

New Zealand Land Search and Rescue Incorporated



Rescue Team Categories Standard

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Disclaimer: New Zealand Land Search and Rescue(NZLSAR) wish to advise any reader of this document that it does not constitute a training manual or substitute any training from a suitable instructor. It is intended as a standard for NZLSAR alpine cliff and cave rescue teams in order for them to make informed decisions about safety of their own team. NZLSAR accept no responsibility for loss, damage, injury, or death resulting from the material contained in or omitted from this document.

Chapter 1 Rescue Team Categories

1.1 Rescue Team Matrix

Each team needs to be classified into one or more of the following categories. The categories are a combination of the sort of environment the team is set up to operate in and the degree of technical rescue difficulty they are prepared to handle. Each category would have its own set of technical and environmental competency prerequisites.

Environment	Level of Technical Rescue Difficulty		
	I - Low Angle	II – Steep Angle	III – High Angle
Close to Road	CR I	CR II	CR III
Away from Road non-alpine	AR I	AR II	AR III
Moderate Alpine	MA I	MA II	MA III
Serious Alpine	SA I	SA II	SA III
Underground Close to road	U CR I	U CR II	U CR III
Underground Away from road	U AR I	U AR II	U AR III
Specialist	S	S	S

1.2 Definitions

I - Low Angle

Evacuations on terrain up to 30 degrees. Typically low risk and low exposure to rescuers and subjects considering objective hazards and run out. A single rope belay may be needed. A 30-degree slope is similar to a moderate to steep ski run or a typical highway embankment. Rescuers may not be tied to system. Majority of weight on the ground. Able to assist with more technical evacuation.

II - Steep Angle

Capable of evacuations on terrain between 30 degrees and vertical. Rescues on this type of terrain would result in harm to rescuers or subjects if the team loses control of the stretcher load and will require a separate belay. A slope of 30 degrees to vertical requires the use of hands and feet to ascend. The environment would be accessible and not require lead climbing or multiple abseils to access the patient.

III - High Angle

Capable of evacuations on steep to vertical terrain with multiple pitches and multiple changes in fall line possible. Lead climbing with a dynamic rope is likely to be required to reach the patient.

Close to Road (CR)

Operations are carried out close to vehicles. Any helicopter involvement is limited to assisting patients to helicopters that have landed in the vicinity of the accident. Rescuers may have to work through the night but are not expected to camp out

Away from Road non-alpine (AR)

Helicopters are used for access and may be used for winching or stopping rescuers off and onto sites. Team has no facilities for carrying out rescues in snow. Rescuers need to be prepared to overnight in the field.

Moderate Alpine (MA)

Team members are able to survive in an alpine environment and carry out snow lowering and raising techniques. Rescuers need to be prepared to overnight in the field. Avalanche hazards may be present and team members must be able to cope with these and take part in avalanche rescues. Helicopters may be used for access and may be used for winching or stopping rescuers off and onto sites.

Serious Alpine (SA)

As for Moderate but avalanche hazards will be present, crevasse travel and rescue techniques will be required along with a higher level of climbing skills and currency. Helicopters are used for access and will be used for winching or stopping rescuers off and onto sites.

Underground Close to Road (UCR)

Operations are carried out close to vehicle access. Any helicopter involvement is limited to assisting patients to helicopters that have landed in the vicinity of the cave entrance. Rescuers may have to work through the night but are not expected to camp out

Underground Away from Road (UAR)

Helicopters are often used for access. Rescuers need to be prepared to be in the field for extended periods of time.

Specialist (S)

Incidents that require specialist skills over and above those normally required. Examples of specialist skills required are things like, Grade 6 alpine climbing, cave diving, highline riggers, and advanced medical care. Incidents like this need to be addressed in the pre-planning for each region.

Chapter 2 Avalanche Competencies for Rescuers

2.1 Avalanche Matrix

Environment	Level of Technical Rescue Difficulty		
	I – Low Angle	II – Steep Angle	III – High Angle
Close to Road	NA	NA	NA
Away from Road non-alpine	NA	NA	NA
Moderate Alpine	<ul style="list-style-type: none"> • Avalanche aware. • Basic rescue skills. • Any field Team to contain an experienced Stage 1. 	As for Low	As for Moderate
Serious Alpine	<ul style="list-style-type: none"> • Majority of team members should be Stage 1. All must be avalanche aware and have basic rescue skills. • At least one member of team to have advanced rescue skills • Any Field Team to contain a Stage 2 or an experienced Stage 1. 	As for Low	As for Moderate
Underground	NA	NA	NA

2.2 Definitions

Avalanche aware

Rescuer is to have a basic understanding of avalanches, victim survival times, what comprises avalanche terrain and the key factors that produce unstable snow. The MSC approved awareness courses or some equivalent that comprises of an evening lecture and a field day would satisfy the minimum requirements for this.

Stage 1

Otago Polytec Stage one or equivalent or the 4 day backcountry course. Has been assessed as competent at recognising avalanche terrain, factors that contribute to snow stability and has the ability to lead an avalanche rescue team. Needs to be current in the use of these skills.

Stage 2

Otago Polytec Stage two or equivalent. Has been assessed as competent at recognising avalanche terrain, snow stability and can manage an avalanche rescue site. Needs to be current in the use of these skills.

Basic Rescue Skills

Knows how to use different probing techniques (spot, 3 probe step, coarse) digging techniques, how to work with dogs on site and key patient handling techniques for avalanche victims, can find a transceiver in < 2 minutes.

Advanced Rescue Skills

Knows how to manage a large site, risk assessment, CIMS for avalanche, helicopter transceiver searching, can find two transceivers in < 3 minutes.

Avalanche Terrain

Any slope that is part of an avalanche path where sufficient snow exists for producing avalanches.

2.3 Equipment Requirements

Any rescuer carrying out training or search and rescue operations in avalanche terrain is to be equipped with a transceiver, probe and shovel.

2.4 Additional Avalanche Rescue Requirements

- The field operations of any avalanche rescue operation should be under the control of a Stage 2.
- The Incident Controller for any rescue in avalanche terrain needs to have a Stage 2 person available for advice.
- All teams involved in avalanche rescue must have an approved (by an advisor and the police) operational preplan.

Chapter 3 Helicopter Competencies for Rescuers

3.1 Helicopter Matrix

Environment	Level of Technical Rescue Difficulty		
	I - Low Angle	II – Steep Angle	III – High Angle
Close to Road	Easy	Easy	Easy
Away from Road non-alpine	Easy/Hard	Easy/Hard Strop or Winch (optional)	Easy/Hard Strop or Winch (optional)
Moderate Alpine	Easy/Hard Strop or Winch (optional)	Easy/Hard Strop or Winch (optional)	Easy/Hard Strop or Winch (optional)
Serious Alpine	Easy/Hard/Strop or Winch	Easy/Hard/Strop or Winch	Easy/Hard/Strop or Winch
Underground Close to road	Easy	Easy	Easy
Underground Away from road	Easy/Hard	Easy/Hard	Easy/Hard

3.2 Definitions

Helicopter Easy

Knows how to safely behave around a helicopter. Safe zones, when to approach, how to carry objects to and from helicopters, communicating with pilot/crew, open and close doors, set up a landing site. Entering and exiting, loading stretcher and other equipment on flat ground. Loading others.

Helicopter Hard

Understanding of helicopter centre of gravity and implications for entering, exiting and loading helicopters. Competent at getting in and out of a hovering helicopter and loading stretcher and other equipment, managing others around a helicopter.

Helicopter Strop

Level 1 – Attaching Strop, attaching rescuers and equipment, picking up patients with stretchers and steep angle terrain, emergency procedures, communication.

Level 2 – Single person pickoff on high angle terrain, team leadership, site assessment, risk management.

Helicopter Winch

Winch operation, safety, emergency procedures, attaching rescuers and equipment, picking up patients with stretchers and rescue nappies, communication.