40866 Perform technical rope rescue

Kaupae | Level	4
Whiwhinga | Credit	10
Whāinga | Purpose	This skill standard is for people who are required to respond to a rope rescue incident at technician level. People credited with this skill standard are able to: determine legislation that empower response agencies to undertake rope rescue operations; rig a transfer device (including a stretcher) for high angle use, using double line technique; perform technical rope rescue techniques to recover casualty and an attendant (rescue load) using raising, lowering, and offset methods; and perform technical rope rescue operations as part of a team. This skill standard can be used for assessment within qualifications across the Emergency Management sector.
Whakaakoranga me mātua oti | Pre-requisites	Unit standard 6400, *Manage first aid in an emergency situation* or Unit standard 23406, *Provide first aid for trauma and medical emergency situations*; Unit standard 6401, *Provide first aid*; Unit standard 6402, *Provide basic life* support; and Skill standard 40865, *Respond to rope rescue incidents;* or equivalent knowledge and skill.

Hua o te ako me Paearu aromatawai \| Learning outcomes and assessment criteria

Hua o te ako | Learning outcomes	**Paearu aromatawai |** Assessment criteria
1. Determine legislation that empower response agencies to undertake rope rescue operations.	a. Determine relevant sections of legislation that empower response agencies to undertake rope rescue operations.
2. Rig a transfer device (including a stretcher) for high angle use, using double line technique.	a. Prepare a transfer device and prepare and rig an attendant.
	b. Package a casualty into transfer device for evacuation.
3. Perform technical rope rescue techniques to recover a casualty and an attendant (rescue load) using raising, lowering, and offset methods.	a. Prepare three complex anchor systems.
	b. Construct and use rope-based systems.
	c. Demonstrate load transfers using knot passes and changeovers.
	d. Employ an offset system to move the rescue load.
	e. Undertake edge transition with a stretcher.

Hua o te ako | Learning outcomes	**Paearu aromatawai |** Assessment criteria
4. Perform technical rope rescue operations as part of a team.	a. Undertake a site assessment, establish command, and plan operation.
	b. Undertake rope rescue operations.
	c. Demobilise the site.

Pārongo aromatawai me te taumata paearu \| Assessment information and grade criteria

Assessment specifications:

- Assessment of this standard must be consistent with:
  - current legislation;
  - organisation's Standard Operating Procedures (SOPs).
- Assessment must align with current best practice as described in industry manuals and texts. Various examples are listed to the resources section below.
- This standard may be assessed in simulated conditions.
- Assessment of this standard is in a high-angle environment.
- Practical high angle sites during assessment are to be between 8 and 40 meters only and 60 degrees or more.
- Assessment criteria 3a – load sharing, self-equalising and multi-point complex anchor systems.
- Learning outcome 4 – evidence of teamwork must include a specified team role.

Definitions:

- *Double line technique* includes a single line technique with independent safety or a twin tensioned rope system.
- *High angle* defines an environment in which one must be secured with rope and other safety equipment to keep from falling from a height at more than 60 degrees.
- *Transfer device* refers to a device used to package and allow safe removal of a casualty from a specific rescue environment with rope rescue systems. It includes stretchers, rescue strops, nappies, and harnesses.

Ngā momo whiwhinga | Grades available

Achieved.

Ihirangi waitohu \| Indicative content

Legislation

- Civil Defence and Emergency Management Act 2002.
- Fire and Emergency New Zealand Act 2017.
- Policing Act 2008.

Rig a transfer device or stretcher

- Attendant personal protective equipment (PPE).
- Package of casualty for transfer: casualty mobility, and casualty protection from environment and hazards.
- Balance casualty load in stretcher.

Technical rope rescue

- Two-rope system and focused multipoint anchor.
- Cord based floating anchor and self-equalising anchor (SEA)/load distributing anchor.
- Complex anchor systems: load sharing, self-equalising and multi-point.
- Rope based systems: raising, lowering, belay and calculation of mechanical advantage.
- Change over direction of rope rescue system under load: lower to raise and raise to lower.
- Mechanical advantage system: simple, compound and complex.
- Offset system to move the rescue load: high directional or low directional.

Rope rescue team operation.

- Team planning: briefing, risk assessment, delegation of tasks and communications.
- Team operation: team roles, team rigging of the site, maintaining communication, and safety check.
- Team demobilising: pack up, debrief and refurbish equipment.

Rauemi | Resources

Where the resources have been updated, please refer to the latest version.

- Civil Defence and Emergency Management Act 2002. https://www.legislation.govt.nz/act/public/2002/0033/latest/whole.html.
- Delaney, R. (2022). *Physics for roping technicians*. https://www.ropelab.com.au/files/physics.pdf.
- Frank, J. A [Ed]. (2021*). CMC rope rescue technician manual* (6th ed.). https://www.cmcpro.com/equipment/rope-rescue-manual/#learn_more.
- Health and Safety at Work Act 2015. Parliamentary Council Office, Te Tari Tohutohu Parēmata. https://www.legislation.govt.nz/act/public/2015/0070/latest/DLM5976660.html.
- Prattley, G. (2020). *Rope rescue and rigging: Field guide*. Over The Edge Rescue.
- Rigging Lab. Free resources. https://rigginglabacademy.com/resources/.
- Rhodes, P. (2020). *A practitioner's study: About rope rescue rigging* (2nd ed). Rhodes.
- Rhodes, P. (2020). *A practitioner's study – volume 2: Confined space rescue considerations for industry, construction and fire/rescue.* Rhodes.
- Rhodes, P. (2019). *A practitioner's study – volume 3: Minimalist wilderness rigging REMS and search and rescue rope rescue skills*. Rhodes.
- Worksafe. (2019). *Best practice guidelines for working at height in New Zealand.* https://www.worksafe.govt.nz/topic-and-industry/working-at-height/working-at-height-in-nz/.

Pārongo Whakaū Kounga | Quality assurance information

Ngā rōpū whakatau-paerewa | Standard Setting Body	Toitū te Waiora Community, Health, Education, and Social Services Workforce Development Council
Whakaritenga Rārangi Paetae Aromatawai | DASS classification	Community and Social Services > Specialist Rescue > Rope Rescue
Ko te tohutoro ki ngā Whakaritenga i te Whakamanatanga me te Whakaōritenga | CMR	0024

Hātepe | Process	**Putanga |** Version	**Rā whakaputa |** Review Date	**Rā whakamutunga mō te aromatawai |** Last date for assessment
Rēhitatanga | Registration	1	25 September 2025	N/A
Kōrero whakakapinga | Replacement information	NA		
Rā arotake | Planned review date	31 December 2030		

Please contact Toitū te Waiora Community, Health, Education, and Social Services Workforce Development Council at qualifications@toitutewaiora.nz to suggest changes to the content of this skill standard.