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OPERATIONAL FACTORS/HUMAN PERFORMANCE

Group Chair's Factual Report - Attachment 14
Heli-Ski US Association Operating Guidelines
October 25, 2022

Heli-Skiing Safety & Operating Guidelines

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¹ HSUS is a Utah non-profit corporation.

HELI-SKIING SAFETY & OPERATING GUIDELINES

I. INTRODUCTION

These Heli-Skiing Safety & Operating Guidelines (HSOG) are intended to provide the helicopter pilot, helicopter operator, outfitter and guide with an introduction to the fundamentals of helicopter skiing operations, to help establish guidelines for standard practices within the helicopter skiing industry, to provide a framework for continuing development of training and safety programs and to promote safety by identification of best practices in the industry. The HSOG guidelines should be supplemental to the helicopter operator's Part 135 certificate requirements and operations, safety and training programs. In addition, the HSOGs require that each helicopter skiing outfitter develop, adopt and implement its own Safety and Operations Plan and daily Operating Procedures. Where a conflict may exist in those requirements, mandatory operations specifications adopted as part of the Part 135 operator's operating certificate and the pilots' professional judgment should control.

Importantly, these HSOGs should not be regarded as establishing rigid standards that allow for only one method of addressing a particular safety or operations element. Operational circumstances may make variance from HSOG guidelines and the outfitter's Safety and Operations Plan appropriate. Similarly, the unique circumstances of a particular Helicopter Skiing Operation may dictate procedures that vary from those of other operations. Even careful implementation of a well-conceived Safety and Operations Plan will not eliminate the risks that are inherent in backcountry winter recreation activities. Ultimately, it is an Outfitter's successful process for addressing and mitigating the underlying risks to Clients and employees that is most important.

II. DEFINITIONS

- A Helicopter Skiing: Guided winter recreation activities including, but not limited to skiing, snowboarding, touring and snowshoeing where a helicopter is utilized to provide up-hill transportation for participants. Helicopter Skiing does not include transportation of individuals or their equipment to or from winter activity locations unless up-hill transportation is also provided. Helicopter Skiing may include transportation of models, athletes and photographers for photography and film making. However, professional photography and filmmaking are not included in "regular operations" as that phrase is used herein. All aviation activities during Helicopter Skiing should be conducted in a manner consistent with FAA Part 135 regulations.

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- B. Outfitter: A person or organization that provides Helicopter Skiing services to the public and that meets the guidelines established under this HSOG Program.
- C. Operator: A person or organization that provides helicopters and Pilots to an Outfitter under a Part 135 Certificate issued by the Federal Aviation Administration and that meets the guidelines established under this HSOG Program.
- D. Helicopter Skiing Operation: A combination of the resources and efforts of the Outfitter and Operator.
- E. Heli-Ski U.S. Association, Inc.: A Utah not-for-profit corporation which serves as a trade association for Helicopter Skiing Outfitters and having as its principal purposes the promotion of safety in Helicopter Skiing and promotion and support of Helicopter Skiing (herein: “Heli-Ski U.S.”).
- F. Guide Qualification Guidelines: Guidelines setting out recommended qualifications for Associate Guides, Guides and Lead Guides as adopted by Heli Ski U.S. A copy of the Guide Qualification Guidelines, as are in effect at the date these revised HSOGs are adopted, is annexed hereto as Appendix 1. In these HSOG’s, where the term “guide” is used in lower case, it is intended to refer collectively to Associate Guides, Guides and Lead Guides.
- G. Associate Guide: An individual designated by the Outfitter who meets the recommended qualifications for that position as set forth in the Guide Qualification Guidelines (See Appendix 1). A Qualifying Associate Guide is one who meets the recommended qualifications to lead a Group, under the direction of a Lead Guide, as set forth in the Guide Qualification Guidelines.
- H. Guide: An individual designated by the Outfitter to supervise the Helicopter Skiing of a Group of Clients and who meets the recommended qualifications for that position as established in the Guide Qualification Guidelines (See Appendix 1).
- I. Lead Guide: An individual designated by an Outfitter to supervise the activities of one or more Groups and who meets the recommended qualifications for that position as established in the Guide Qualification Guidelines. At least one Lead Guide should be designated to each helicopter in operation, each day (See Appendix 1).
- J. Outfitter Safety Officer: A person qualified to act as a Guide or Lead Guide and designated by the Outfitter to coordinate and oversee

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implementation of the guidelines set forth herein and in the Operator's Safety and Operations Plan. An Outfitter Safety Officer may also be given responsibility to oversee OSHA and/or environmental regulation compliance.

- K. Client: An individual participant in Helicopter Skiing, but not a guide when working in his/her professional capacity. However, "Client" shall include any Outfitter or Operator employee that is participating in Helicopter Skiing activities and who is not at that time qualified and acting as a guide. Example: a member of Ground Crew or office staff that joins a Group shall be treated as a Client for purposes of pre-flight safety briefings, use of safety equipment and other operating procedures.
- L. Group: A number of Clients in the company and under the supervision of one or more guides participating in Helicopter Skiing, the total of which shall be at or less than the full passenger capacity of the helicopter used for their transportation. Multiple Groups may be combined to work together, provided that the combined Group is led by a Guide or Lead Guide and an Associate Guide or Guide accompanies the second Group.
- M. Skiing Activities: All activities by Clients and guides, whether or not actually skiing, occurring between successfully exiting from under the rotor of a helicopter at a Landing Zone and coming under the rotor of a helicopter at a Pick-up Zone.
- N. Ground Crew: All personnel who have received training as set forth herein and who assist in ground operations, including but not limited to Flight Following, Client loading and unloading, and refueling.
- O. Flight Following: An ongoing process of tracking and recording the location, status and intentions of aircraft. The location and status of Groups should also be tracked and recorded as part of the Flight Following function. Flight following is ordinarily conducted at an Operations Base or Day Staging Area. Outfitters are encouraged to utilize evolving technologies to enhance Flight Following functions. See VI(c), below.
- P. Landing Zone: Location conforming with the requirements of Section VIII (D) of these HSOG, where Guides and Clients are intended to disembark the aircraft to commence Skiing Activities (sometimes herein, "LZ").
- Q. Pickup Zone: Location conforming with the requirements of Section VIII (F) of these HSOG, where Guides and Clients are intended to board the aircraft for transport to re-commence Helicopter Skiing Activities or

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return to the Outfitter's operations base or staging area (sometimes herein, "PZ").

- R. Operating Season: Notwithstanding that same may commence in fall and/or extend into spring, a period of time associated with a single winter during which an Outfitter conducts Helicopter Skiing Activities. Where an Operating Season spans portions of two calendar years, it should be denominated by the year in which the month of January falls.
- S. Operating Area: All that area on public and/or private lands where the Heli Skiing Operation legally conducts Helicopter Skiing.
- T. Operations Base: A fixed location from which an Outfitter conducts Helicopter Skiing Operations. The Operations Base may be in a permanent or seasonal facility and should be in reasonable proximity to the area where Skiing Activities are conducted. The Operations Base should include adequate facilities for daily guide meetings, secure space for maintenance and storage of emergency equipment and communications equipment to facilitate communication with guides, Ground Crew, pilots, Flight Following personnel and emergency coordination. Except where emergency equipment is cached or is transported in an appropriate vehicle to facilitate remote operations, it should be stored at the Operations Base.
- U. Day Staging Area: Location from which Helicopter Skiing operations are staged on any particular day. The Day Staging Area may be the same as the Operations Base or a remote staging area. Flight Following may be conducted at the Day Staging Area or at the Operations Base if adequate communications can be maintained. A copy of the Emergency Manual should be available at the Day Staging Area. The Trauma Pack, Oxygen Pack and appropriate rescue gear (see Section X of these HSOG's) should be available at the Day Staging Area or within reasonable proximity to that location.
- V. Emergency Manual: A separately bound and tabbed compilation of the Outfitter's Emergency Communications Plan (including a table of emergency contacts with phone numbers), Field Evacuation Plan, and Emergency Response Plans for Missing or Overdue Aircraft, Aircraft Accident, Aircraft Mechanical Failure, Missing Skier, Skier Injury or Medical Emergency, Avalanche and Fuel Spill. The Emergency Manual can be a dedicated subsection of the Safety and Operations Plan.
- W. Safety and Practices Review Committee. A permanent committee of the Board of Directors of Heli-Ski U.S. with responsibility to oversee revisions to these HSOGs (subject to Board approval), to implement the

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Performance Review process to help assure compliance with these HSOGs and to make policy recommendations to the Board on safety matters.

- X. Performance Reviews, Performance Review Checklist: Outfitter and Operator conformance to the guidelines set forth in these HSOGs will be established through periodic Performance Reviews as described at Section XIII. Performance Reviews will utilize the Performance Review Checklist annexed hereto as Appendix 2. Subject to Board approval, the Safety and Practices Review Committee may amend the Performance Review Checklist from time-to-time.

III. OPERATING PLAN

At or before beginning operations for any season, the Outfitter and Operator should agree upon and then follow a safety and operations plan (as defined in this Section, “Safety & Operations Plan”) and operating procedures (as defined at Section IX, below, “Operating Procedures”).

A. Safety & Operations Plan. The Outfitter should establish and implement a Safety & Operations Plan that is consistent with the guidelines set forth herein, which satisfies the requirements of the Heli Ski U.S. Performance Review checklist and which corresponds to its Emergency Manual. In addition, the Outfitter should appoint an Outfitter Safety Officer who will coordinate and oversee implementation of the Safety & Operations Plan and who should coordinate Guide-Pilot co-training with the Lead Pilot.

B. Operations Map & Catalogue of Runs.

1. Operations Map. To facilitate efficient operations, Outfitters are encouraged to develop, regularly update and keep available during their Operating Season, a composite Operations Map (or Maps where appropriate) of the Operating Area. The Operations Map should be an evolving asset of the Outfitter, expanding in detail and function over time. It is recommended that the Operations Map(s) include:
 - a. Permit area boundaries and exclusion zones and wildlife avoidance areas within permit areas;
 - b. Primary flight paths, no-fly zones and special aviation hazards (i.e. elevated power lines, antennae, etc.);
 - c. Primary ski zones, named runs (as practical), staging areas and significant landmarks;
 - d. Air and ground evacuation routes;
 - e. Communication equipment locations and remote weather station locations;
 - f. Emergency equipment cache locations, emergency shelter locations and fuel cache locations (if any); and
 - g. Other items as determined by the Outfitter and Operator.

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A copy of the Operations Map should be kept on display at the Operations Base in the location where guide meetings are conducted. It is recommended that a second copy be available at the Day Staging Area, kept with Emergency Manual to facilitate emergency rescue response.

2. Run Catalogue. To facilitate daily operations, guide training and pilot orientation, develop a catalogue of ski runs that it uses on a regular basis. The Run Catalogue should be developed over a period of several seasons so that a variety of conditions and year-to-year variations in runs, hazards and LZ's can be noted. The Run Catalogue may be kept in hard-copy or digital format. It is suggested that the catalogue include:
 - a. GPS coordinates for at least one LZ and PZ in each area where Skiing Activities are regularly conducted. Additional GPS coordinates for LZ's and PZ's can be added at Outfitter and Operator discretion;
 - b. Digital or film photographs of runs used on a regular basis;
 - c. A narrative description of the runs, degree of difficulty and particular Risks (See Section V, B).

C. VFR Flight Rules. All aircraft operations should be conducted under Visual Flight Rules (VFR) as defined by the Federal Aviation Administration. Without limiting application of those rules, each operator should adopt and follow consistent guidelines appropriate to their operating area and prevailing weather patterns with regard to minimum ceilings and prevailing visibility.

D. Icing. Operations should not be conducted in known icing conditions or forecast icing conditions.

E. Coordination of Operations. Where other flight operations, including other helicopter skiing operations regularly use the same or partially co-extensive operating area, the Operator should meet with other operators to establish a communications plan and, as necessary, to coordinate routes, position reporting, noise, safety procedures, and other matters as appropriate.

F. Regular Cessation of Operations. Regular operations should terminate not less than one (1) hour before sunset.²

G. Special Termination of Operations. Each Pilot and Lead Guide shall have authority to cancel operations and to order any or all Groups to be evacuated from the field any time conditions warrant in his or her opinion. Neither the Lead Guide nor the Pilot shall have authority to overrule an affirmative decision by the other to remove Groups from the field. Conditions warranting termination of operations and/or evacuation from the field may include, but are not limited to:

² Professional film and photographic work is excluded from "regular operations."
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1. Visibility or conditions deteriorating (or, within relevant time periods, likely to deteriorate) to marginal VFR and/or to Instrument Meteorological Conditions (IMC).
2. Flat light or other conditions that do not provide sufficient visibility for safe operation.
3. Increasing or erratic winds preventing safe operation of the aircraft.
4. Matters relating to the condition of an aircraft.
5. Matters relating to snow stability.
6. Conduct or condition of Pilots, Clients, guides, Ground Crew or other employees.
7. The inability to effectively manage Risks, as defined at Section V (B) hereof.
8. Other matters relating to the safety of Clients, guides, Ground Crew, Pilots or aircraft.

H. Operator and Outfitter Responsibility.

1. It is the responsibility of the Operator to work with the Outfitter to establish a clear Safety and Operations Plan and Operating Procedures, to effectively communicate those guidelines to its Pilots, to provide consistent day-to-day interpretation of those guidelines and to properly support implementation of those guidelines by the Pilots. While Operators and Outfitters should establish a Safety and Operations Plan and Operating Procedures appropriate to their operation and location, those guidelines shall never compromise safety when unforeseen or unusual circumstances occur. The Pilot's professional judgment must be respected at all times.
2. It is the responsibility of the Outfitter to establish and implement a Safety and Operations Plan, to work with the Operator to establish clear Operating Procedures, to effectively communicate those guidelines to its guides and Ground Crew, to provide consistent day-to-day interpretation of those guidelines and to properly support implementation of those guidelines by the guides, Ground Crew and Pilots. Outfitters shall not seek to over-rule, pressure or

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otherwise inappropriately influence a Pilot's professional judgment.

[Note: Highlighting is original to document when accessed by NTSB.]

3. Nothing in this the HSOG Program shall be interpreted to make an Operator responsible for the safety and wellbeing of Clients during Skiing Activities or to make an Outfitter responsible for the activities of an Operator working under its Part 135 Certificate.

I. **In Season and Annual Reporting.** Outfitters should report any significant avalanche or other significant incident to Heli-Ski U.S. Members within 48 hours. At or before the Heli-Ski U.S. annual meeting, operating statistics are required to be reported annually to Heli Ski U.S. Reportable statistics should include, for example, skier days, flight hours, aircraft type and performance, the occurrence of accidents involving aircraft resulting in injury to any person or damage to aircraft and such other matters as Heli Ski U.S. may reasonably require.

IV. PILOT QUALIFICATIONS & TRAINING

A. Lead Pilot. Where more than one pilot is assigned to a Heli Skiing Operation, the Operator may designate a single Lead Pilot (LP) for that Heli Skiing Operation. Where only one pilot is designated to a Helicopter Skiing Operation, that pilot should meet the qualifications of a LP. LP qualifications are:

1. Two thousand (2000) hours, total.
2. One thousand (1,000) hours helicopter.
3. Two hundred fifty (250) hours of flying in terrain typical for the Helicopter Skiing Operation or completion of a training program specifically designed for those unique conditions. This training should be recorded in the training record for each respective pilot.
4. Company checkout in make and model including ground and flight training.

B. Pilots. The minimum qualifications for Pilots who are not Lead Pilots are:

1. One thousand (1000) hours, total.
2. Seven hundred fifty (750) hours, helicopter.
3. Two hundred fifty (250) hours of flying in terrain typical for the Helicopter Skiing Operation or completion of a training program

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specifically designed for those unique conditions. This training will be recorded in the training record for each respective pilot.

C. Verification of Qualifications and Record.

1. The Operator must verify each pilot's certificate, flight time, and current appropriate medical certificate. Operators should also seek to obtain each pilot's accident history, certificate action, and safety performance records.
2. The Operator shall require a pilot applicant to provide a Federal Aviation Administration (FAA) abstract of his/her certificate record, and driver's license record. A license abstract can be obtained from the FAA at the following address:

FAA
Airman Certification Branch
P.O. Box 25082
Oklahoma City, Oklahoma 73125-4940

D. Safety Priority. It should be emphasized to the Pilot during his/her training and on a regular basis, that flight safety, attention to detail and compliance with Federal Aviation Regulations (FAR), the Outfitter's Safety and Operations Plan and Operating Procedures are of paramount importance and should take precedence over Skiing Activities and Outfitter, guide and Client requests. It is the Pilot's responsibility to follow the Operator's internal procedures and all Operating Procedures relating to aviation operations. Pilot training should emphasize that Pilots must act with the highest standards of care and professionalism.

E. Pilot Training. At minimum all pilots shall be trained in compliance with current FAA 135 flight training guidelines. Additional training should include:

1. Inadvertent Instrument Meteorological Conditions (IMC) avoidance and recovery training to include:
 - a. Recognition & avoidance of IMC conditions.
 - b. Basic attitude flight training under the hood for:
 1. Recovery from unusual attitudes.
 2. Demonstration of 180 degree turns with a decent and a climb.
2. Performance planning to include:
 - a. Density altitude conditions that are anticipated to be encountered in the operational profile.
 - b. Hover in-ground effect.
 - c. Hover out-of-ground effect.

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- d. Performance limits associated with external equipment.
3. Loss of effective anti-torque thrust.
4. Emphasized training in:
 - a. Pre-flight procedures for cold weather operations.
 - b. Winter flight precautions relating to:
 1. Horizonless flying conditions.
 2. Momentary reduced visibility conditions.
 3. Turbine ingestion of snow or ice.
 - c. Availability and proper use of cockpit checklists.
 - d. Use of the flight manual.
 - e. Basic helicopter aerodynamics to include:
 1. Settling with power.
 2. Ground resonance.
 3. Dynamic rollover.
 4. Low speed flight.
 5. Auto-rotation characteristics (annual touchdown auto-rotation is recommended).
 - f. Recognition and minimization of sustained operations within the shaded area of the Height/Velocity (H/V) diagram.
 - g. Proper procedures for securing the aircraft against weather where hangar storage is not available and proper procedures for de-icing when necessary.
5. Human factors:
 - a. Aeronautical Decision Making (ADM).
 - b. Crew Resource Management (CRM).
6. Emergency egress and survival techniques.
7. On board Client briefing.

Operator training required under this section should be documented and kept in appropriate training folders. These documents should be made available to the Performance Reviewer, as described in Section XI, below.

V. PILOT – GUIDE CO-TRAINING

To help assure safe and efficient coordination of Operator and Outfitter activities and consistent interpretation and implementation of these HSOGs and the Safety and Operations Plan, Pilots, guides and Ground Crew should co-train, as set forth in this section.

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A. Coordinated Training. Pilots, guides and Ground Crew should jointly train on and follow consistent practices with regard to:

1. The Outfitter's Safety & Operations Plan.
2. Radio communications protocols
3. Use of hand signals.
4. Pre-flight briefing procedures.
5. Procedures at Landing Zones and Pick-up Zones.

B. Application Specific Training for Pilots. With the assistance of the LP and Outfitter Safety Officer, each Pilot must receive Helicopter Skiing specific training, including:

1. Terrain and operating area familiarization, including:
 - a. Location of particular aviation hazards within the operating area, including power lines, radio towers, waterfowl habitat and gathering areas and other potential hazards.
 - b. Exit routes for inadvertent IMC.
 - c. Noise abatement areas.
 - d. Restricted areas, private property, wildlife avoidance and "No-fly Zones."
2. Landing and settling techniques for bear-paw and/or full ski apparatus.
3. Landing Zone and Pick-up Zone selection and documentation.
4. Identification and management of the following risks ("Risks"):
 - a. **Avalanche Paths.** Avalanches can travel substantial distances across relatively flat areas and pilots must learn to recognize and avoid avalanche paths. Pilots and Guides should communicate to determine appropriate location for aircraft.
 - b. **Seracs and Icefalls.** Seracs are large towers of ice that form at the foot of glaciers and at steep drop-offs within glaciers. Icefalls can form on the sides of mountains and on cliffs and steep mountain faces. Seracs and ice falls can break loose unexpectedly and travel substantial distances across relatively flat areas. They are also capable of triggering an avalanche, even during times of stable snowpack. Pilots

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- and Guides should communicate to determine an appropriate location for aircraft to avoid seracs and icefalls.
- c. Crevasses. Crevasses tend to form where glaciers travel over headwalls, down steeper terrain, along lateral moraines, into obstructing topography, and where glaciers round corners. Large crevasses under snow can usually be identified by depressions on the snowpack surface. Lateral (side) views of the proposed landing area, obtained in ascent or descent can be helpful in identifying potential hazard areas. Pilots and Guides should communicate to determine an appropriate location for aircraft to avoid crevasses.
 - d. Cornices. Cornices, large accumulations of wind deposited snow, tend to form on ridges, summits, in saddles, and occasionally in unexpected locations. Though frequently quite strong, cornices can be severely cantilevered and/or poorly adhered to underlying surfaces and can release or partially collapse without warning. Pilots should keep aircraft adequate distances from the edges of cornices and be aware of parking aircraft directly below an overhanging cornice. Pilots and Guides should communicate to determine an appropriate location for aircraft where dangers relating to cornices are present.
 - e. Rock falls. Rock falls can occur at any time and are most often a product of frost wedging and solar radiation. Pilots must exercise caution and should maintain adequate flight and parking distances from large cliffs and rock faces.
 - f. Winds. Pilots should look for wind signs (typically blowing or “flagging” snow from ridge tops and peaks and blowing flagging from marker stakes/wands at Landing and Pick-up zones), prior to each take-off and landing. Atmospheric conditions and terrain features may combine to create wind shear at ridge tops and mountain peaks. Pilots should confirm wind conditions on windward and lee sides of a mountain, prior to a ridge-top or peak landing and respect terrain features that can deflect wind and create unstable air.
 - g. Flat Light, Low Light and Difficult Visibility. See Section VI(K), below.
 - h. Back Country Users. Pilots must be aware of and maintain adequate distances from other back country users. Skiers, cross-country skiers and mountaineers may be found within operations areas and, as a matter of courtesy, efforts should be made to maintain reasonable separation from these users. Due to their exceptional mobility and speed,

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snowmobiles can create particular challenges and Pilots should be aware of parking below areas where snowmobiles could trigger an avalanche and at locations where restricted view lines could cause a snowmobile to collide with the aircraft.

5. Although compliance with Outfitter permit requirements and restrictions shall remain the responsibility of the Outfitter, Pilot knowledge of those matters can help to assure compliance and Pilots should therefore receive training with respect to:
 - a. Wildlife avoidance and documentation requirements.
 - b. Avoidance and documentation of other back country users, including minimum separation from Groups and aircraft.
 - c. Outfitter use documentation requirements.
 - d. Such other requirements and restrictions as may be imposed in the Outfitter's permit.

C. Helicopter Specific Training for Guides & Ground Crew. With the assistance of a Pilot and/or the Outfitter Safety Officer, each guide and Ground Crew member should receive training specific to the helicopter or helicopters to be used in operations with respect to:

1. Location and operation of ELT, Fire Extinguisher, First Aid Kit and other emergency equipment.
2. Proper operation of cargo compartment and ski basket latches, door handles, etc.
3. Loading and unloading procedures.
4. Proper use of seatbelts and shoulder harnesses.
5. Use of intercom equipment.
6. Emergency exit procedures.
7. Proper Client pre-flight briefing procedures, covering all of the above and such other matters as the Operator, Outfitter and FAA deem appropriate.
8. Aircraft performance capabilities and limitations.
9. Emergency aircraft shut-down procedures.
10. Implementation of the Outfitter's Emergency Manual plans (see Section XI, below).

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11. Such other matters as the LP deems appropriate.

Guides, Pilots and Ground Crew joining the operation subsequent to initial training should complete the above training by working on a one-on-one basis with the Outfitter Safety Officer and a Pilot, prior to commencing field work. In addition, each Operator and Outfitter shall establish a program that includes daily briefings as set forth in Section IX.

VI. GROUND SUPPORT PERSONNEL AND PROCEDURES

Ground Crew and Guides acting in ground support roles provide a significant contribution to the overall safety of the Helicopter Skiing Operation. Accordingly, Ground Crew and other personnel that regularly work in proximity to flight operations should be appropriately trained with respect to safety and operating procedures and ground support activities should be regularly monitored for compliance with proper procedures by the Outfitter Safety Officer or other managers designated by the Outfitter. Open lines of communication should be established to allow reporting of hazardous situations and submission of ideas and suggestions concerning safety, at daily briefing and/or debriefing sessions.

A. Flight Line

1. Guides or Ground Crew shall brief Clients with respect to loading, unloading and emergency procedures, from an established checklist, prior to their boarding the helicopter for Helicopter Skiing Activities.
2. All Clients and guides shall be required to wear an avalanche transceiver. Each day, prior to their boarding a helicopter, a guide or Ground Crew member should check each guide and Client to assure that they are wearing and have turned on their avalanche transceiver. The Outfitter should establish a procedure to assure that transceiver batteries and function are checked periodically during the Operating Season.
3. If there are glaciers within the Operating Area, it is recommended that all Clients and guides be required to wear a climbing harness during Helicopter Skiing activities. If the Outfitter elects to require climbing harnesses, prior to boarding a helicopter each day a guide or Ground Crew member should check each guide and Client's harness for proper buckling and fit.

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4. The Operations Base and any remote staging area should have clear demarcations and/or barriers indicating areas where Clients are not permitted, except in the company of a guide or Ground Crew member.
5. Guides or Ground Crew should escort all Clients to the helicopter while supervising Client movements.
6. Guides or Ground Crew should assist Clients with loading, initial seat belt fastening, and any specific information relative to the aircraft and flight routine.
7. Guides or Ground Crew should monitor and assist movement of the helicopter in congested areas and, as appropriate, in other circumstances.
8. Guides or Ground Crew should assist Clients upon landing by opening the helicopter door, deplaning, and escorting the Clients from the helicopter activity area.

B. Training of Ground Crew. Training should be established and documented to ensure understanding and implementation of the following practices:

1. Helicopter safety and awareness both inside and outside the aircraft.
2. Client briefing procedures.
3. Loading and unloading Clients.
4. Flight Following.
5. Emergency Manual and Emergency Plan implementation.
6. Ground guiding and communication with the Pilot when appropriate.
7. For persons otherwise authorized to refuel aircraft, fueling procedures (see Section VI D, below).
8. Load manifest preparation.
9. Ground Operations emergency procedures and location of emergency equipment in case of ramp mishap.

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10. Records of Ground Support Personnel training should be kept in appropriate training or personnel folders and it is recommended that the Outfitter Safety Officer review those records at least once each season to assure that all Ground Crew members have received appropriate training.

C. Flight Following

1. The Outfitter shall establish a Flight Following program and a Flight Following Log should be kept during all periods in which flight operations are conducted. The Flight Following Log should include provision to note time of check in, guide or Pilot name for identification, location and intended direction of travel or destination. Flight Following check-in for all Groups and helicopters at least once each hour is strongly recommended. Pilots and/or Guides shall also report to Flight Following personnel any time Groups or aircraft relocate to a different operating area. Flight Following personnel should be appropriately trained and Flight Following logs should be reviewed for compliance with procedures. Flight Following reference locations may be based on widely used names, map references or GPS coordinates.
2. Outfitters should work with their Operator to implement an automated GPS flight tracking system (i.e. Blue Sky or equivalent) to supplement and as a back-up for the Flight Following program.
3. Two-way radio communication should be maintained when practical. Outfitters are encouraged to utilize remote radio repeaters to expand the range of two-way radios. In addition, it is recommended that Outfitters supply at least one satellite telephone for each helicopter in service, to provide a back-up means of communication for emergencies. In the event that the Operating Area is served by cellular phone communications, the Outfitter may substitute cellular phones for satellite phones. In terrain where radio and repeater applications are not practical, an Outfitter may substitute a combination of satellite telephones and digital texting devices, provided that the flight following location is appropriately equipped to receive the calls and texts and that guides are able to communicate with each other by radio.
4. Except where a Lead Guide, Outfitter Safety Officer or guide is available at the Operations Base or Day Staging Area, implementation and coordination of the appropriate Emergency Plan will be the responsibility of Flight Following personnel. Complete, bound and tabbed copies of the Outfitter's Emergency

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Manual shall be kept on hand for immediate reference at the Operations Base and at the Day Staging Area. Flight Following personnel should be trained in proper use and implementation of the Emergency Plans and documentation of training should be maintained by the Outfitter Safety Officer.

D. Refueling. Responsibility for proper operation and maintenance of fuel storage, transport and transfer systems will ordinarily rest with the party owning or leasing that equipment. Without altering those relationships:

1. Only persons who are properly trained and jointly authorized by the Lead Pilot and chief management officer of Outfitter should refuel the aircraft.
2. Minimum refueling personnel training should include:
 - a. Grounding Procedures.
 - b. Safety precautions including open flame/smoking prohibitions and prohibition on use of a cell phone or radio when fueling.
 - c. Proper use of "Personal Protective Equipment," which should include: eye protection, chemical resistant gloves, hearing protection and such other equipment as may be required by law.
 - d. Proper operation of fuel caps and hatches.
 - e. Refueling equipment operations training.
 - f. Fuel use documentation.
 - g. Spill Response Procedures.
 - h. Fire extinguisher operation.
3. Mobile fuel trucks shall comply with applicable state and federal laws and regulations and should be equipped with, at minimum:
 - a. Personal Protective Equipment.
 - b. Container to collect residual fuel from nozzle.
 - c. Spreadable absorbent, shovel and container for collection of contaminated absorbent.
 - d. Absorbent wipes.
 - e. Fire Extinguisher.
4. Stationary fuel supply tanks should comply with applicable state and federal laws and shall be equipped with, at minimum:
 - a. Personal Protective Equipment.
 - b. Container to collect residual fuel from nozzle.
 - c. Spreadable absorbent, shovel and container for collection of contaminated absorbent.
 - d. Absorbent wipes.

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- e. Fire Extinguisher.
 - f. MSDS Data Sheets.
 - g. If not otherwise required by state or federal laws or regulations, it is recommended that Operators and/or Outfitters consider use of double walled tanks or secondary containments for stationary fuel supply tanks.
5. Operators and Outfitters that regularly store or transport 120 or more gallons of fuel in one container or vehicle should have a written Spill Response Plan, copies of which should be kept in the vehicle if a mobile fuel truck and at the location where fuel is stored, if stationary. The spill response plan shall meet all applicable requirements under federal, state or local laws and should include, at minimum:
- a. Step-by-step procedures for spill response.
 - b. The identity and phone number of a spill response contractor that is available on 24 hour call. Prior contact with the spill response contractor should be made to assure availability and to determine available resources.
 - c. The identity and phone numbers of all agencies required to be notified of a spill and the threshold spill quantity for notification.
 - d. Phone numbers for local fire department.
6. Provided that the helicopter manufacturer's certificate otherwise permits such and that Clients are de-boarded and a safe distance from the aircraft, Operators and Ground Operations Personnel may perform Helicopter Rapid Refueling (HRR) (a/k/a Hot Refueling). Ground Crew must be specifically trained for HRR and the Operator is responsible for compliance with industry standard practices and/or local laws and regulations.

VII. AIRCRAFT & PILOT EQUIPMENT

A. IMC Instrumentation. All aircraft shall be equipped and operated with appropriate instrumentation to recover from inadvertent Instrument Meteorological Conditions (IMC). The installed equipment shall meet, at a minimum, FAR Part 135.159 night VFR instrumentation standards.

B. Emergency Locator Transponders. All aircraft shall be equipped with an Emergency Locator Transmitter (ELT). It is recommended that Operators consider GPS integrated ELT's.

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C. Anti-Collision Equipment. Aircraft shall be equipped with, and shall use as appropriate:

1. Alternating avoidance lights.
2. Minimum of one strobe light.

D. Communications Equipment. All aircraft shall be equipped with appropriate aviation communications equipment and Pilots shall monitor Unicom Channels. In addition, aircraft and Guides must be equipped with appropriate radio communications equipment to allow direct Pilot – guide communication.

E. Covers, Heaters and Tie-Downs. Aircraft that are not regularly kept in hangars should be equipped with fuselage covers, rotor and tail rotor covers, transmission and cockpit heaters as recommended by the aircraft manufacturer for winter operations and tie-downs to secure main rotor. In addition, aircraft should be outfitted with and should keep on board during field operations, appropriate intake plugs.

F. Ski Basket. Skis and snowboards shall be carried in FAA approved, externally affixed baskets or other approved devices. Skis and Snowboards should not be directly affixed to landing gear or landing gear support structures. The proliferation of snowboards and evolution of so-called “fat skis” has made use of many older model ski baskets difficult and use of larger volume ski baskets is encouraged.

G. Skis. Helicopters should be equipped with FAA approved skis, bear-paw pads, or other devices designed to help support the weight of a helicopter in snow. It is recommended that skis be equipped with gripping devices to prevent the aircraft from sliding or rotating on slick surfaces.

H. Baffles. If recommended by the manufacturer, approved baffles shall be available for installation on the aircraft as conditions warrant, in the judgment of the Pilot, as recommended by the manufacturer or required by the FAA.

I. Pilot Personal Equipment. At all times during operations, Pilots should:

1. Have on board, and as appropriate, wear an avalanche transceiver.
2. Wear or have onboard, appropriate winter clothing and foot gear.
3. Have on board a VHF (or other appropriate band) handheld radio for communications with Guides and Flight Following personnel when aircraft is shut down.

J. Emergency Equipment. Depending upon the terrain within the Operating Area, it is recommended that some or all of the following additional equipment be kept on board the aircraft:

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Water, MREs (or other food source), sleeping bag, headlamp, emergency candles, two lighters, space blanket, tarp or bivy sack, collapsible ski poles, snowshoes, signaling device.

K. Additional Emergency Equipment. At the discretion of the Operator and Outfitter, the aircraft may also be equipped with:

Avalanche or high-angle rescue pack, additional first aid equipment including oxygen pack, and automated external defibrillator (AED), evacuation sled or backboard, extra avalanche transceiver.

VIII. SNOW SAFETY & WEATHER FORECASTING PROGRAM

A. General. Each Outfitter shall establish a program to gather snow and weather data and to make a daily forecast of snow stability and weather conditions. Snowpack data should be gathered daily, throughout the Operating Season to support daily stability forecasts, long-term trend analysis and year-to-year comparisons. That data and resulting profiles should be compiled and stored in notebooks or electronic files, for future reference.

B. Snow Safety Director. Each company should appoint a Snow Safety Director to implement the snow safety and weather forecasting program. Minimum qualifications for a Snow Safety Director are Level III Certificate issued by the American Avalanche Institute (AAI), American Institute for Avalanche Research and Education (AIARE), Level II **Professional Operations** Certificate issued by a Canadian Avalanche Association recognized program or equivalent certification by another recognized sanctioning body. In addition, a Snow Safety Director should have not fewer than four (4) seasons of experience in an active role in a snow stability forecasting program with a professional ski patrol, avalanche forecasting service, helicopter skiing operation or other back-country guiding operation. It is the Snow Safety Director's job to prepare or oversee preparation of daily weather and snow stability forecasts and to develop and maintain a snowpack database.

Subject to the requirement that he or she shall retain supervisory responsibility, the Snow Safety Director may delegate responsibility for developing and maintaining the snowpack database and all or any portion of a snow stability and/or weather forecast to an appropriately qualified guide(s) or to an Assistant Snow Safety Director, should the organization elect to establish that position. An appropriately qualified guide or Assistant Snow Safety Director should have a Level II Certificate issued by an American Avalanche Association recognized program, Level I **Professional Operations** Certificate issued by a Canadian Avalanche Association recognized program or an equivalent certification issued by a recognized sanctioning body.

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Effective January 1, 2019 Assistant Snow Safety Directors must hold a Level III Certificate (or then current equivalent certification) issued by the American Avalanche Institute (AAI), American Institute for Avalanche Research and Education (AIARE), AVPRO by American Avalanche Association (AAA), Level II Professional Operations Certificate issued by the Canadian Avalanche Association or equivalent certificate issued by a recognized sanctioning body.

C. Data Guidelines. All snow, weather and avalanche observations should be collected and reported as specified in: “Snow, Weather, and Avalanches: Observational Guidelines for Avalanche Programs in the United States” American Avalanche Association, 2010 (the “Observational Guidelines”).

D. Data Sources.

1. Snow Data. The primary source for snow data should be that gathered by the Outfitter’s own trained personnel. Each guide should be required to report daily field observations to support development of the snowpack database. It is recommended that the Outfitter and Snow Safety Director establish a data collection program which assures that each guide will regularly prepare a snow pit profile and that sufficient profiles from relevant areas, aspects and altitudes are available to support the Snow Safety Director’s short-term forecasts and snowpack database for long-term trend analysis. It is also recommended that the Snow Safety Director obtain additional data from external sources, (i.e. avalanche forecasting services, highway department avalanche forecasting departments and other Outfitters) when available.
2. Weather Data. Primary sources for obtaining data in support of the weather forecast will ordinarily be external (i.e. NOAA/National Weather Service and aviation, marine and industrial data collection systems). While use of such services is appropriate and recommended, the Heli-Ski Operation should prepare its own weather forecast for the Operating Area. In the event that available data services do not provide data specific to the Operating Area, the Outfitter should establish its own remote weather station(s). The daily weather forecast should be reviewed with the Lead Pilot for his/her concurrence.

E. Stability Forecast Guidelines. The daily snow stability forecast should be specific to the areas, altitudes, slope aspects and geographic features that will or may be utilized on that date. Forecasts for adjoining terrain should also be reported, especially if snow on that terrain may be expected to be less stable than on the terrain where operations are planned.

F. Snow Stability Rating System. The snow stability forecast may be given in terms of the Snow Stability Scale (Very Good to Very Poor) or the North American Public Avalanche Danger Scale (Low to Extreme). See Appendix G, Table G.1 and Figure G.3

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to the Observational Guidelines. However, it is recommended that the Outfitter and Snow Safety Director agree upon one forecast format and that it be used throughout the Operating Season to assure consistency and clear communications.

G. Training. At or prior to the start of each Operating Season, the Snow Safety Director (or a person designated by the Snow Safety Director) should conduct a training session with all guides. Topics should include: standard tests to be utilized, snow and weather data collection procedures, snow study pit craftsmanship and the snow stability rating system that the Outfitter will utilize. Topics may also include evolving standards, technology and techniques in the snow science community.

IX. OPERATING PROCEDURES

A. Daily Schedule & Briefings.

1. Schedule. A daily schedule should be established that provides for termination of regular operations not less than one (1) hour prior to sunset and which allows for compliance with Pilot duty-day limitations.
2. Morning Guide Meeting/ Pre-Operations Briefing. Each operating day should begin with a briefing attended by guides and Ground Crew and run by a Lead Guide. At the morning, Pre-Operations Briefing:
 - a. The Snow Safety Director or Assistant Snow Safety Director should present their weather and snow stability forecasts at the start of the Briefing. Provided that one individual has final responsibility for forecasting and database management, Outfitters may rotate responsibility for daily forecasting among appropriately qualified guides to achieve greater participation and buy-in to the forecasting process.
 - b. Following presentation of the snow stability and weather forecast, operational planning for the day should be discussed. To the extent that the area of operations can be selected in advance, there should be a review of primary ski zones, runs, PZ's, LZ's and significant land marks using the Operations Map and Run Catalogue;
 - c. Using the Operations Map, there should be a brief review of relevant permit area boundaries, exclusion zones, wildlife avoidance areas and the location of known, unusual hazards, emergency caches and shelters (if any);
 - d. There should be a review of evacuation routes, fuel caches and special aviation hazards.

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Pilots should be invited to attend the morning pre-operations briefing, as their duty day restrictions permit, and encouraged to utilize the meeting as a forum to address matters bearing on the safety and/or efficiency of the operation. If a Pilot or Lead Pilot is unable to attend the Pre-Operations Briefing, the Lead Guide should separately review the information in items a-d above with the Pilot(s) to the extent necessary to assure safe and efficient operations.

3. Evening Guide Meeting/Post-Operations Debriefing. At conclusion of regular operations for the day, there should be an evening guide meeting/ Post Operations Debriefing. Pilots should be welcome, but not required to participate in the Post Operations Debriefing. At the Post Operations Debriefing:
 - a. Each guide should report any unusual occurrences (including relevant avalanche observations), information concerning the clients in his/her Group, wildlife sightings and other matters necessary to ensure continued safe and efficient operations; and
 - b. The Lead Guide or his/her designated surrogate should provide an overview of the day's operations including ways in which operations can be made safer and/or more efficient, going forward.
4. Communication. It is the strong belief of Heli Ski U.S. that honest, open communication between Lead Guides, Guides, Associate Guides Ground Crew, Pilots and Outfitter officers helps to facilitate safe and efficient operation of the Helicopter Skiing Operation. The Pre-Operations Briefing and Post Operations Debriefing are intended to provide an opportunity for communication that allows the Helicopter Skiing Operation to continually improve in safety and efficiency.

B. General Requirements for Aviation Operations.

1. Aircraft orientations should be given prior to each Group's first flight using a briefing checklist, with instruction on loading, unloading, emergency procedures and general conduct around the aircraft. Briefings should include instruction that use and/or possession of alcohol and drugs is prohibited in and about the aircraft and during all field operations.
2. Guides and Clients shall wear seat belts and, as provided, shoulder harnesses.
3. The combined weights of all Clients and Guides in each group will be noted and totaled on a load manifest which will be delivered to the Pilot prior to any flight involving that group. The Pilot should

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be notified of changes/substitutions in persons and weights during the day. The load manifest should also include notation of any compressed gas cylinders carried aboard (avalanche airbag systems), their location on the aircraft, the type of gas (air or nitrogen) and the volume of that gas.

4. No items or equipment should be put onboard the helicopter without knowledge and approval of the Pilot.
5. No fluids should be carried inside the aircraft cabin, except water.

C. Pre-Flight Procedures. In addition to all standard, FAA, manufacturer and Operator required pre-flight inspections, prior to the first departure each day and following any extended shutdown or any shutdown due to weather conditions, each Pilot should:

1. Perform additional pre-flight inspections appropriate for cold weather environment as specified by the aircraft manufacturer and as appropriate to additional equipment installed for Helicopter Skiing. Such inspections should include condition of ski basket and skis/bear paws.
2. Make sure skids/skis/bear paws are not frozen to the ground.
3. As conditions warrant, inspect for ice/snow at or near turbine intake and perform appropriate de-icing procedures.
4. Note that aircraft may be on slick surface.
5. Check wind direction and speed.
6. Radio-check flight-following, aircraft radio and hand-held VHF radios.

D. Landing Zone Selection and Preparation.

1. Landing Zones should:
 - a. To the extent practical, be improved such that they are capable of supporting the fully loaded helicopter, in place.
 - b. Provide safe clearance for the main and tail rotors.
 - c. Be large enough to safely unload the Clients and the guide and their equipment and provide sufficient additional clearance to allow for safe, unobstructed departure of the aircraft.

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- d. The pilot may nonetheless hold power on any Landing Zone.
2. Conditions permitting, where a Landing Zone is to be re-used, it should be improved by:
 - a. Creation of a landing platform of compacted snow, large and strong enough to meet the criteria set forth at item 1, of this Section.
 - b. Installation of wind flagging (survey ribbon or other appropriate, high visibility material) securely affixed to a wand, stake or other appropriate device. Use of at least two (2) wind flags or one (1) wind flag and one fixed reference point (which may be a natural object, colored chalk, painted stake, etc.) at each Landing Zone is recommended. Specific flagging patterns may be adopted to meet Pilot preferences, but flagging practices should be consistent for all Guides and Pilots within a single Helicopter Skiing Operation.
 - c. As conditions warrant, installation of additional wind flagging on nearby terrain features.

E. Landing Zone Procedures.

1. Pilot should:
 - a. Before landing, discuss safe Pick-up Zone location and Hazards with Guide.
 - b. If conditions require, check all sides of proposed LZ for winds and cornices.
 - c. Confirm the characteristics of the LZ and approach, and then set up for short final.
 - d. On short final, confirm clearance for main and tail rotor.
 - e. Establish a reference point for departure route.
 - f. Following landing, maintain turbine rpm, unless shutting down.
 - g. Await departure signal from Guide. Pilot should disregard departure signal from Client.
 - h. Following departure, contact Flight Following to communicate location and intentions.
2. Guide should:
 - a. Before landing, assist Pilot with Hazard and PZ identification.
 - b. On short final, assist Pilot by confirming clearances to terrain features.

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- c. Upon landing, unload and secure equipment and closely direct Clients to appropriate location.
- d. Reconfirm that all latches, doors and ski basket cover are properly secured.
- e. Visually check aircraft for unusual conditions and/or fluid leaks.
- f. After reconfirming location of Clients, signal aircraft to depart.

F. Pick-Up Zone Selection and Preparation.

1. All Pick-up Zones should:
 - a. Meet all requirements for Landing Zones.
 - b. Be clear of Risks and other hazards.
2. Under normal conditions, Operators and Outfitters should not:
 - a. Allow Clients to board a helicopter except at a Pick-up Zone meeting the above criteria.
 - b. Use “toe-in” or single ski landings as a means to allow Clients to board a helicopter.
3. Conditions permitting, Pick-up Zones should be improved by:
 - a. Creation of a landing platform of compacted snow, large and strong enough to meet the criteria set forth at item H(1) above.
 - b. Installation of wind flagging (survey ribbon or other appropriate, high visibility material) securely affixed to a wand, stake or other appropriate device, placed per Operator/Outfitter Operating Procedures.
 - c. As conditions warrant, installation of additional wind flagging on nearby terrain features.

G. Pick-Up Zone Procedures.

1. Pilot should:
 - a. Contact guide by radio prior to approach to determine readiness.
 - b. Obtain wind and other pertinent information from Guide.
 - c. Familiarize with surrounding terrain to confirm approach, prior to commencing short final.
 - d. On short final, confirm main and tail rotor clearances to terrain.
 - e. Following landing, signal guide to commence loading.
2. Guide Should:

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- a. Secure all packs and equipment at appropriate location.
- b. Place Clients in appropriate location (typically 10:00 to Pilot).
- c. If preferred by Pilot, direct landing using hand signals.
- d. Load Clients and equipment using appropriate procedures.
- e. Confirm that all doors, hatches and ski basket lid are properly secured and visually scan helicopter for unusual conditions or fluid leaks.
- f. Confirm that Client seat belts are secure, prior to boarding helicopter.
- g. Confirm clear left and above, to pilot, prior to aircraft departure.

H. Special Procedures for Flat Light and Low Visibility Conditions. Because Helicopter Skiing Activities typically require visibility equal to or greater than that required for flying, operations are rarely conducted in poor visibility and the potential for Controlled Flight into Terrain (CFIT) should be low. However, Pilots must maintain awareness for momentary reduced visibility from blowing snow, changing weather conditions and flat light. Pilots should not hesitate to terminate operations where visibility is insufficient for safe flight.

1. **Reduced Visibility.** Loose snow becoming airborne from rotor wash can create momentary visibility difficulties, even in periods of good visibility. Pilots should utilize fixed reference points such as LZ-PZ flagging on wands and stakes, equipment secured in place by Guide, rocks, shrubs, ridgelines, and people. Pilots should not hesitate to abort an approach to an LZ or PZ due to marginal visibility and as conditions warrant require a guide at a Pick-up Zone place additional flagging ribbon on surrounding terrain.
2. **Changing Weather.** Helicopter Skiing takes place in mountain environments that can sometimes create clouds, frozen fog and microclimate storms. Changing weather can require Pilots and Guides to make prompt decisions to terminate field operations. In addition to their own experience and instincts, Pilots should utilize the experience of the Lead Guides and available weather data in making a decision to withdraw from the field. It is recommended that Flight Following and other Ground Operations personnel be trained for and assigned weather monitoring tasks, utilizing weather services, remote contact points and pre-established terrain features as bench marks for changing weather.
 - a. During periods of marginal weather and where adverse weather is anticipated, Helicopter Skiing operations should be restricted to locations where guides and Clients may exit

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- the field without aircraft transport or where alternate (non-aviation) exit assistance is available.
- b. Pilots should utilize terrain familiarization training to document emergency exits from operations areas, (i.e.: low lying glaciers, creek beds, mountain passes, cols, highways and roads). It is recommended that Pilots memorize these exits and enter key coordinates on GPS systems for future reference. Pilots must follow appropriate communications procedures when utilizing highways and roads as emergency exits.
3. Flat Light. Usually caused by overcast skies, flat light may also be the product of shadows and late afternoon light effects.
 - a. When flying in flat light, horizon-less conditions, Pilots should substantially reduce airspeed and check instruments to guard against unintended descent.
 - b. Prior to approaching a Pick-up Zone in flat or low-light conditions, Pilots should require that the guide on the ground place additional flagging ribbon on surrounding terrain, with particular emphasis on high points and the intended approach and departure routes.

X. EMERGENCY RESPONSE PLANNING

“Plans are useless, but planning is essential.”

Dwight D. Eisenhower, describing D-Day preparations.

No matter how well conceived and executed, no Safety and Operations Plan can eliminate all risks associated with Helicopter Skiing. Risks and other hazards will always remain and accidents will occur. Outfitters must therefore have emergency plans in place to facilitate an appropriate response to an accident. However, and as alluded to in the above quote by Dwight Eisenhower, accidents do not follow scripts and will rarely occur under the circumstances an Outfitter has planned for. Emergency planning and training should, therefore, emphasize communications and the skill sets of guides and Ground Operations personnel to coordinate resources in an emergency. The ability to overcome unanticipated complications or system failures is of greater importance than any specific plan.

All Helicopter Skiing Operations should have a written Emergency Manual, which includes:

A. Emergency Classification System.

1. Class I – Resources at site sufficient to meet needs.

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2. Class II – Additional, internal Heli-Skiing Operation resources required.
 3. Class III – Outside resources required.
- B. Specific Emergency Plans. The Emergency Manual should have sections addressing:
1. Emergency Communications Procedures (See Section C, below);
 2. Field Evacuation Plan (See Section D, below);
 3. Missing or overdue aircraft;
 4. Aircraft accident;
 5. Aircraft mechanical failure;
 6. Missing skier;
 7. Injured skier or skier with medical emergency;
 8. Avalanche;
 9. High-angle/crevasse rescue; and
 10. Environmental Emergency (Fuel Spill).
- C. Guide Pack & Class I Emergencies. Because many emergencies can be handled with resources present at the scene and because stabilization of a victim and/or accident circumstances pending arrival of additional resources may be necessary, each Outfitter should develop a standardized minimum equipment list for guides to carry in the field. A suggested minimum equipment list is set out in Appendix 3 to these Guidelines. Items on the Outfitter's list may be carried in the guide's backpack (the Guide Pack) or elsewhere on the guide's person. The desire to have rescue equipment immediately available must be balanced against safety concerns that can arise from excessive weight in a Guide Pack. Except as indicated on Appendix 3, where a guide and tail guide will be working together throughout a day, it is acceptable to eliminate duplication of heavier and bulkier items by having them in one of the two Guide Packs, only.
- D.

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E. Emergency Communications Plan.

1. Plan. Each Outfitter should establish an Emergency Communications Plan to assure that third party emergency response resources can be engaged without delay. As to each resource, the Emergency Communications Plan should identify primary and secondary points of contact, the persons or agencies with authority to initiate an emergency response and the capabilities of the resource. Resources that should be included in the Emergency Communications Plan, to the extent available:
 - a. Other Helicopter Skiing Operations;
 - b. Search and Rescue Services;
 - c. Law Enforcement Agencies (and accident reporting agencies, if different). Note: In some jurisdictions, search and rescue services can only be called into action by a particular law enforcement agency and the Emergency Communication Plan should identify that agency;
 - d. Landowner Agencies (USFS, BLM, State Agencies);
 - e. Clinic, Hospital and/or Trauma Center;
 - f. Air Ambulance evacuation services if local hospital/clinic services are limited;
 - g. Fire Department;
 - h. Aviation Operators and/or government aviation operators such as Coast Guard and Air National Guard;
 - i. Environmental Clean-up Contractor;
 - j. Ski Area Rescue and Medical Personnel;
 - k. Snowmobile clubs or tour operators.
2. Implementation. Copies of the Emergency Communications Plan should be located at the Operations Base and the Day Staging Area. Prior to commencement of an Operating Season, contact should be made with each resource to determine that the contact and resource information remains current and correct. In the event that one or more communities in close proximity to the Helicopter Skiing Operation conduct joint emergency response drills or have some other program to assure coordinated emergency responses, it is recommended that the Safety Officer participate in or observe training exercises and/or resource coordination meetings occurring during its Operating Season.
3. Two-Way Emergency Communications. Outfitters are encouraged to establish a two-way communications and response relationship with third party emergency response resources such that those organizations can call upon the Outfitter and Operator for emergency assistance in an appropriate case, during the Operating Season.

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- D. Field Evacuation Plan. Based on the assumption that the Operator's aircraft will not be available, the plan shall include at least two alternate methods for evacuating personnel from the field. One evacuation plan, for application in marginal and changing weather conditions, should be independent of aircraft. Areas that cannot be evacuated without use of aircraft should not be utilized for Helicopter Skiing Operations during periods of marginal VFR or where deteriorating weather conditions are expected.
- E. Trauma/Medical Emergency. Outfitters must be prepared to confront trauma and medical emergencies occurring in the course of regular operations. The Outfitter should be prepared to render first aid and to transport the patient/victim to the nearest hospital or clinic that is capable of providing a higher, professional level of care.
1. Internal Medical Resources. The Heli-Ski Operation should have on hand or immediately available:
 - a. Trained Personnel. Per the Guide Qualification Guidelines, all guides are required to be trained in emergency first aid. Acceptable training certifications include: Emergency Medical Technician (EMT), Wilderness Emergency Medical Technician (WEMT), Outdoor Emergency Care (OEC), Wilderness First Responder (WFR) or any equivalent or greater domestic or foreign certification (i.e. Paramedic, Nurse, Physician, etc). Each guide should be responsible to keep his/her certifications in force through recurrent training and re-certification and to assure that the Outfitter has evidence of the guide's certification(s) and recurrent training. The Outfitter should keep copies of those certifications and training certificates in the guide's personnel file or other appropriate file. It is recommended that the Outfitter Safety Officer review those files at least once each season to assure that all first aid training certificates are current.
 - b. Trauma Pack. Including, at minimum, limb, spine and cervical stabilization devices, supplies for advanced 1st aid treatment of wounds, apparatus for assisted breathing, and bodily substance isolation supplies. The Trauma Pack should be available in the helicopter, at the Day Staging Area or at another location in reasonable proximity to the location where Helicopter Skiing Operations are being conducted.
 - c. Oxygen Pack. Including compressed oxygen, masks and nasal cannula and appropriate airway devices. The Oxygen Pack should be available in the helicopter or at the Day Staging Area.

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- d. Automated External Defibrillator (“AED”). It is recommended that Outfitters have an AED available. Because they are relatively small and light, and given the advantages accruing from immediate access, it is recommended that the AED be placed on board the helicopter at the start of each day and removed to a warm location overnight to protect its batteries.
 - e. Backboard, rescue sled/litter together with appropriate devices for securing a patient.
2. External Medical Resources. The Outfitter should have a working knowledge of the capabilities of near-by clinics, hospitals and medical centers and the location of the nearest Trauma Center. The Emergency Communications Plan should include contact information for the Clinic, Hospital and Trauma Center and identify the process by which those resources can be accessed.
 3. Trauma & Medical Evacuation
 - a. Slope Side Evacuation. The Outfitter must have resources on hand or available without delay to remove an injured skier from a mountain side or other location where helicopter transport would not be available.
 - b. Trauma/Medical Evacuation from Field. The Outfitter must have resources on hand or available for access on short notice to remove an injured skier from the field by helicopter and by other means if a helicopter is not available. Ground Crew and guides should practice procedures required to outfit the helicopter for evacuation of an injured skier on backboard or litter at the start of each Operating Season and similarly should practice evacuation of a litter borne injured party by snowmobile or other alternate conveyance.
 - c. Trauma/Medical Evacuation to Definitive Care Center. In the event that local resources are limited, the Outfitter’s emergency planning should include provision to engage an air ambulance service for transportation of more serious cases.³
- F. Avalanche Rescue. The potential for avalanche exists whenever Helicopter Skiing operations are ongoing. In addition to an avalanche forecasting program, each Outfitter must have an avalanche rescue plan in place that primarily relies upon on-site resources to rescue buried victims. Speed is critical; delays in rescue to bring personnel and/or equipment to a search location can diminish the likelihood of a successful outcome. For this reason, it is suggested that clients be trained in rudimentary avalanche

³ Because of the expense of such evacuations, it is suggested that the Outfitter advise clients to purchase appropriate insurance prior to their trip.

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search and rescue techniques and that guides practice their search and rescue skills several times each season. Each guide and client must be equipped with an avalanche transceiver and the guide and a second guide, tail guide or one client in each group should be equipped with a shovel and probe. To protect against the possibility that the guide may be buried, at least one client in each group should be equipped with and trained in the use of a radio by which other guides, the Pilot and/or Flight Following may be contacted to request assistance. It is suggested that all radios bear a label indicating appropriate channels for emergency communications. In addition, the Helicopter Skiing Operation shall maintain and have available in the helicopter, Day Staging Area or remote cache as appropriate, an Avalanche Rescue Pack equipped with probes, marker flags, shovels and equipment to treat hypothermic victims (i.e. blankets, sleeping bags, etc). In the event of an avalanche emergency, the Trauma Pack should be dispatched to the site with the Avalanche Rescue Pack. The Avalanche Rescue Pack should be clearly labeled as such. It is suggested that the pack bear a laminated inventory card and that the Outfitter establish a practice to re-inventory the pack at the start of each season and following any use of its contents.

G. High Angle Rescue. The mountainous terrain where Helicopter Skiing Operations take place frequently includes cliffs and other precipitous terrain features. For some Outfitters, crevasses and ice falls present additional hazards. Where the Operating Area includes terrain that presents the risk that a high angle rescue will be required, Outfitters should assume that their own resources and skills for high angle rescue will exceed those possessed by local search and rescue organizations and governmental entities and that it will be up to the Outfitter's personnel to effect any necessary high angle rescue. Each Outfitter should assess its terrain for high angle hazards and determine what resources and skills would be required to rescue a skier (injured and uninjured) from those features. If there is a reasonable possibility that a high angle rescue will be required, the resources should then be placed in a High Angle Rescue Pack which should be available at the Day Staging Area.

1. High Angle Rescue Pack Suggested Contents:
 - a. Climbing Harnesses (3)
 - b. Dynamic Rope (2) 40 meters or longer
 - c. Static Rope (1) 100 meters or longer
 - d. Locking Carabineers (8)
 - e. Pulleys (2)
 - f. Tubular Webbing (2) 5 meters each
 - g. Cordellete (2) 8mm x 8 meters
 - h. Prussic (4) simple loop and (2) leg loop for ascending
 - i. Ascenders (2)
 - j. Figure 8's or other belaying devices (2)

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k. Anchors (2) (pickets, etc.)

l. Cam Straps (4) 4-8 meters.

The High Angle Rescue Pack should be clearly labeled as such. It is suggested that the pack bear a laminated inventory card and that the Outfitter establish a practice to re-inventory the pack at the start of each season and following any use of its contents.

2. Suggested additional High Angle Rescue Pack contents. Outfitters whose Operating Area includes glaciers should consider requiring that clients wear a climbing harness to facilitate crevasse rescue and should add to the High Angle Rescue Pack:

a. Ice Screws (6), 3 long & 3 short;

b. Crampons (2) pair, tool-less adjusting;

c. Ice Axes (2)

H. Fuel Spill Response. As to remote fuel caches, Operations Base Fuel systems and mobile fuel systems, each Heli Ski Operation should have a Spill Prevention, Control and Counter Measures Plan (SPCCP) in place, in advance. The SPCCP should include all equipment and training required by law and, without limiting the foregoing:

1. Training of personnel for handling small scale spills and reporting larger spills;

2. Adequate supply of Personal Protective Equipment, spill mitigation materials and tools on-hand for small scale spills;

3. Containers for removing contaminated materials from small scale spills;

4. Identification of contractors authorized to receive contaminated materials from small scale spills and prior agreement by such parties to receive such materials;

5. Identification (including names of contact persons and phone numbers) of third party contractors that are able to handle larger spills on an emergency basis; and

6. Identification of Federal, State and/or local agencies that are required to be notified in the event of a fuel spill.

I. Recurrent Training & Drills. To assure competency and to identify and resolve problems in implementation, it is recommended that each Helicopter Skiing Operation establish a schedule for training and drills

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with respect to the foregoing emergency plans. The Outfitter Safety Officer should be given responsibility to plan and verify all training and drills.

1. Emergency Communications Plan.
 - a. Resource and contact verification: Annually
 - b. Training of Guides and Ground Crew: Twice (beginning and near the mid-point) each season.
 - c. Internal drill: Annually in conjunction with training on a specific emergency skill set.
 - d. Co-training with external resources: Bi-annually, as available.

2. Field Evacuation Plan.
 - a. Resource verification and contact verification: Annually
 - b. Training of Guides and Ground Crew: Annually
 - c. Actual evacuation drill: Not Required.

3. Trauma/Medical Emergency.
 - a. Verification of guide certificate status: Annually
 - b. Inventory of contents of Trauma Pack and other medical supplies: At the beginning of each Operating Season and following any use of the equipment.
 - c. Emergency Evacuation Drill using helicopter and snowmobile: Annually (once each).

4. Avalanche Emergency.
 - a. Inventory of Avalanche Rescue Pack: At the beginning of each Operating Season and following any use.
 - b. Avalanche Beacon single and multi-unit burial drills for guides: Regularly during Operating Season.

5. High Angle Rescue (if terrain conditions require):
 - a. Inventory of High Angle Rescue Pack Contents: At the beginning of each Operating Season and following any use of the equipment.
 - b. High Angle Rescue Drill: Once Annually for Helicopter Skiing Operations without glaciers but with precipitous terrain features and twice annually for Helicopter Skiing Operations with glaciers in their Operating Area. It is suggested that all operations make one high-angle rescue drill simulating rescue of a non-ambulatory victim.

6. Environmental Emergency:
 - a. Resource and Contact Verification: Annually.

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- b. Training of Ground Personnel for implementation of the SPCC Plan: Annually or more often if required by law.
- c. Inventory of spill mitigation materials and tools: Weekly for fixed location fueling systems. Daily for mobile refueling systems.

XI. DISBURSEMENT OF EXPLOSIVE TESTING DEVICES

No Outfitter or Operator shall use aircraft as a means of aerial disbursement of explosive testing devices except upon compliance with the following:

- A. Explosive Testing Device Safety Plan. The Outfitter shall develop and implement a written plan meeting all federal and state laws and regulations governing the handling, storage, use and disposal of explosive testing devices. Clients shall not be permitted to be on board any aircraft carrying explosive testing devices.
- B. Licenses. All persons handling explosive testing devices shall possess all necessary licenses for possession and use of those devices.
- C. Permits. The Outfitter's operating permit must expressly allow for use of explosive testing devices.

XII. SUSTAINABILITY & ENVIRONMENTAL PROGRAMS.

- A. General. The members of Heli-Ski U.S. recognize that they are privileged to operate on public lands and, to maintain that privilege and the public's trust, they must act as competent stewards of their Operating Areas during their Operating Season. The members of Heli-Ski U.S. also recognize that, as good global citizens, they must seek to limit and offset the carbon footprint created by their Helicopter Skiing Operations.
- B. Limiting Carbon Footprint and Carbon Offsets.
 - 1. Limiting Carbon Footprint. Operators and Outfitters are encouraged to seek ways to limit the carbon footprint of the Helicopter Skiing Operation by using more fuel efficient helicopters when available, shortening flight times by utilizing remote staging areas, orchestrating flight operations for maximum efficiency, combining groups as weight limitations allow and reducing the number of ground transportation trips as circumstances permit.

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2. Carbon Offsets. Members of Heli-Ski U.S. are strongly encouraged to work with their clients to facilitate participation in a carbon offsets program such as TerraPass, Ski Green or a similar program of their choosing.
- C. Education of Clients. Helicopter Skiing Operations should perform a public service by educating clients about the environment of the Operating Area, by advising clients on appropriate handling of trash and waste and by teaching ethical practices for use of back-country areas. It is suggested that Outfitters adopt and teach a “Plus-1” protocol for handling of trash and litter by which each client is asked to assure that all materials they brought into the Operating Area, Operations Base and remote staging areas are accounted for, plus at least one additional item of litter or trash, assuring that the Heli Skiing Operation will leave those areas cleaner than at the start of the day.
- D. Permit Conditions & Restrictions. Outfitters are responsible to assure that all Pilots, Guides and relevant Ground Personnel are aware of and sufficiently trained to comply with all conditions, requirements, restrictions, boundaries and exclusion zones associated with its permit(s) and consents to operate on public and private land.
- E. Care of Operating Area:
1. Minimal Impact. Consistent with good safety practices, economical operation and the purpose of helicopter skiing, each Outfitter should conduct its operations in a fashion that minimizes impacts on its Operating Area. It is the objective of HeliSki U.S. that outfitters conduct operations such that little or no evidence of the Helicopter Skiing Operation exists in the Operating Area following completion of the Operating Season.
 2. Trash & Litter. All trash originating from or relating to the Helicopter Skiing Operation shall be collected as same is generated and removed to an appropriate disposal site. Guides and Ground Personnel should follow a Plus-1 standard for policing staging areas, LZ’s, PZ’s and the Operations Base.
 3. Flagging & LZ/PZ Marking. Outfitters should use bio-degradable flagging and naturally occurring materials (i.e. alder wands) to mark LZ’s, PZ’s, equipment caches and fuel caches. To the extent that other materials are used, the Outfitter should seek to remove those items at season end or to conceal items that will be re-used at the same location in the following Operating Season.

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4. Fuel Caches. Remote fuel caches shall comply with all applicable laws and regulations and, at minimum, shall be placed on a liner strong and large enough to contain a spill of all fuel within the cache. Fuel caches must be equipped with spill mitigation materials and an appropriate fire extinguisher. Fuel placement and disbursement should be logged to assure that all petroleum products placed in the cache are accounted for at season end. The use of locks on fuel pumps and removal or concealment of wrenches for opening of containers is encouraged to discourage vandalism.
- F. Wildlife. In addition to maintaining full compliance with permit conditions and applicable laws, Helicopter Skiing Operations shall:
1. Keep aircraft a reasonable vertical and horizontal distance from known wildlife, goat kidding areas, active raptor nests and animal dens.
 2. Avoid engaging in activities that may cause unnecessary stress to wildlife and select areas for daily operation that avoid recently observed wildlife likely to remain in the area of observation.
 3. Consistent with safe practices, direct Clients to routes that avoid wildlife that have been encountered or observed in the course of Helicopter Skiing Activities.
 4. Report third party harassment or poaching of wildlife to appropriate officials.

XIII. IMPLEMENTATION & PERFORMANCE REVIEWS

A. Implementation by Member Companies of Heli Ski U.S. All member companies of Heli Ski U.S. shall make continuing good-faith efforts to fully implement this HSOG program and shall seek to engage Operators who agree to implement the HSOG program. To facilitate full implementation, Outfitters should forward copies of this program to proposed Operators sufficiently in advance of their Operating Season to allow Operators to adopt and implement necessary compliance procedures.

B. Performance Reviews. To help assure the effectiveness of the HSOG Program, Heli Ski U.S. will conduct Performance Reviews of its members and their Operators for compliance with the terms hereof. Performance Reviews shall be carried out by appropriately skilled individuals (Performance Reviewers) appointed by the Review Committee and the results of each Performance Review shall be reported to the Outfitter, the Operator and the Safety and Practices Review Committee by the Reviewer(s). Each year, the Safety and Practices Review Committee shall make a report to the full membership of Heli Ski U.S. describing Performance Reviews performed,

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trends in Performance Reviews and areas in which the HSOG and Performance Review Checklist may be improved.

1. Objective, Notice. Performance Reviews shall be carried out cooperatively, with the objective of enhancing Outfitter and Operator performance, increasing safety in the Helicopter Skiing industry and developing an inventory of industry best practices to be shared among Outfitters and Operators. Except as set forth at Subsection 7, all Performance Reviews shall be upon reasonable advance notice.
2. Standard. Performance Reviews shall be conducted using the Heli-Ski Performance Review Checklist, as same may be amended from time-to-time. Operator performance shall be graded on a scale that indicates the relative importance of each HSOG provision as: “Essential,” “Required” or “Good Practice” and whether the Outfitter’s compliance with that provision is “Complete,” “Substantially Complete” or “Incomplete.”⁴
3. Flexibility in Application of HSOG. Matters designated as “Essential” and “Required” on the Performance Review Checklist have been identified by the Board and Safety & Practices Review Committee as being appropriate for safe conduct of Helicopter Skiing. However, it is an Outfitter’s successful process for addressing and mitigating the underlying risks that is most important. These HSOGs should not be regarded as establishing rigid guidelines that allow for only one method of addressing a particular safety or operations element. The unique circumstances of a particular Helicopter Skiing Operation may dictate processes that vary from those of other operations. Further, these HSOGs are intended to allow for an evolution of safety processes over time that encourages innovation and application of new technology and better risk mitigation techniques. Provided that variations in processes fully address underlying risks, Performance Reviewers should accept them as compliant with the requirements of these HSOGs.
4. Duty of Cooperation. Outfitters are obligated to provide reasonable cooperation to the Performance Reviewer(s). Such cooperation shall include access to morning and evening guide meetings, access to all Guides and Ground Crew, access to training and snow safety program records and access to other records demonstrating compliance with these HSOGs. The Outfitter shall identify its Outfitter Safety Officer and either that individual, a Lead Guide or another individual designated by an officer of the Outfitter shall provide such assistance

⁴ These terms are defined in the Performance Review Checklist.

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with the Performance Review as the Reviewer may reasonably request. The Outfitter shall inform its personnel and the Lead Pilot of their duty to cooperate in the Performance Review process. In addition, the Outfitter shall allow Performance Reviewer(s) a total of two days of participation in Helicopter Skiing for observation and review purposes, without charge. It is preferable that the Performance Reviewer be permitted to observe the performance of at least two different guides, one selected by the Outfitter and one selected by the Reviewer.

5. Performance Review Process. The Performance Reviewer(s) should contact the Outfitter at or near the commencement of an Operating Season in which a Performance Review is to be held to schedule mutually convenient dates for the review. Changes to the schedule shall be made only with approval of both parties. The Outfitter shall provide the Performance Reviewer(s) with copies of its Safety & Operations Plan and Emergency Manual in advance of the Performance Review. It is anticipated that Performance Reviews will take two to three days, but should be conducted in a fashion to minimize disruption of the Outfitter's regular operations. The Performance Reviewer(s) should note all areas in which the Outfitter's conformance to the HSOG program is Complete, Substantially Complete and Incomplete, but should also note all areas in which the Outfitter's program is exceptional and which should be considered for inclusion in a Heli-Ski U.S. inventory of best practices.
6. Performance Review Reports, Remedial Action Plans. The Performance Reviewer(s) should provide each Outfitter with a copy of the completed Performance Review Checklist within five (5) business days of completion of the on-site Performance Review. Within ten (10) days following delivery of the completed Performance Review Checklist, the Outfitter shall supply the Performance Reviewer(s) with a schedule for rectifying each performance element identified as Essential or Required that is deemed to be Substantially Complete and Incomplete (the "Remedial Action Plan"). For Performance Review Checklist requirements ranked as Essential, the Remedial Action Plan shall require that the process for addressing Substantially Complete and Incomplete ratings be commenced immediately. The Remedial Action Plan shall be subject to approval by the Reviewer(s), which approval shall not be unreasonably withheld. Outfitters shall implement all elements of a Remedial Action Plan within a reasonable time period and shall provide the Performance Reviewer(s) with written certification of completion of Remedial Action Plan items. Within a reasonable period from completion of a Performance Review, the Performance Reviewer shall deliver a final Performance Review report to the Outfitter and the Safety and Practices Review Committee.

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The final report shall note actual or scheduled completion of the Remedial Action Plan items and practices followed by the Outfitter which should be considered for inclusion in an industry best practices inventory.

7. Performance Review Cycle.
 - a. Where a Performance Review rates a Heli-Ski Operation as Complete in all components classified on the Performance Review Checklist as Essential and Required, the Outfitter shall be scheduled for its next Performance Review in the fifth (5th) following season.
 - b. Where a Performance Review rates a Heli-Ski Operation as Complete or Substantially Complete in all components classified on the Performance Review Checklist as Essential and Complete or Substantially Complete in not less than one-half of all components rated as Required, subject to the Outfitter's certification of implementation of the Corrective Action Plan (to bring all Essential and Required items rated as less than Complete to that standard), the Outfitter shall be scheduled for its next Performance Review in the third (3rd) following season.
 - c. Where a Performance Review rates a Heli-Ski Operation as Incomplete in one or more areas rated as Essential or not Complete or Substantially Complete in at least one-half of areas regarded as Required, the Outfitter shall be deemed in "Material Breach of the HSOG Program" and will be scheduled for a Performance Review in the next following season.
8. Supplemental Performance Reviews, Disciplinary Action.
 - a. Any Outfitter that has been found in Material Breach of the HSOG Program may be subject to a Supplemental Performance Review, without notice, during the same and the next two following Operating Seasons. An Outfitter which is found in Material Breach of the HSOG Program a second time within three (3) years shall be placed on notice of pending suspension from Heli Ski U.S. pursuant to Article III, Section 7 of the Heli-Ski U.S. Bylaws.
 - b. Whenever an Outfitter has certified its completion of a Corrective Action Plan, its implementation of the Corrective Action Plan may be subject to a Supplemental Review, without notice, at any time prior to its next scheduled Performance Review. Misrepresentation of completion of a Corrective Action Plan may subject the Outfitter to discipline pursuant to Article III, Section 7 of the Heli-Ski U.S. Bylaws.

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- c. Only the Board of Directors shall have authority to impose a disciplinary sanction on an Outfitter.
9. Appeals. An Outfitter shall have a two-level right of appeal from an adverse Performance Review. An adverse Performance Review shall include any outcome which does not result in a five (5) year Performance Review interval under Section 7(a) of this Article XIII B.
 - a. An Outfitter shall first appeal an adverse Performance Review determination to the Safety and Practices Review Committee which shall conduct a *de novo* review of all evidence submitted by the Outfitter and Reviewer(s).
 - b. An Outfitter may next appeal an Adverse Performance Review to the Board of Directors of Heli-Ski U.S. In an appeal to the Board of Directors, the decision of the Safety and Practices Review Committee shall enjoy a rebuttable presumption of correctness. The Board of Directors shall consider such evidence as the Outfitter wishes to present and such additional evidence as the Board shall request.
10. Expenses of Performance Reviews. The Outfitter that undergoes a Performance Review shall reimburse the Performance Reviewer(s) for travel, meals and incidental expenses. Heli-Ski U.S. shall pay a review stipend to the Performance Reviewers at such rate as the Board shall determine from time-to-time. Outfitters that are Performance Reviewed shall bear all costs associated with the Reviewer's use of a Client seat that would otherwise be sold to the public.

C. New Members. The procedure for becoming a member of Heli-Ski U.S. is set forth in the Association's bylaws. As part of that process, a Prospective Operator Member must go through a Performance Review within two Operating Seasons of becoming a Prospective Operator Member. That process is commenced by the Prospective Operator's submission of a request for review to the Safety and Practices Review Committee.

1. Self-Audit, Operations & Safety Plan. Prior to the Performance Review, the Prospective Operator Member must conduct a self-audit of its operations and must certify that it believes that its Helicopter Skiing Operations are in compliance with substantially all requirements set forth in these HSOGs. Together with the request for review, the Outfitter shall submit three (3) copies of its Operations and Safety Plan, its Emergency Manual and such additional documentation as Heli Ski U.S. may reasonably require;
2. Cooperation. By submission of the request for review, the Prospective Operator Member shall be deemed to have agreed to

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give full cooperation to a review of its operations by Heli Ski U.S., as set forth in Article XIII (B) above.

3. **Review Fee.** Prior to the Performance Review, the Prospective Operator Member shall make a deposit against the costs to the Association of performing a compliance audit, in an amount determined by the President of the Association (the “Review Fee”).
4. **Implementation of Corrective Action Plan.** To the extent that any “Essential” operational requirement is found to be “Substantially Complete” or “Incomplete,” the Prospective Operator Member shall not be admitted as an Outfitter until completion of implementation of a Corrective Action Plan is verified by a Performance Reviewer. To the extent that any “Required” operational requirement is found to be “Incomplete,” the Prospective Operator Member shall not be admitted as an Outfitter until completion of implementation of a Corrective Action Plan is verified by a Performance Reviewer.
5. **Review Cycle for New Members.**
 - a. Where a Performance Review rates a new Member Heli-Ski Operation as Complete in all components classified on the Performance Review Checklist as Essential and Required, the Outfitter shall be scheduled for its next Performance Review in the third (3rd) following season.
 - b. Where a Performance Review rates a Heli-Ski Operation as Complete or Substantially Complete in all components classified on the Performance Review Checklist as Essential and Complete or Substantially Complete in not less than one-half of all components rated as Required, subject to the Outfitter’s certification of implementation of the Corrective Action Plan (to bring all Essential and Required items rated as less than Complete to that standard), the Outfitter shall be scheduled for its next Performance Review in the next following season.

APPENDICIES

Appendix 1: Guide Qualifications & Experience Guidelines.

Appendix 2: Performance Review Checklist.

Appendix 3: Guide Pack Equipment List (Draft).

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