Risk Identification – Natural Hazards

Why would this happen? HAZARD	Significance? RISK RATING	Controls - What we will do about it – Standard Operating Procedures The Assessor is accountable for the overall safety of the course and must ensure the below controls are in place Specific SOPs are identified in relevant discipline specific Risk ID
Extreme Weather Events - Heavy Rain - High winds - Severe hot - Severe cold - Lightning strikes	Medium	**Prevention:** Updated weather forecast is obtained and plans are adapted so conditions are suitable for the group's skill level, the activity and the location. **Management:** Participants have the appropriate clothing, food and shelter for the conditions. Seek shelter if lightning flash to thunder clap is less than 30 seconds. Wait until it has been 30 minutes since last 30 second count or storm has clearly passed. **Emergency:** Method of warming or shade available. Escape routes are known. Communications available to call for assistance.
Water Surge - Tidal surge - Rogue waves - Tsunami - Seiche	Medium	**Prevention:** Research if you are in a tsunami evacuation zone. Civil Defence Tsunami evacuation zones. **Management**: A safe method of travel on the water is set up so Assessors are able to take over if a water surge occurs. Participants know what to do if they or someone else in a group capsizes from a vessel. Participants have appropriate clothing on in case of a capsize. **Emergency:** Emergency equipment is carried and communications available to call for assistance. If you are in a tsunami evacuation zone and you feel a LONG or STRONG earthquake, Drop, Cover and Hold during the shaking then move immediately to the nearest high ground or as far inland as you can out of the tsunami evacuation zone.
Flood - Enclosed space	Medium	**Prevention:** Updated weather forecast and river flow information is obtained and conditions are suitable for the group's skill level and location. River levels are appropriate for the trip. **Management:** Escape routes or locations are known if rivers suddenly start rising. NZOIA ratios are maintained so the Assessor can manage the group.

		Emergency: Emergency food and equipment is carried in case on an entrapment.
Flood - Surface	Medium	**Prevention:** Updated weather forecast and river flow information is obtained and conditions are suitable for the group's skill level and location. River levels are appropriate for the exercise. **Management:** Participants know what to do if they capsize or fall into the river. Escape routes are known if the water suddenly starts rising. **Emergency:** Emergency equipment is carried and communications available to call for assistance.
Rock Fall	Medium	**Prevention:** Updated weather forecast is obtained and conditions are suitable for the group's skill level and location. **Management:** Group management strategies are used to minimise exposure to loose rock. Helmets are worn in mountaineering and rock climbing when exposed to rock fall. **Emergency:** Emergency equipment is carried and communications available to call for assistance.
Landslide	Medium	**Prevention:** Updated weather forecast is obtained and conditions are suitable for the group's skill level and location. **Management:** Alternate routes are used if land looks saturated. **Emergency:** Emergency equipment is carried and communications available to call for assistance.
Snow Avalanche	Medium	**Prevention:** Assessors and candidates to have appropriate avalanche qualification and experience. Snowpack/avalanche conditions are researched prior to trip. Sources of information include avalanche.net.nz, local ski patrols, guiding companies, and other climbers/skiers. **Management:** Stability evaluations are carried out in field. This includes observation of terrain and snow conditions, snowpack analysis, and instability tests. Conservative route selection is employed to utilise safe terrain. Group to spread out in avalanche terrain where appropriate. All participants carry avalanche equipment (beacon, shovel and probe) if travelling in avalanche terrain. Transceiver checks completed prior to entering avalanche terrain.

		Emergency: Emergency equipment is carried and communications available to call for assistance.
Icefall Avalanche	Medium	**Prevention:** Weather forecast is checked and plans adapted. **Management:** Use route selection, timing and methods of travel that manage the exposure to ice fall. Helmets worn when the risk of objects falling from above is possible. **Emergency:** Carry emergency rescue equipment and have communications available for assistance.
Rapids	Medium	**Prevention:** Updated weather forecast and river flow information is obtained, and river flows and conditions are suitable for the participants. **Management:** Correct techniques are being used, taught and monitored. E.g. hug boat, wet water exit, roll position, white water float position. Helmets are worn while kayaking. River sections after heavy rain/flooding are scouted/checked prior to the group getting on the river or running rapids. **Emergency:** Emergency equipment is carried and communications available to call for assistance.
Collapse e.g. - Snow bridges - Glaciers - Cliff edge - Cave system	Medium	**Prevention:** Weather forecast is checked and plans adapted. **Management:** Use route selection, timing and methods of travel that minimise the exposure to collapse potential. Choose safe routes and appropriate travel techniques. **Emergency**: Emergency equipment is carried and communications available to call for assistance.
Volcanic Eruption	Medium	**Prevention:** Check alert level from GeoNet web site. Camp out of lahar paths. If the Alert level increases follow DOC restrictions **Management:** Be familiar with the routes and pathways of potential lahar flows **Emergency:** Emergency equipment is carried and communications available to call for assistance.
Geothermal	Medium	**Prevention:** Check alert level from GeoNet web site

		Management: Stay clear of geothermal action **Emergency:** Emergency equipment is carried and communications available to call for assistance.
Earthquake	Medium	Source: Alpine Fault - GNS Science | Te Pū Ao The Alpine Fault has a high probability of rupturing in the next 50 years. The rupture will produce one of the biggest earthquakes since European settlement of New Zealand, and it will have a major impact on the lives of many people. It is unable to be accurately forecasted. **Emergency:** Drop, Cover, Hold. Emergency equipment is carried and communications available to call for assistance.