookout duties for the rest of the snorkelers.
- Limit talking and other distractions while on duty

- When the lookout must leave his/her post, he/she is responsible to make sure another lookout is assigned to the lookout location.
- The Snorkel Lookout/Safety Zodiac Driver must have safety gear and equipment including vinegar, spare snorkel keepers, whistle etc., spare masks, snorkels and fins, VHF radio, and yellow snorkel vests and any flotation devices.
- If possible, the safety boat should have both a driver and an additional person to watch

5.4 In-Water Snorkel Guides

- An appropriate number of staff depending on weather/sea conditions, terrain, group size and local regulations etc., should act as in-water snorkel guides pointing out items of interest in the water and monitoring guests who need help with gear or flotation.
- These guides are to remain in general area of the guests constantly looking around and checking on guests while staying particularly close to any guests having difficulties
- The in-water snorkel guides are not to wander off on their own!

5.5 First Aid for Jellyfish Stings In The Field

- Inform the ship, EL and ship's Doctor ASAP
- **Do not rub** - Rubbing can result in further venom release and make it worse!!!
- **Use vinegar** to flush the area thoroughly and try to maintain a constant flushing for several minutes (if possible)
- Vinegar prevents further stinging by un-triggered tentacles
- Do not use urine or alcohol – they do not work
- Do not use freshwater – it could trigger more stinging cells

Flick Off

- If time allows, try to flick off remaining visible venom sacs with a ship ID card, key card, credit card or other flat surface
- This gets rid of the stinging sacs without crushing them. If crushed, the venom will spread. Be careful that you do not get stung yourself.

Return to the Ship for Further Medical Treatment

- Carefully transport the injured person to the ship as quickly as possible and keep the doctor/bridge advised if any signs of anaphylactic shock are observed

5.6 Hand-In and Clean Up

- Guests should leave gear in a designated location after their last snorkel. If time allows staff can check the gear hand-ins against the snorkel waiver forms.
- Wash all gear thoroughly with freshwater and appropriate cleaning solution
- Sort and store fins by size in appropriate places
- Refill Snorkel Safety Boxes (vinegar, shampoo, Vaseline, snorkel keepers, whistles)

Standard Operating Procedures

6. DRONE OPERATIONS

6.1 For Drone Operations in Antarctica

- Follow IAATO SOPs as below:

IAATO Statement on the use of Remotely Piloted Aircraft Systems (RPAS) 2018

The term Remotely Piloted Aircraft Systems (RPAS) is used for any remote piloted aircraft (Formerly called UAVs).

IAATO accept the general use of RPASs within their members' operations, provided the following criteria have been met:

- For the 2018–19 season, recreational RPAS flights are not allowed in coastal areas;
- RPAS flights for scientific or commercial purposes are allowed, if conducted with the permission/authorization from a competent authority;
- RPAS flights are allowed at deep field sites, including coastal areas bound by ice shelves, if conducted with the permission/authorization from a competent authority.

Members who allow RPAS flights should have Standard Operating Procedures in place that are specific to their operation.

Prior to conducting the activity, the use of Remotely Piloted Aircraft Systems (RPAS) must be included in the operator's permit/authorization conditions e.g. Advance Notification, Environmental Impact Assessment (EIA) and Waste Management Permit (WMP), where relevant.

Points for Consideration for Operators' Standard Operating Procedures

In addition, for those instances where RPAS flights are allowed, Members agreed to provide the following information as points for consideration when setting up the activity.

1. Legal requirements

- The tour operator and pilot must be familiar with, and adhere to, Antarctic Treaty and National legal requirements.
- Waste Management should be considered in the event that a RPAS is lost.
- Some Competent Authorities require a Waste Management Permit.

2. Flight Operations and Piloting of RPASs

- The best practice guidelines presented in the peer-reviewed article by Hodgson and Koh (2016) should be reviewed by all parties involved with RPAS operations.
- All flights should be pre-approved by an authorized person/EL.
- RPAS equipment should be inspected by an authorized person/EL to ensure that it meets the requirements outlined in the authorized operating procedures.
- RPASs should be of robust construction with suitable safety features for use in Antarctica. If operated over water it should have a flotation device or alternative mechanism (such as a leash) to allow for recovery if it lands in the water.
- RPAS pilots should be able to demonstrate proficiency and experience in varied flying conditions.
- RPASs should not be operated in the immediate vicinity of a vessel if the vessel's radar is operational.

- Every flight should adhere to the individual Members' Standard Operating Procedures and a risk assessment carried out in advance for the activity.
- Each flight should have a pilot and an observer (except during solo expeditions).
- Pre-flight planning should include identifying an alternate landing area away from the launch site should the launch site become unusable. The authorized person/EL should be made aware of the alternate landing site before the flight begins.
- A test flight should be undertaken to show the authorized person/EL that the equipment is fit for purpose, and the pilot is proficient in its operation and use in the Antarctic.
- Each flight should begin with an airborne test of the RPAS and its systems in an area away from people and wildlife. This should include testing the RPASs failsafe systems for auto-return. (It is noted that south of 70 degrees, failsafe systems may be unreliable).
- The pilot should maintain visual contact with the RPAS at all times.
- The observer should maintain a lookout over the area for wildlife, people or other hazards, change in weather conditions and is responsible for monitoring signs of disturbance by wildlife.
- The observer is responsible for maintaining VHF radio contact with the other staff (Authorized person/EL/ Bridge/Communications team). The pilot should not use a VHF radio while the RPAS is airborne.



3. Flight restrictions

- Flights should be conducted in fair weather, with a cloud base sufficiently high that visual contact can be maintained with the RPAS at all times to ensure pilot control.
- Total flight durations should not exceed 20 minutes, and the pilot must have a way to monitor the flight battery voltage at all times during the flight. (It is noted that in colder conditions flight time will be controlled by battery life.)
- Flights should not be started in winds exceeding the RPAS manufacturer's recommended maximum and should be aborted if winds exceed 25 knots.
- The maximum distance away from the pilot should never be beyond visual contact

4. Environmental restrictions

- Electric powered RPASs are preferable and should be used to minimise noise impact.
- Be aware the lower the RPAS flight, the more likely wildlife will respond.
Initial responses are often physiologically and not necessarily obvious to the observer. RPASs should be flown at the maximum altitude practicable to achieve desired outcomes, and stopped as soon as a behavioural response is observed.
- RPASs should be launched, when possible, out of sight of wildlife.
- RPASs should never be launched closer than 100 meters from wildlife.
- RPASs must not be flown over or near to concentrations of wildlife on shore or at sea, or over concentrations of marine mammals and flying birds.
- RPASs must not be flown over Antarctic Specially Protected Areas (ASPAs).
- RPASs must not be flown over Antarctic Specially Managed Areas (ASMAs) unless the activity is specifically allowed in the ASMA Management Plan.
- RPASs must not be flown directly over designated Historic Sites and Monuments (HSMs).
- RPASs must not be flown in the vicinity of scientific stations without the permission of the Base Commander.
- If any wildlife indicates disturbance, unusual behaviour, or interest in the RPAS, the flight should be aborted immediately.
- At all times, Pilots, Expedition Leaders and Vessel Master recognize the desirability to keep RPASs out of the sight / hearing range of all other vessels at all times.
- In the event of a crash, every effort should be made to collect all the remains and evidence of the RPAS, if safe to do so.

5. Record keeping

- A log of all flights must be maintained, including location, length of flight, weather conditions, any crashes or unexpected landings.
- RPAS flights must be recorded on the PVR (post-visit report), including the detail above and if there was any disturbance to wildlife.
- Additional reporting to the operator's Competent Authority may be required under permit/authorization conditions.

IAATO RPAS for Navigational Use

Background

The term Remotely Piloted Aircraft Systems (RPAS) is used for any remote piloted aircraft (Formerly called UAVs).

IAATO accepts the general use of RPASs within their members' operations, provided the following criteria have been met:

- i. For the 2018–19 season, recreational RPAS flights are not allowed in coastal areas;
- ii. RPAS flights for scientific, navigation or commercial purposes are allowed if flying permission has been incorporated into the IAATO Member permitting and planning processes. Non-approved Individuals guests, staff, passengers and other personnel are not allowed to fly RPAS's;
- iii. RPAS flights are allowed at deep field sites, including coastal areas bound by ice shelves, if conducted with the permission/authorization from a competent authority.
- iv. Members who allow RPAS flights should have Standard Operating Procedures in place that are specific to their operation.
- v. Prior to conducting the activity, the use of Remotely Piloted Aircraft Systems (RPAS) must be included in the operator's permit/authorization conditions e.g. Advance Notification, Environmental Impact Assessment (EIA) and Waste Management Permit (WMP), where relevant.

Purpose

Whilst the IAATO Recreational Ban of RPASs remains strong within the IAATO Community it is acknowledged that more and more vessels are using RPASs for Navigational Use. Deployment of Remotely Piloted Aircraft Systems (RPAS) can, in some circumstances, reduce or avoid environmental impacts that might otherwise occur. Their use may also be safer and require less logistical support than other means of deployment for the same purpose.

With this use in mind, IAATO would like to propose the following RPAS Guidelines for Navigational Use to be assessed during the 2018-19 Antarctic Season.

Scope of RPAS use for Navigation:

1. Assess sea ice conditions
2. Assess open water, coastal or other, navigational constraints or risks
3. Having been permitted for navigation, other uses of opportunity, such as commercial filming of the vessel, should not be performed.

Guidelines

Pre-deployment Planning and Environmental Impact Assessment (EIA)

Requirements of the Environmental Protocol and its Annexes

- i. A permit for operation of an RPAS for navigational use must be issued by an appropriate national authority before the activity is undertaken.
- ii. Any proposed activities undertaken in the Antarctic Treaty area shall be subject to the procedures set out in Annex I of the Environmental Protocol for prior assessment of the impacts of those activities on the Antarctic environment.
- iii. Flying or landing an aircraft in a manner that disturbs concentrations of birds and seals is prohibited in Antarctica, except in accordance with a permit issued by an appropriate authority under Annex II to the Environmental Protocol.
- iv. Removal of hazardous wastes from Antarctica, including electrical batteries, fuels, plastics, etc. is required by Annex III, which should be considered in contingency plans for lost or damaged RPAS as part of the Environmental Impact Assessment (EIA).
- v. A permit issued by an appropriate national authority is required to enter an Antarctic Specially Protected Area (ASPA), and special requirements to operate RPAS may apply within an ASPA or an Antarctic Specially Managed Area (ASMA): any planned RPAS operation within ASPAs or ASMAs, including any overflight of these areas, must be in accordance with the respective ASPA or ASMA Management Plan.

General Considerations

- i. Undertake detailed pre-flight planning, including thoroughly assessing the particularities of the operational area in advance of deployment, to ensure an appropriate understanding of its topography, weather and any hazards that may impact upon an environmentally sound operation.
- ii. Map out flight plans, prepare contingency plans for incidents or malfunctions, including alternative landing sites and plans for RPA retrieval should there be a crash.
- iii. When operating RPAS from vessels, be aware of elevated risks of collisions with flying birds that often follow ships.

Operator Characteristics

- i. RPAS pilots should be well-trained and experienced before undertaking operations in Antarctica. Supporting documents and demonstration of experience (flight logs, etc.) need to be verified by the IAATO Operator.
- ii. Before operating in Antarctica, RPAS test flights should be undertaken in a variety of conditions by the pilot that will be operating in Antarctica with the specific type and model of RPAS that will be deployed.
- iii. RPAS operations should comprise a pilot and at least one observer. Pilots and designated observers should operate within Visual Line Of Sight (VLOS) with the RPA at all times, unless the operation is approved by a competent authority to operate "Beyond Visual Line Of Sight (BVLOS)".
- iv. Pilots and designated observers should be vigilant during operations and maintain good communications with each other throughout operations, watching for wildlife moving into the area of operations.
- v. When possible, pilots should avoid operation of RPAS near wildlife.
- vi. Pilots and designated observers should operate with special care near cliffs where birds may be nesting, and where practicable maintain the horizontal separation distance. During VLOS operations, pilots and designated observers should watch for, and inform each other of, signs of wildlife disturbance.

Reporting

- i. If an interaction with wildlife occurs, the designated observer (other than the pilot who should be principally focused on RPA systems and control) should record animal reactions
 - a. Interactions should be defined as changing the behavior of wildlife due to an interface with the RPAS.
- ii. Post-activity reporting should be completed in accordance with the EIA, IAATO and/or permitting associated with the activity.
- iii. RPAS operators are encouraged to carry out further research into the environmental impacts of RPAS to help minimize uncertainties and to undertake regular reviews of the research to help refine and improve currently known best practice environmental guidelines for the operation of RPAS in Antarctica.

Please also see the following support documents in the IAATO Field Operations Manual (FOM):

- Environmental Guidelines for operation of Remotely Piloted Aircraft Systems (RPAS) in Antarctica
- RPAS Best Practice Paper
- IAATO Statement on the use of Remotely Piloted Aircraft Systems (RPAS) 2018

6.2 For Drone Operations Worldwide

- The IAATO SOPs for UAV flights (above) are to be used as applicable worldwide.
- The UAV photographer is responsible for checking on national, regional and local regulations for flying UAVs and securing proper permissions with the support of the ship's agent or Silversea office as needed.
- Photographers should not assume that they are allowed to fly in a region. It remains the responsibility of each individual photographer to ensure that all local laws and requirements in terms of drones usage are met.
- Expedition Leaders are responsible for supervising all aspects of UAV activity, including the field activities of the UAV photographers.
- The Expedition Leader or Assistant Expedition Leader is responsible for meeting with embarking UAV photographers at the start of the voyage to review together the Company's SOPs and ensure procedures are clear.
- Ahead of each day filming is anticipated, the EL should know the plan and proposed flights and filming goals of the photographer(s). Pre-flight planning to include identifying an alternate landing area away from the launch site should the launch site become unusable.
- UAV photographers must attend all staff and guest briefings to ensure they are updated for activities off ship and ashore.
- Flights should be conducted in fair weather; with a cloud base sufficiently high that visual contact can be maintained with RPAS/UAV at all times to ensure control.
- RPAS/UAV equipment should be inspected by an authorized person/EL to ensure that it meets the requirements outlined in the authorized operating procedures.
- No flights over land will be conducted from the sea. Flights over the sea may be conducted from land, from a Zodiac, or from the deck of the ship when at anchor.
- No drone flights permitted from the ship while underway unless authorized by the Master.
- A Zodiac will always be on standby in the unlikely event that the device needs to be retrieved. This means if flying from the ship there must be a Zodiac on standby.
- RPAS/UAVs should not be operated in the immediate vicinity of a vessel if the vessel's radar is operational.
- Each flight must have a pilot and an observer
- The observer should maintain a lookout over the area for the RPAS/UAV, wildlife, people or other hazards, change in weather conditions and is responsible for monitoring signs of disturbance by wildlife.
- Total flight durations should be monitored, and the pilot must have a way to observe the flight battery voltage at all times during the flight. (It is noted that in colder conditions flight time will be controlled by battery life.)
- Flights should not be started in winds exceeding the UAV manufacturer's recommended maximum and should be aborted if winds exceed 25 knots.

- The maximum distance away from the pilot should never be beyond visual contact
- The observer is responsible for maintaining VHF radio contact with the other staff (Authorized person/EL/Bridge/Communications team). The pilot should not use a VHF radio while the RPAS/UAV is airborne.
- Be aware the lower the RPAS/UAV flight, the more likely wildlife will respond. Initial responses are often physiological and not always obvious to the observer. RPAS/UAVs should be flown at the maximum altitude practicable to achieve desired outcomes, and stopped as soon as a behavioral response is observed.
- RPAS/UAVs should be launched, when possible, out of sight of wildlife.
- RPAS/UAVs should never be launched closer than 100 meters from wildlife.
- UAVs must not be used over any wildlife colonies or concentrations of wildlife on shore, marine mammals at sea or over concentrations of flying birds to minimize potential impact to native birds and mammals.
- UAVs are never to be used to pursue or follow wildlife.
- At all times, Pilots, Expedition Leaders and Vessel Master recognize the desirability to keep RPAS/UAVs out of the sight and hearing range of all other vessels at all times.
- In the event of a crash, every effort should be made to collect all the remains and evidence of the RPAS/UAV, if safe to do so.
- Biosecurity measures will be followed as per regional requirements, including when necessary wiping down the device before and after flight with a disinfecting agent (e.g. Virkon-S, Virox5 or other).

6.3 Record Keeping

- A log of all flights in Polar Regions must be maintained, including location, length of flight, weather conditions, any crashes or unexpected landings using the Silversea standard drone flight log form. This log is to be sent to the designated shore side contact after each voyage.
- RPAS/UAV flights must be recorded on the PVR (post-visit report for Polar Regions), including the detail above and if there was any disturbance to wildlife.
- Additional reporting to the operator's Competent Authority may be required under permit/authorization conditions.

6.4 Piloting of RPAS/UAVs

- RPAS/UAV pilots should be able to demonstrate proficiency and experience in varied flying conditions.
- Proving UAV pilot proficiency may involve a pre-departure interview about the UAV photographer's experience with the equipment, proof in part of their competence, or confirmation of their abilities through proven professional use.
- Only those who have proven proficiency in a way that satisfies Silversea's responsibility to their SOPs will be allowed to operate UAV equipment with permission and support from the Company, Master and Expedition Leader.

- Silversea will refuse the use of any UAV equipment if the Company feels the conditions or level of experience will not be met under their permit.
- Those who can demonstrate proficiency in a manner that satisfies Silversea's responsibility to a permit will be added to the Company's list of pre-approved UAV photographers for future seasons, but UAV photographers will always be subject to proving maintained competency with the equipment in similar conditions for future dates.
- As no official training or certification frameworks currently exist, Silversea must rely on their SOPs, based on the IAATO Guidelines, to guide process.

6.5 Guests and RPAS/UAVs

- Guests are not permitted to fly UAVs.
- However, if conditions permit, qualified and pre-screened expedition staff photographers or parties with legitimate scientific or commercial UAV projects who have been vetted by the Company may elect to operate remote-controlled UAV's to obtain commercial aerial footage from select locations.
- Parties with legitimate scientific or commercial UAV projects are welcome to inquire about possible logistical support while onboard a Silversea voyage. If a guest (e.g. a scientist, researcher or documentary filmmaker) wishes to fly a UAV for non-recreational purposes on one of the Company's trips, it will be the responsibility of the guest to first contact the Company.
- In the case of a scientist, it is the scientist's responsibility to obtain all authorizations and/or permits from the Competent Authority. The company will consider any applications under its own authorization. The final decision as to where, when and if the UAV can be used (regardless of application) will be made by the Company, Master and Expedition Leader.
- Prior to approving the use of a UAV by a guest for scientific purposes or limited commercial applications, such as documentary filmmaking, Silversea must be convinced that the activity is a legitimate activity and that appropriate authorizations have been obtained.
- All UAV use by guests involved in scientific research or limited commercial applications, especially in Antarctica must follow the conditions of the Competent Authority authorization and pertinent permits, and under final approval of Silversea per their guidelines and appropriate UAV guidelines and authorizations such as those issued by IAATO.

Standard Operating Procedures

7. REGIONS WITH POLAR BEARS

7.1 General Polar Bear Safety

- Polar bears can be encountered all over the Arctic. Every staff member must be familiar with regional guidelines and regulations in regards to operations in polar bear areas as well as the AECO Polar Bear Guidelines available here:
<https://www.aeco.no/guidelines/polarbear/>
- Silversea and AECO Guidelines prohibit any actions designed to lure, pursue or otherwise seek out polar bears in such a way as to disturb them or expose either bears or humans to danger.
- Silversea Expedition Staff must take every necessary action to prevent our guests from having close, unexpected encounters with polar bears. Any shooting at (or of) a polar bear will be investigated as a possible criminal offence.
- Every staff member ashore must be armed with either a rifle or flare pistol, an appropriate number of rounds for the firearm, and must carry a working radio.
- Expedition staff members leading walks ashore need to do a head count for each group and keep their guests close together in tight walking groups. This means that the group walks only as fast as the slowest group member.
- Weather such as snow and fog that hampers visibility may make a landing unsuitable and decisions as to the viability of a landing need to be made accordingly between the Expedition Leader and the bear guards.
- In the event of an urgent shore side evacuation, it is the Expedition Leader's responsibility to double check as soon as possible that all guests and crew have left the shore and/or returned safely to the ship.
- Enough Zodiacs to evacuate everyone ashore must be on hand near the landing site.
- Unless there is an emergency or under instructions, no staff member should ever load a round or fire a weapon at any time.
- No staff member should walk around by themselves on a landing site without notifying a bear guard or the Expedition Leader first.
- Any incident related to polar bears must be reported immediately through the ship's command to the DPA and SVP of Expeditions. No communications are to be made directly from the ship to any authorities or AECO, unless instructed to do so by the company.
- Guests and staff delivering interpretation in polar bear regions may benefit from wearing and using Quietvox devices ashore. Dedicated staff members (generally lecturers and naturalists) will use the Quietvox units to interpret to the guests, while

Rifle Handlers and Bear Guards will refrain from wearing or using the units so as not to be distracted from their primary duties.

- When opportunities for practicing shooting at the firing range are available, priority for attendance is to be given to the Bear Guards and Rifle Handlers.

7.2 From the AECO Operational Guidelines re: Polar Bears

- Avoid confrontations with bears. Hurting or killing a polar bear is an offence if not done in self-defense. Irresponsible actions leading to such a situation can also be deemed an offence.
- Do not make a landing if you cannot see clearly, e.g. fog with low visibility.
- Always be vigilant to bears; always keep watch when in zodiacs or ashore. When landing, check out the terrain before landing the passengers. If a bear is close to the landing site, then the landing should be cancelled at that site. Establish a polar bear watch system and stay in places where you have good visibility of the surrounding area.
- Never feed or leave anything edible where it can be found by bears. (Nothing should be left behind). Teaching bears that people can mean food is a potentially deadly hazard both for bears and people.
- Never follow/chase bears; by ship or zodiac, in drift ice or open waters or on-foot ashore. The bear can become stressed (without you noticing) and an emergency situation may be the result.
- Never put pressure on anyone or be pressured by anyone to approach close to bears, or do anything related to bears that are not deemed safe.
- If you find yourself in close proximity to a bear ashore, you should observe the following:
 - Never approach a bear when you catch sight of it.
 - Leave the area swiftly and calmly.
 - Stay together as a group and keep an eye on the bear.
 - Bring sub-groups together.
- Frighten off the bear if it follows you and you have no chance of getting away. Stay together and make as much noise as possible. Behave firmly and make use of whatever means you have to intimidate it. Make sure you do not shoot flares off such that they land behind a bear that is on its way towards you. Use signal guns or signal pens with crack cartridges (not maritime signal flares or red flares of any kind).
- Shoot to kill: If a bear refuses to be intimidated, so that human lives are at stake, prepare to kill it.
- Define a dividing line in your surroundings, and prepare to shoot if the bear crosses it. You should target vital organs, such as the heart or lungs, if possible. Continue shooting till you are sure that the animal has been put down. Be very careful when you approach the animal afterward.

- Report injured or killed polar bears immediately to local authorities. Don't remove the dead animal or other items on the location of the incident.
- Plan ahead with the landing staff, for the handling of a possible polar bear situation.
- Guide to visitor ratio should be adequate taking into account the risk of polar bear encounters.

AECO: Polar Bears – Vessels and Zodiacs

- If you catch sight of a polar bear on land or on ice from an expedition cruise vessel a minimum of 200 meters should be kept between the vessel and the bear(s). Do not attempt to approach the bear to a closer distance with the vessel.
- If the vessel is laying still and a polar bear is approaching it is not necessary to retreat unless there is potential danger in the situation. Take all necessary safety precautions especially when polar bears are approaching the vessel on ice and can potentially reach the broadside.
- Small vessel and vessels with low outside decks must never allow a bear to approach the broadside.
- Portholes that can be reached by the polar bear must always be closed in these situations.
- Do not allow anyone to lean over the broadside or to put themselves at any risk during the “polar bear situation”.
- 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.
- This distance is only acceptable when it is absolutely clear that the bear shows no signs of stress or being disturbed from the presence. If the polar bear shows any signs of stress or starts walking away, **never follow a bear(s), but retreat from the area immediately.**
- The Zodiac must always be positioned so that it can leave the area in a safe and controlled manner should the situation require it.
- Never follow or approach a swimming polar bear from any angle. If you catch sight of a swimming bear, retreat immediately.

7.3 Appropriate Polar Bear Reactions

Scenario A – Bear spotted at a distance

- If a bear is spotted at a distance while groups are ashore, the spotter will be sure the bear guards and the Expedition Leader are notified immediately on an alternate radio channel.
- Information to be conveyed should include the animal's location, approximate distance from the landing site, and any behavioral observations.
- The Expedition Leader and the bear guards will then continue to communicate as the situation dictates and will decide how to proceed based on the scenario.

- If the bear guards and Expedition Leader decide that it is necessary to evacuate the area, then this announcement will be made on the main radio frequency to all the other staff ashore using the code words, “Papa Bravo” and giving directions for everyone to return to the landing site.
- Expedition staff will then escort their guests, still in tight groups, back to the Zodiacs and will begin to assist in the evacuation of the landing site as needed.
- At this point, it will be important to keep the guests calm and moving in an orderly and efficient way back to the Zodiacs.

Scenario B – Bear spotted at close range

- In the unlikely event that a bear is spotted at close range on shore or in the water, the spotter or closest expedition team member may need to fire a flare right away in an attempt to scare the bear. If time allows, first inform the EL and/or Lead Bear Guard.
- It is recommended that the preliminary flare(s) be shot into the air.
- As soon as possible, all staff members ashore should be notified of the situation by radio, and will return to the Zodiacs to evacuate the guests as outlined above.
- If the evacuation is urgent, staff can distribute Zodiac lifejackets to the guests once they are already in the boats.
- In the event of a sudden site evacuation, all staff should remain on the main radio frequency in order to stay updated on the situation’s developments, but keeping radio communications to a minimum in order to keep the channel clear for the most urgent messages.
- Meanwhile, the armed bear guards will be in charge of handling the bear as the situation and their training dictates.

7.4 Drones as a Tool to Assist in Spotting Polar Bears Ashore

- Taking into consideration all the drone regulations, if there is an approved UAV pilot amongst the bear guards and rifle handlers on the expedition team, and conditions are favorable for drone flight, then the pilot may fly a drone over a landing site to assist in finding polar bears on the landscape.
- Because flights from sea over land are prohibited, the use of a drone to spot bear(s) should only be undertaken from the shore after a safe perimeter has been established by the bear guards.
- The UAV pilot should have no other responsibilities at the landing so that this one dedicated individual can focus on the UAV flight while a second individual acts as observer and keeps watch for bears in the vicinity of the pilot and his/her self.
- As per drone SOPs, radio communications to other bear guards, Bridge or EL etc. must be made by the observer and not the pilot while flying the UAV.

- The drone should always be considered as an additional tool for detecting polar bears shore side, and not the primary way of spotting bears. An over reliance on technology does not replace the eyes, ears, site knowledge and intuition of trained bear guards.
- If a bear is sighted by drone, the drone is to be returned to the pilot and landed. Never pursue or follow a bear with the drone.
- Drone flights for scouting a landing site for bears should be logged in the Photographer's Drone log with notation of the specific reason for the flight.
- Any footage of polar bears captured on drone video while scouting for them at a landing site is not to be used in the DVD, nor for any commercial purposes by any staff member while employed by Silversea or afterwards.

Standard Operating Procedures

8. Bird Strike Protocol

8.1 Bird Strike Prevention

- Seabirds, and other migratory birds, can be attracted to a ship by its lights during the night or as a refuge in poor weather. The best method to prevent bird strikes on a ship is to follow established GSGSSI protocols prior to arrival to the Territory or to a known densely populated bird region.
- Prevention protocols include, reducing outside lights to the minimum necessary for safety, directing lights inward and away from windows, and closing curtains on all windows and portholes.
- When possible windows and portholes without curtains should be blacked out as well.
- These measures need to take place particularly when the ship is near islands while still offshore, and when approaching land during evening hours or when visibility is poor.

8.2 Bird Strike Mitigation

- In case prevention measures fail, members of the deck crew and Expedition Team will check the decks and crevices of the ship each morning and if a bird is located on board, all efforts to avoid handling should be made and first consult with the onboard ornithologist before taking any action.
- When necessary to capture the individual, hold the bird across its back to keep the wings folded and do not use any force.
- If the bird is disoriented or has waterlogged feathers carefully place the individual in a box/container in a dry, warm room until the individual is recovered and ready to be released.
- Once the individual is ready for release make sure it is at night with the ship's lights off, or at a minimum, or as soon as possible during the day taking care to ensure there are no predators (skuas, gulls, falcons, etc.) present.
- The GSGSSI Bird Strike Proforma as provided to operators on 08 August 2018 by GSGSSI's Visitor Management and Biosecurity Officer (Ross James) will be used to report any bird strikes (including birds released unharmed) to the Government Officer when in South Georgia and South Sandwich Islands.
- In other regions, proper reporting procedures will be followed.

Standard Operating Procedures

9. Firearms

9.1 General Firearms Safety

PLEASE NOTE: Below are the AECO Firearms SOPs provided here until Silversea internal firearm content is aligned with various regulatory bodies.

General

- Careless handling of firearms represents a greater hazard to human health than polar bears. It is imperative that safety rules be adhered to when firearms are stored, transported or used.
- People have very differing attitudes/feelings towards firearms ranging from nervous and negative feelings to strong interest and a desire to look at/touch weapons. It is important that the expedition leader/guide explain the need of guns and signal guns, how and when we load and unload them, the dangers involved, the importance of unauthorized persons never touching them and of following the instructions of the guides and guards ashore.
- Type of weapon: The Governor of Svalbard recommends the use of rifle caliber .308 Win or larger for polar bear protection. The ammunition must be of the expanding type. All firearms in use on the cruise should be of the same caliber, using the same ammunition.
- Guides should use their “own” rifles: Guides and/or polar bear guards carrying firearms should preferably be responsible for one particular rifle throughout the season (or throughout the whole cruise).

Training

- All guides and polar bear guards should have good shooting skills, be experienced in handling the firearm and have knowledge about polar bear behaviour. At least one guide ashore should have considerable experience, preferably from hunting or active shooting. Unless the user is familiar with the firearm and has had sufficient training with a firearm, the sense of safety provided by firearms is deceptive. Test your weapon and signal gun/pen prior to the cruise. Never point at anyone with a gun or signal pen; loaded or unloaded.

Signal Guns

- To frighten away a polar bear, a signal gun or emergency signal pen (with crack cartridges) is more suitable than a rifle, but flares can not replace a rifle; they only complement it. Moreover, flares are useful for alerting about imminent danger or accident. Flare guns also represent a hazard for humans and should not be loaded unless you need them.

Storage and Maintenance

- **Weapon locker:** All firearms should be stored in the ships' weapon locker, never in the owner's cabin. The bolt should not be stored at the same place as the rifle.
- **Ammunition:** Should be locked up.
- **Running maintenance:** The "owner" has the responsibility of maintaining and cleaning their rifle. Be sure that the oil used to clean the gun is suitable to low temperatures – incorrect cleaning materials can result in weapons jamming in the Arctic.

In Zodiacs - Transportation

- Use a cover to protect the rifle from sea water and dust.
- The rifle should never be loaded or half loaded in the zodiacs.

Ashore

- The expedition staff must keep an overview of their group!
- If approaching a cabin, send an armed person out to check out the cabin first to make sure there are no bears hiding close to or inside the cabin.
- Never let visitors walk alone if not accompanied by a rifle-carrying person.
- Load cartridge (half loading) of at least one firearm immediately when coming ashore outside settlements.
- Load the chamber only to prepare for an actual warning or shot. Never walk around with loaded chamber.
- Empty the chamber immediately when a risky situation ends.
- Never let visitors handle your rifle.
- From Silversea: Additional weapons shore side need to be accessible, but not loaded with live ammunition and always in the sight of the shore party i.e. not left alone.

In Settlements

- Never walk inside the settlements with a half loaded or loaded rifle. Let the bolt be open or remove it, making it visible to everybody that it is unloaded.
- Never walk outside the settlements in polar bear areas without a rifle.

Standard Operating Procedures

10. ESCORTING TOURS

10.1 Prior to Departure of Transportation

- Read and review the Tour Reports (TRs) from previous visits to the destination and any PIQs to know what to expect on tour. Ideally this should be done a couple of days in advance to be prepared for questions from guests.
- Upon arriving at your designated tour start point, check in with the tour guide for that vehicle or boat and review together the timings, destinations, and plans at each stop as given by the EL.
- Introduce the guide to the Quietvox system and set him/her up with the transmitter
- If discrepancies to schedule are noted, advise the EL, AEL or EPC immediately to avoid issues.
- Check that the microphone is working and that the transportation is clean and ready to go.
- Reserve a seat in the front of the transportation (not the very front row however) for one expedition team member. This person is in charge of communications with the guide to ensure the program runs smoothly. This person should also be the first one off the transport to assist guests and answer questions they might have as they disembark.
- If a second staff member is on the tour, take a seat at the rear of the transportation but be ready to disembark at the front of the group at each stop.
- Place a Silversea bus sign in the window and remember to collect it at the day's end.
- In case the step onto the transport is too high, check that there is a step in place for guests to board and unload the transportation. If not, it may be possible to borrow a Zodiac step from the ship for the day.
- If there is more than one staff member assigned to a coach/vehicle/boat, decide who will count guests onto the transportation and who will guide and assist guests to the buses along the route from the ship to the parking area.
- Once the guests begin disembarking the ship, all chit-chat between staff is to cease and staff begin to count the guests onto the coaches as they embark the vehicle. This head count is important to distribute guests evenly between the vehicles.
- As guests load, it may be appropriate to set the guests' Quietvox color code for the tour.
- Once you have a final count and all are seated and ready for departure, be sure to radio in a head count to the person in charge of debark – usually the AEL or Program Coordinator. This should be given as, “22 guests PLUS 3 staff” or simply “22 PLUS 3.”
- Listen to the person in charge of loading. Most of the time one bus will be loaded and then the next. Be proactive, and guide guests accordingly to the bus being loaded.

10.2 During the Tour

- At each and every stop, be sure the guide tells the guests what time to be back (“in 20 minutes” is not acceptable, it must be at a time such as 1:20 pm) and where to meet up with the group at that time in case the guests get separated from the group.
- Be sure the guide also advises the guests if it is safe to leave belongings on the vehicle when they head out. It is always recommended that guests do not leave valuables or important documents on the bus.
- A staff member should be at each door of the vehicle to assist guests off and answer any questions.
- At lunch, comfort, or refreshment stops, at least one staff escort should go inside the venue first to make sure all is ready and prepared (including dietary requests) and to direct guests to toilets, any points of interest, and the dining area.
- Record timings of the tour, guide names, and any comments for the tour report.
- Facilitate a great tour! Recognize when you need to step in to keep the tour on schedule, when the temperature or microphone volume needs to be adjusted etc. If guests unexpectedly need to return to the ship or have a medical emergency, it is your job to work with the local guides and tour operators to take care of them.
- Work with the guide in case they need to talk more (you can ask leading questions), talk less (you can discretely suggest a little rest time for the guests), or when to avoid statements such as, “we usually stop here, but today we are in a hurry.”
- The use of cell phones and/or headphones on tours is discouraged except for communications to the ship and/or other staff on tour for logistics purposes and this should be done quietly and discretely out of ear shot of the guests if possible.
- After each stop it is the responsibility of the expedition staff members to count the guests back onto the vehicle and ensure that all are present and accounted for. In the event that someone is missing, steps will need to be taken to locate the missing individual(s) and further coordination with the tour operator and/or ship may be required.
- While on tours, expedition staff take on in the role of hosts, liaisons between guests and locals, guides, interpreters, educators and are expected to be proactive. Wherever possible staff add to the guests’ experience with knowledge, insight, socializing, or if appropriate buying inexpensive items in a market for sharing. These items can be reimbursed aboard.

10.3 Returning to the Ship

- It’s a good idea to choose a landmark on the outward drive away from the port so that you know when you are getting close to the ship on the return. When you see you are nearing the port, call the Bridge with your VHF radio, or contact someone aboard (EL or HD) by cellular phone to advise the ship you are returning with guests.
- Once you have helped all the guests off the transportation, be sure to collect the bus sign and thoroughly check the bus from back to front for any misplaced items. These can be brought to Reception to be placed in ‘lost and found.’

- Touch base with your guide to make sure there are no outstanding issues or concerns from their perspective or from yours.
- In case there was any issue on the tour, inform the EL ASAP so that he/she is aware of the problem before being approached by guests.

Appendix 1.

Essentials of Zodiac Driving

During operations Zodiac drivers should at all times wear a life vest or float coat, appropriate protective clothing and carry/monitor a VHF radio.

1. Starting the Engine

To start the engine, ensure that the throttle is in the neutral position, the kill cord is in place and that the key is in the ignition. If needed, squeeze the primer bulb until it is firm to allow fuel to reach the engine before starting. Turning the key with the throttle in neutral and the kill cord in place should result in the engine turning over. At this point, with the engine running, any tether lines can be released.

2. Boat Handling

Always when driving consider windage, swell, stream effects, momentum, prop effect, and the boat's pivot point. Anticipate the impact of sea and wind conditions on the handling of your Zodiac.

Windage

- Even a small Zodiac will be affected by wind and the driver needs to take this into consideration especially when coming alongside the platform and in marinas

Stream and Current

- Stream and current will impact the maneuverability of your boat. Pay particular attention to currents when maneuvering alongside the platform. Always tie up with the bow facing forwards into the stream.

Momentum – Carrying way and stopping

- A level of comfort using neutral and letting your boat move under its own momentum will come with practice. All boats “carry way” and a large heavy vessel will require more power to make it move in the first place, hence when moving it has greater momentum and will keep moving longer when in neutral.
- Use a small amount of engine power (i.e. reverse) to halt the last of this momentum; however it is best to think ahead to take advantage of the elements as much as possible – the wind and the stream.
- Especially at slow speeds a boat may travel in a different direction than the way it is pointing due to a combination of wind, stream, and handling characteristics.
- Areas downwind or downstream are your boat's “Danger Zone.” By knowing which direction stream and wind are trying to take the boat you can use them to your advantage, as nature's brakes to slow you or to assist you into a berth. Learn how to read the elements and use them to your advantage.

Pivot Points

- In boats making headway the pivot point is about 1/3 of the boat's length from the bow. Putting the wheel/tiller hard over to the left (port) while making headway, roughly 1/3 of the vessel will turn to port and the remainder goes to starboard.

- When going astern the pivot point moves aft and with the wheel hard over to left (port) with stern way, 1/3 of the vessel moves to port, the remainder to starboard.

Steering

- Outboards steer from the thrust of water pushed by the prop as it is turned when the engine is in gear. In other words, “NO GEAR, NO STEER.” To drive in the correct direction before power is applied remember, “WHEEL BEFORE GEAR.”
- When driving at slow speed a controlled “burst of power” is effective to increase the maneuverability of the boat.

Turning

- Steering in a small space take into account all the points above
- Position the boat taking into account wind and stream. Approach as slowly as possible remembering that speed carried into the turn will make the turn larger.
- Turn the wheel/tiller hard over, engage headway, monitor the turn, and put the gear into neutral when space is short. As needed turn hard over in the opposite direction, engage astern, and monitor the turn. Continue this sequence as needed.
- It is usual to turn into whichever element is strongest, either wind or stream.

Coming Alongside

- Take into account how your craft reacts to the wind and current. Approach into the wind or stream and use whichever one will have the greatest effect. Prepare lines and plan your “escape” route in case the maneuver needs improvement.
- Your ideal angle of approach is 30 – 40 degrees off the bow. Use neutral to keep speed and momentum low. At about a boat’s length distant, steer away from the pontoon and increase headway. This will straighten the boat without needing to go into reverse. If you are too fast or too steep, steer towards the pontoon and engage astern momentarily to bring the boat alongside. This has the effect of slowing you and bringing the stern in.

Leaving the pontoon

- If the route ahead is clear without wind or current a good push off on the bow and headway will suffice. However it is usually better to come away in reverse, utilizing a bit of forward and the shape of the boat to roll on the bow. Engage sternway and as the stern comes away, straighten up the wheel. Once well clear move off ahead.
- To leave with any wind or current, you may need to utilize spring lines – a bow or a stern spring. Drive against the line, engage neutral, slip the spring and motor away.

3. Anchoring

The Zodiac’s anchor is one of the most important pieces of safety equipment. NEVER leave the ship without an anchor.

- Look for shelter from the elements, consider the tide and check the suitability of the bottom. Will there be enough room to swing free of other boats and terrain?
- Bring the boat to a stop into the prevail wind or current
- Lower the anchor slowly and in a controlled way until it touches the bottom
- Motor back slowly paying out the anchor rope so that it doesn't pile up upon itself

- Pay out plenty of line – the longer the line – the more secure your boat will be
- Once the rope has been paid out tie off at the bow and wait for the wind and current to set the anchor. If needed, motor gently astern to gradually dig the anchor in.
- Check the boat is holding position using two objects in line with each other. If the two objects shift orientation the anchor is dragging - raise it and start again.
- When anchoring the Zodiac remember that it is the driver's responsibility to ensure that the boats are safely secured and clear of any dangers.
- When leaving an anchorage, engage ahead to ease the load, haul in the line and chain, taking care not to run over your line. Stow the anchor securely.

4. Rules Of The Road

Head-On Under Power

- When you are traveling head-on toward another vessel under power, both vessels should turn to **Starboard** so that you pass Port-to-Port
- Make your turn obvious so the other vessel's skipper can clearly see your intention

Crossing Under Power

- If you are showing your starboard side, you must give way and pass behind the other vessel. If you are showing your port side you must stick to your course.
- Another way to think of this is if the vessel is off to your starboard side they have right-of-way, or "RIGHT HAS MIGHT."
- Only change course if it is the only way to avoid collision.

Overtaking Under Power

- It is the responsibility of the overtaking vessel to stay well clear of the vessel being overtaken, while the overtaken vessel should maintain speed and course.

Using Channels

- On the water whenever possible drive on the **right hand** side of a channel

Lateral Markers

- Lateral marks are used to show a channel
- The meanings of the marker vary around the world – be sure you know the rules in the waters where you are operating
- **International (non USA or Canada)** – "*A little red port left in the glass*" – meaning leave the red channel markers to the port side of your boat as you enter into the harbor. Green markers will be passed on the starboard side of your boat.
- **USA & Canada (and some others)** – "*red on the right when returning*" – meaning leave the red markers to your right side as you enter a harbor (return from sea) and green markers on the left side.

5. Weather

A basic understanding of wind strength, direction, and what effect it has while you are out on the water is essential for skippers of small boats. Remember wind against the stream will make the sea state worse.

The Beaufort Scale and interpreting weather forecasts

Force	Wind Speed	Description	Wave height	Sea State
0	Less than 1 knot	Calm	0 m	Mirror like
1	1 -3 knots	Light Air	Up to 0.1m	Ripples on the surface
2	4 – 6 knots	Light Breeze	Up to 0.3m	Small wavelets with smooth crests
3	7 – 10 knots	Gentle Breeze	Up to 0.9m	Large wavelets with crests starting to break
4	11 – 16 knots	Moderate Breeze	Up to 1.5m	Large waves begin to form with the white foam crests
5	12 – 21 knots	Fresh Breeze	Up to 2.5m	Moderate waves and many white horses
6	More than 21 knots	Strong Breeze and more	2.5m and more	Large Waves and higher

Tides

Gravitational effects of sun and moon cause the seas to rise and fall giving us tides that vary depending on the position of the sun and the moon relative to the Earth.

Spring and neap tides

When the Earth, sun and moon are in directly line with each other, the sun and the moon pull together on the same part of the ocean, and we experience ‘spring tides’ (nothing to do with season of spring). Spring tides tend to be the most extreme.

When the sun, Earth and the moon are not in line and the sun and the moon are pulling against each other on different parts of the ocean, our tidal range is smaller. When the moon, Earth and sun form a right angle the weakest ‘neap tides’ are in effect.

Sea Breeze

The sun heats up the land's surface, especially during the middle of the day. The land transmits this heat to the air above it. Meanwhile, the sea and the air above do not warm up so quickly. The difference in temperature between the air over the land and the air over the sea means there is a pressure difference too. Air rushes from the sea to the land to equalize this pressure difference. This is what creates a sea breeze.

Land Breeze

At night the land cools quickly and temperatures drop below sea temperature. The temperature of the air over land drops below the temperature of air over the sea. The

difference in temperatures means a difference in pressure and air rushes out to equalize the pressure. This creates a land breeze which is not as strong as a sea breeze.

Wind Against Tide

When wind blows against the flow of the tide it can create larger, steeper waves. Be alert for this around harbor entrances and headlands where currents are stronger.

Wind With Tide

Wind blowing the same way as tidal flow can make the sea appear calm and smooth. Don't be fooled into thinking the wind is light, when in fact it may be strong.

Appendix 2.

OPERATING INSTRUCTIONS FOR SILVER CLOUD KAYAK PROGRAM
July 2018**1. Introduction**

This document aims to provide background information to compliment the SOPs and help Kayak Guides run an exceptional kayak program providing fun, memorable and enjoyable excursions for Silversea guests. It is a dynamic document, so please feel free to add to it as we learn and grow as a collective of Kayak Guides establishing the best way to offer kayaking on the Silver Cloud. This document should be used in conjunction with current approved SOPs. The Silversea Job Descriptions also highlight minimum requirements for staff.

NOTE: All the kayak related paperwork and additional information including kayak PowerPoint presentations, files, and photos are available on the kayak hard drive, and in the “Kayak” folder that is currently located on the desktop of one of the two computers at the Expedition Reception counter. Printing is available on this computer but the files are only here, not on the server.

2. On Board Operations

At the first welcome of guests on board, the Expedition Leader should either have the lead guide, or the EL introduce the kayak team, mention that there is a kayak program on board, and advise that all interested guests will need to attend a mandatory briefing (announce the time). It is also helpful to have a “Kayak Poster” (available on the hard drive) on the kayak bulletin board with some details about the program, as well as a laminated copy of the FAQs on the board.

After this introduction, the Kayak Guides should stand beside the kayak board thus being available to answer questions. We also posted the timing for the mandatory meeting highlighting that the doors will close 5 minutes after meeting start as this is also a safety briefing.

It is important to make sure that the kayak meeting is advertised in the Chronicle. Publications in the Chronicle need to be coordinated with admin staff early the evening before the event.

In general, we found it best to:

- Introduce kayaking at the welcome briefing and again at mandatory Zodiac, AECO, or IAATO briefing when time suits
- Have a poster describing the kayak program on the kayak noticeboard
- Have a copy of FAQs on noticeboard
- Publicize the meeting in the Chronicle
- Publicize the meeting via a poster on the noticeboard
- Possibly make an announcement 10 minutes before mandatory meeting, if EL allows

These various formats assure everyone is aware the meeting is happening and is mandatory.

Selection of Paddlers

The kayaker experience form asks that guests have swimming and watersports experience and speak conversational English. They are required to attend all relevant briefings. The age limit for paddlers is non-negotiable due to insurance reasons.

Guests are asked to have suitable health and fitness. It is difficult to assess all these criteria from brief conversations and the experience form. If there are concerns, some strategies might be to have guests try on dry suits ahead of their group time, sit in a kayak on deck, have extended conversations to assess English ability, whatever it takes for you and the guest to assess whether the kayak program is suitable for them. Kayak guides reserve the right to refuse participation of guests as noted in the SOPs and Silversea management will support the decision.

Briefings

There are a variety of briefings pre-made on the hard drive. Feel free to customize them. At a minimum, briefings will provide guests with information regarding safety guidelines, relevant wildlife and operating regulations, set realistic expectations, recommended dress and other information deemed necessary by the kayak team. Kayakers are required to attend all relevant briefings.

Mandatory Meeting

We usually asked the Assistant Expedition Leader (AEL) for an hour slot in the Explorer lounge for this meeting. Often attendance is 75-100 people. The meeting takes about 30-35 minutes plus time for questions and every guest in attendance and wanting to participate needs to fill out an experience form, which takes time. Usually the guides would start on stage while additional staff stay at the doors and close the doors after 5 minutes and keep an eye to be sure that guests don't wander into the presentation for the last 5 minutes and then join the program. We found it most helpful to have guests fill out the form at the presentation, as this then becomes your attendance sheet for the safety briefing. It becomes complicated if days later people want to join the program and insist they were at the meeting but did not fill out a form.

Beware of making exceptions for guests who miss the mandatory meeting. The EL asked the Kayak Guides to make a special exception and once one person was allowed to have an 'individual briefing' after the mandatory, many more guests approached the Guides wanting the same privilege.

Following the meeting, the Kayak Guides acquire a ship manifest from the Reception Desk and use this with the experience forms to create a randomly ordered kayak list for potential paddlers. This list is posted on the kayak notice board along with the list of paddlers for the first day. Examples of this are on the kayak hard drive and kayak folder at expedition desk.

The night before an intended kayak operation, liaise with AEL to send an email to Staff Captain requesting number of Zodiacs and kayaks, time for Zodiacs and kayaks, and any special instructions (scouting Zodiac, side gate needed/not needed when we are alongside in port areas). It is advised to head to the Bridge and have this information written on the whiteboard by the officer on duty in the evening as well. In the morning, you can confirm with the officer on watch that all is in order.

3. Day-to-Day Operations

For wilderness areas such as Antarctica/Arctic:

In the evening the kayak guides generate an excel sheet which lists the 10 or 12 paddlers on the team for the next day including any relevant timings for meetings and other details. The waitlist for remaining kayakers is also posted as part of this excel spreadsheet for transparency. Should a guest cancel at the last minute the next person in line can be contacted.

On the paddling day, the kayak guides meet with the safety driver on the bridge upon arrival to assess conditions and decide where to paddle, check hazards, discuss where to anchor kayaks if required etc. The Zodiac driver then disembarks into Zodiac with all necessary gear to put the kayaks on tow and firearms (where needed).

Both Kayak Guides meet the group at the assigned time in deck 5 lobby. Guests are advised to be in casual clothes. At the meeting guides hand out the “how to dress sheet”. They review clothing, how to get in and out of kayak, team work, site specific information, ice, wildlife and other relevant information. There is a cheat sheet on the hard drive with a checklist for this meeting. Following this meeting guests complete a waiver form and walk immediately to the mudroom to collect kayak gear. Guests are asked to reconvene in the mudroom, dressed and ready to paddle approximately 45 min - hour after the initial meeting time. Normally, it will take an additional 15 minutes from the dressed meeting point time until guests have their skirts on, (skirts are left in the mudroom) are checked and ready to disembark.

The kayak guides organize and bring paddles and safety gear and are responsible to assure guests are safety checked and have all they need to paddle. The Zodiac driver will have already taken the anchor ball, mesh bag with pumps/gear, and towlines. One or two Zodiacs are used to transport guests to their awaiting kayaks if they have been anchored. If the paddling team is 10 or less then sometimes everyone joins the Kayak Safety Driver in his boat to transport to kayaks. Wherever possible and especially with 12 paddlers, 2 Zodiacs for disembarking/embarking in to kayaks is better so the system is smooth, less nerve racking for guests and reduces risk. The Zodiacs are rated to a maximum of 15, however the ship’s officers prefer us to not load the boats that full unless in emergency and in some parts of the world regulations cap the passenger load at 12. The Kayak Guides then demonstrate an efficient and cautious way to disembark in to the kayaks. All guests are then loaded in to boats.

During the paddle, the guests are asked to stay together within shouting distance of at least two other kayaks and the Guide.

At the end of the paddle, the guests return to the Zodiac using the reverse of the embarkation procedure, helping each other in to the Zodiac as a team.

Upon return to the ship, one guide joins the guests in the mudroom to retrieve all borrowed gear. Used gear is kept separate from clean gear for cleaning efficiency at the end of the voyage. The other guide stays with the Zodiac driver to assist Zodiac drivers tying up kayaks and lifting them on board.

There is a prepared PowerPoint presentation that can be shown to staff to familiarize them with the kayak program, and specifically how to assist with lifting/lowering kayaks. Additionally, we encourage staff that are new on board to attend the mandatory kayak briefing so they are informed to answer guest questions.

Back on board, there is kayak report that needs to be written after each excursion. See section ‘paperwork hints’ for more details.

Number of Guests per Paddle

Guests will paddle in double kayaks and guides will paddle in singles. The absolute minimum ratios, as outlined in the SOPs are eight guests to one guide in kayak, with one Zodiac on the water. Whenever possible, even if there are only six guests, we try to have both guides on the water. A team of three (two guides and one driver) make it much easier for lowering and raising kayaks, organizing gear, as well as giving the guests a more personalized and special experience. If there are an uneven number of paddlers, speak to the EL to see if a staff member can join the paddling team. As well, many crew are keen to paddle and can be utilized to fill empty seats at short notice. We found it helpful to have HD send an email (sent on our behalf but which we wrote) explaining that there is a kayak program on board, and finding out which crew might be interested in joining for a paddle. We encourage interested crew to attend a passenger briefing when they are available. From this list of

interested crew, we compiled a list of who might be available in morning versus afternoon so that at short notice we could find someone easily to fill a spot.

Doubles vs. Single Kayaks

Please only allow guests to paddle in double kayaks. When the group is small and there are an uneven number of paddlers, it is tempting to allow a guest to paddle a guide's single rather than asking staff/crew to join a guest in a double kayak. This will set a precedent, other guests will ask for singles, images may emerge on social media and future guides may be badgered to offer the same privilege.

Timelines

Kayak excursions are meant to fit in with the overall ship excursion program and thus fall within an allotted time slot. Kayak Guides need to coordinate with the EL to determine excursion length so as to cause minimal disruption to the overall ship operation. SOPs state that excursions are only during daylight hours, but otherwise are at the guide's discretion. Guides can alter excursions at any time based on weather, conditions, comfort, skill level of guests, or any other factors a guide deems to infringe on safety of guests. Communicate with EL regarding changing plans. As well, we found that sometimes the EL plans would change either lengthening or shortening an excursion so it is helpful to have the safety driver check in with the EL near the scheduled excursion end time if you are keen for more time on the water, or if you see activity different than expected in case excursion timings have changed.

4. Firearms in the Arctic Kayak Program

We experimented with several ways to operate with firearms and this was our preferred method thus far:

- Kayak safety driver took the firearms with them while setting up and anchoring kayaks and thus was able to protect his/herself. There was a large designated pelican case that is outfitted by the firearms team containing all the firearms and ammunition needed for kayak guides and safety driver.
- We found it easiest to take the firearms in to our kayaks after all the guests were comfortably seated in kayaks yet still hanging close to the safety zodiac.
- For the first kayak guide, the rifle was carried in a pelican case in zodiac then kept in a long soft waterproof case on/in kayak. Ammunition and flare pistol were carried in a small separate dry bag. The 2nd guide carried flare pistol and ammunition in a small dry bag on/in kayak.
- At the end of the paddle, the guides would often organize a raft up and group photo, then advise guests to enjoy their surroundings for a final few minutes while the guides paddled to the zodiac and returned firearms to the kayak safety driver. Then guests were invited to embark in to the zodiac.
- Kayak guides brought the firearms back on board when they joined the guests on ship, and packed them away as directed by Firearms Master. In our case, we took the guide rifle out of the dry bag, reclosed the pelican case, hung the dry bag on hooks and locked the full case in the firearms specific lock up area.
- One kayak guide and driver took Breathalyzer test daily with the rest of firearm handlers and the other kayak guide carried only a flare pistol.

5. Paperwork Hints

A kayak report is to be completed at the end of each excursion. The Kayak Guides write the report and the driver completes GPS coordinates, weather and relevant timings. These reports are finalized and

given to the AEL at the end of the voyage. The reports are currently sent to Tim Amm, shore side by the AEL. Kayak guides also put the reports in appropriate destination folders found on AEL computer. It is important that the format for report naming is followed explicitly so that the forms are properly filed in the company wide system. We found it easiest to cut/paste/write over other reports to keep the format.

Waiver forms are retained together in a drawer in the expedition office and given to the AEL at the end of the season.

6. Operations in Port

If you are hoping to kayak in a port town check first if we have port authority (see below). It is also useful to search on Google and Google maps to see if the site is suitable and talk to other staff. Where possible we found it super useful to be on the Bridge for the approach and even take a Zodiac for a quick scout before commencing the kayak. It was helpful to let the bridge know the night before the port paddle that we were hoping to kayak so where possible the ship could dock port side on the pier to allow for the easy movement of kayaks from the starboard side. When necessary the kayaks can be carried around the bow and lowered/raised on port side, but this is a lot more work.

From our experience, it is at least a half hour from docking time to when the deck hands are able to lower a Zodiac to start kayak operations. Check if it is a busy port day (provisions, garbage) because sometimes this could be up to an hour. As well, request a time for gangway as this will need to be specially arranged since often in port only the kayakers are disembarking into Zodiacs. It takes around 45 minutes to lower 1 Zodiac and 3 loads of kayaks and have them on tow ready for kayakers.

Remember to request gangway 15 min before you need it for your return and ask the Bridge to organize lifting kayaks/Zodiacs as well. Most port days we had only 1 Zodiac and so took only 10 paddlers to keep it simple and efficient. A typical day using Dover, UK as an example:

- 9:00 Silver Cloud alongside
- 9:30 Begin lowering 1 Zodiac and 6 doubles 2 singles. Kayak driver on pilot ladder.
- 10:25 Gangway ready
- 10:30 Kayakers disembark into Zodiac with kayaks on tow
- 12:30 Request gangway to be ready in 15 min
- 12:45 Kayakers embark Silver Cloud, request raise kayaks in 15
- 13:00 Kayaks and Zodiac raised
- 13:30 Kayak driver on pilot ladder, finished operation

In the British Isles often guests were able to kayak and attend an excursion, however it was challenging to schedule. Lots of flexibility and organization was needed as guests often came back late from tours or changed their mind after being tired from tour. In Norway, most of the kayak excursions were offered in lieu of an excursion.

Port Authority

For port areas such as in the British Isles and Norway, permission is needed from the Port Authority to lower Zodiacs and allow kayak operations. This request is put through the AEL who then works with the financial officer to gain permission. These permissions are sent via email and if a copy is sent to the Kayak Guide as well, it is useful to include these in the destination folders for future guides.

Frequently, specific instructions are included in the email such as working channel, exclusion zones, and a request to check-in before beginning operations.

7. Inventory

Currently not all of the kayak gear is loaded in to the fleet-wide Fidelo inventory system. There is an Excel spreadsheet for the kayak inventory, which we use as our master list.

When new items arrive:

When new items arrive, cross check the items with the list of items to be received. This list of items expected can be requested from Tim Amm. The new arriving items (received after June 11, 2018) will already be in the Fidelo system and have an assigned code. If there are already some of these items onboard, send an email to Provisions Manager, Staff Assistant and cc Tim Amm to have the total number onboard updated. These are the “Big 3” who need to be included in all emails regarding inventory items:

Tim Amm	timothy@silversea.com
Provisions Mngr	schotelstoremanager@silversea.com
Staff Assistant	scexpeditionstaffasst@silversea.com

For example, if on July 10 you receive four new 8L dry bags, check that four are listed on the incoming goods list. Check the kayak storeroom and inventory sheet to see if we already have some of this exact item on board. You may find we have 20 on board so tell the Big 3 this new total number is 24 so it can be updated in the system. If any items are lost, broken, or no longer usable please inform the Big 3 so they can update the inventory. Otherwise it is difficult to order new gear if the inventory shows us having plenty on board.

When you want to order items, find the POC (Point of Consumption) code from the provisions manager and send an email to the Big 3 to order items. If there is not yet a POC for this item, you may have to sit with the provisions manager to source an image and description from a website to be sure the right item is ordered. Many stationary items are available easily onboard by contacting the Big 3.

Ordering

For consumables (such as dry suit wash, stationary), email Staff Assistant and Provisions Manager and cc Tim Amm and they will try to source it onboard or order this item on your behalf. If you need an item urgently, or have an idea of a purchase which will enhance the kayak program in any way, speak with the EL before purchasing for approval. The item may still need to be purchased through official channels, or you may be granted permission to purchase and be reimbursed onboard. If you purchase without prior permission, there is a strong chance you will not be reimbursed.

8. Maintenance

In general, all the kayak gear that was used during a voyage is washed at the end of that voyage. There is specific dry suit/neoprene wash available. Washing is easiest in the mudroom after boots have been collected and with kayak team and perhaps one or two extra hands takes about 1-1.5 hours. Normally it takes 2 nights and one day for a full mudroom of gear to dry. There is one fan and dehumidifier in the kayak room and a 2nd fan can be borrowed through housekeeping by asking reception. They will give you the pager to ring to request delivery of the fan. When you are finished with the fan, notify housekeeping and they will pick up the fan and put it away. The gear is in great shape thus far and there are lots of replacement/repair items available on board.

The kayaks are also in great shape. There are lots of replacement/repair items available on board.

A sheet could be posted in the kayak room showing when zippers and latex seals were last maintained. The kayak room is quite warm and dry and this maintenance is useful every 2 months or so.

Storing Kayaks When Not in Use

The kayaks are stored Deck 8 on the starboard side. All the boats are on racks. On a daily basis the kayaks are left in the open, tied to the racks. When the boats are not being used for a long period such as during West Africa trips, it is best if the boats are clean and dry and under a tarp.

9. For the Kayak Safety Drivers

A few tips, tricks and responsibilities for the safety driver:

- There is a full document that outlines how to raise and lower the kayaks. It is on the hard drive and is super useful with tip for those new to the Silver Cloud.
- Once a trip, usually near the end, kayak drivers wash the boats and check hatches, and look for maintenance issues. The driver also keeps in good repair the mesh bag of gear (pumps, sponges), tow lines, etc.
- There is a section of the report (GPS etc.) that the drivers complete.
- Kayak Safety Drivers need to be comfortable using the pilot ladder to facilitate operations in a smooth manner, especially in areas (such as port towns) where Zodiacs are only being lowered for the kayak program.
- As per SOPs, Kayak Safety Drivers need to scout for wildlife (polar bears and walrus) prior to and during the kayak excursion. Binoculars are available from Staff assistant if needed.
- Kayak guides should also be proficient support drivers prior to kayak guiding.

10. Gear for Kayak Guides and Guests

Silversea has organized a pro deal for kayak guides who want to purchase Kokotat equipment. The system is new and I (Valerie) have just tried it. Here's how it went

- Mid-April: I sent an email to Mary Bergan and Tim Amm (mary@stshore.com, timothy@silversea.com) requesting exactly which piece of gear I wanted. Mary wrote me back confirming my choice, where I would like the item delivered, and price. I had requested the item be sent to the Silver Cloud ASAP.
- Early May: my item was out of stock and in early May I was given a timeline of 3-4 weeks for availability. I confirmed I still wanted the item and phoned Mary to give my credit card details. Mary and I were in communication, gear was still on its way.
- July 6: My disembarkation day-My item arrived in Seattle and Mary asked where I would like the item sent. I am excited that my gear will be waiting for me on the Cloud for my next contract.

Gear for Guests

Guests are highly encouraged to also wear at all times their kayak skirt, neoprene booties, and are offered mitts of some description. Outside of the Polar Regions it is up to the guides discretion whether or not guests are required to wear dry suits based on water temperature, conditions, guide experience and judgment etc.

Safety Gear

There is always emergency gear in case of stranding in every zodiac. The kayak safety zodiac and/or guides will carry additional safety gear to assist the program and in case kayakers capsize. The items carried by the kayak team are not in this moment regulated by any outside body and therefore are at the discretion of the guides on board. There are several styles of dry bags available within the kayak

inventory to carry safety gear and many gear options. Should you need additional warm gears consult HD for lost property on ship or gain pre-approval before purchasing gear. Suggested items that are available for the kit include:

- tarp
- drinking water
- flashlight
- first aid kit
- emergency blankets/bivy bag
- closed cell foam
- weatherproof matches
- compass
- whistles
- duct tape
- SOLAS rations
- emergency candles
- sleeping bag
- extra hats and gloves
- multi-tool
- large bag of hand/feet warmers
- bailing pumps
- sponges
- throw bags
- extra paddle
- zip ties
- small pieces of rope