

Meeting the ANSI B77 Standard for Lift Evacuation
Part 2

All ski areas both large and small have their own protocols for lift evacuation. The following is a list of suggestions to be considered when preparing a lift evacuation plan.

1. The first item that should be prepared is:
 - A. a list of all aerial lifts
 - B. the length of those lifts
 - C. the number of chairs on the ascending side of the lift and their seating capacity
 - D. the number of lift towers
 - E. a description of the most difficult terrain to be incurred during the evacuation process
 - F. the approximate time needed to complete the process
2. Another item that should be listed but is not covered by the ANSI Standards is the tagging and locking out of the power supply. These items are covered by OSHA and are essential to the lift evacuation procedure.
3. Items A1 and A2 deal with the line of authority needed to initialize and carry out the lift evacuation including area management, lift operations, ski patrol and any other groups or individuals involved in the process. This is especially true for smaller ski areas that by necessity may have to include other area personnel in addition to ski patrol.
4. Item B is a description of all lift evacuation equipment and where it is stored. There should also be a tag on each storage bag listing its contents and the date of its last inspection. Dana Jordon of Cascade Toboggan emphasized that all directions need to be

short, concise and above all simple so that anyone who reads them will have no trouble in following them.

5. Item D pertains to evacuation time and difficulty of terrain. These items should already be listed in Section 1.

6. Item E is an estimate of the time needed to commence lift evacuation after a lift has been declared inoperable. This should also include the personal involved in the decision and the exact steps to be taken.

7. Item F mandates steps to communicate with the lift passengers, the decision to initiate the lift evacuation process, when the process will start and how long it might take. This is also an opportunity to access any special needs of lift passengers and if those needs necessitate special evacuation techniques. Item F also requires noting the frequency of communications with the passengers. Item H requires a description of the equipment to be used for communication with the evacuation teams.

8. Item G is the only item that will be observed by the State of Pennsylvania's Evaluation Team. It requires that evacuators (ski patrol) demonstrate the evacuation of a typical passenger, an incapacitated passenger, an adaptive skier and a non ambulatory passenger. As previously stated, the state of Pennsylvania combines the non ambulatory and incapacitated passenger into one evacuee. This is to be demonstrated on the most difficult terrain.

9. Item I refers to suspending the evacuation process if the aerial lift becomes operable, noting the exact procedure.

10. Item J should list how the evacuees names, addresses and other pertinent information is recorded, how they are taken to a central location and what if any conditions may require special consideration.

11. Item K requires a written post evacuation report and evaluation by all parties involved in the process. Make sure that a list of all evacuees is included in the report.

The last several paragraphs refer to the specifications of rope to be used in the evacuation process. This information may be listed in the description of lift evacuation equipment in item B.

Finally, it should be emphasized that the National Ski Patrol or its subsections are not responsible for the planning, documenting or execution of ski area lift evacuations. That responsibility lies solely with the ski areas and their management.

Sample ANSI B77

Lift evacuation Form

Items A through J will vary for each lift.

- | | |
|-----------------------------------|---------------------------------|
| A. Name of Lift | Valley Chair |
| B. Type of Chair | Fixed Gear, two passenger chair |
| C. Manufacturer | Halls |
| D. Number of chairs on carry side | 60 |
| E. Total passengers on carry side | 120 |
| F. Number of towers | 14 |
| G. Length of lift | 2780 feet |
- H. Description of most difficult terrain for lift evacuation- Evacuating passengers from between towers T10 and T11 will be the most difficult. Tower T11 is the highest, 42 ft., and the ground beneath the tower slopes on a 20 degree angle from skier's right. There is also another aerial lift with its attendant lines and cables 40 feet from the Valley chair, however, the surface beneath both lifts has been cleared providing easy access to the adjacent slope.
- I. Estimate time for the completion of the lift evacuation- 1 Hour
- J. Procedure to lock out tag lift before evacuation. Ski patrol will place a padlock on the main electric switch deactivating the lift motor. This will be supervised by lift operations.

The following items will be the same for each aerial lift listed

Items K through T

- K. Line of authority- In the event of a possible lift evacuation, lift operations will notify both area management and ski patrol immediately- The ski patrol hill captain will inform his shift and order preliminary preparations. Management and lift operations will continuously update ski patrol of the evacuation status until the process starts or is cancelled.
- L. Description of lift evacuation materials and their location - There are a total of 12 lift evacuation bags; six are stored at top shack and six at summit station. Each bag contains the following items.
- 2 flash lights
 - 1 pair heavy duty gloves
 - 5 glow sticks
 - 2 cans of light throwing line
 - 1 throwing weight
 - 1 rescue eight device
 - 1 harness for the belayer
 - 1 twist lock carabineer
 - 150 ft of static 11mm rescue line
 - 1 Cascade lift evacuation seat
 - 1 Cascade line saver

All materials such as ropes, lines etc used in the lift evacuation process conform to the specifications listed in the ANSI B77 Guidelines page 83.

- M. Provisions for lift evacuation training area management has the sole responsibility of scheduling and conducting lift evacuation practice.- Management will direct ski patrol, lift operations and any other involved area employees to conduct an annual lift evacuation practice which will rotate between the area's aerial lifts.
- N. Estimate of the time between the aerial lifts declared inoperable and the time lift evacuation begins - There would be less than 30 minutes elapsed time between a lift evacuation is declared and its start.
- O. Provisions for communications with passengers on the disabled aerial lift and the frequency of those communications.- Depending on the length of the lift one or more line walkers will walk below the lift and inform passengers of the status of the lift evacuation process and ascertain if there are any passengers that have special needs. These passengers should be evacuated first. Communications should continue every twenty minutes until lift evacuation starts or is cancelled.
- P. Methods of evacuation to be used for typical passengers an adaptive skier and an Incapacitated or non ambulatory passenger. – Typical passengers will be evacuated using the Cascade Chair Lift Evacuator. Non-ambulatory/ incapacitated skiers will be evacuated using the PMI Hasty Harness. In some cases it may be necessary to hoist a patroller up to the chair to assist passengers in the evacuation process. Adaptive skiers will be evacuated.
- Q. Provisions for communications with evac lift teams- All ski patrollers lift

operations and management personnel will use channel 1 on mountain radios to communicate.

R. Provisions for suspending lift evacuation if the aerial lift becomes operable-

Lift operations will inform all personnel involved with the lift evacuation that the lift has become operable. When management has approved the decision Ski Patrol will remove the lock out device and make sure all ropes and lines used in the evacuation process is removed. Only then may the lift be restarted.

S. Provisions for the control and assistance of evacuated persons until released.-

A list of all evacuated persons will be made containing their names, addresses and telephone numbers as they exit the lift. If an evacuee claims an injury from the lift evacuation process that should be noted and documented. The evacuees will then be assisted or directed to a designated assembly point to collect further information before being released. Area personnel will be assigned to these duties.

T. Post evacuations report- Ski Patrol and lift operations will prepare a post evacuation report containing specific information pertaining to the lift evacuation. Management shall approve the report and keep it on file for six years or what ever period the state or OSHA shall require.

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