



LEAST RESISTANCE TRAINING CONCEPTS

PROCEDURE GUIDE No. 20-48

ROPE RESCUE SYSTEMS

Issue Date: 1-18-2020



This Procedure Guide supersedes all previous guides in order to comply with the latest Lyon County, state and national training and operations standards.

Discussion:

Rope rescue systems are commonly used in the field in one form or another. This Procedure Guide addresses safety issues with respect to the use of rope rescue equipment and systems.

Responder Qualifications:

Responders shall possess Technical Large Animal Rescue – Operations, and preferably, Low Angle Rope Rescue certificates.

1. Safety Policy:

- 1.1 Safety is the overarching priority in all responses. No procedure or protocol provided in any Procedure Guide shall supersede the use of sound judgment as may be appropriate to maximize incident safety.
- 1.2 All responders shall wear appropriate helmets at all times, wear gloves when handling ropes, and wear ANSI Class-II or Class-III vests or jackets whenever operating on or near any active traffic lanes.
- 1.3 A qualified Safety Officer shall be designated for all technical rescue responses.
- 1.4 In circumstances where responders cannot reliably communicate by direct voice, portable radios shall be utilized.
- 1.5 Responders shall utilize standard TLAR techniques and practices, including all applicable safety checks of any equipment that will carry any load.

2 Equipment Utilized:

- 2.1 Any time a rope rescue system is used to lift or haul a human or livestock load, only rated equipment shall be used
 - Certified Life Safety Rope for human loads
 - 13mm (or larger) kernmantle braid certified rope for non-human loads
 - Carabiners rated at 30kn or greater
 - Rigging plates, ascenders and related accessories rated at 40kn or greater

3 Anchor Points:

- 3.1 Anchor points shall provide a 15:1 safety factor for human loads and a 5:1 safety factor for animal or equipment loads.
- 3.2 Anchor points shall be free of sharp edges that could damage or cut rope or webbing, and shall have no openings through which any device attaching the rope rescue system could slip out when the line goes slack.
- 3.3 When vehicles are used as anchor points, the hood shall be raised and keys removed and given to the Safety Officer.

4 Carabiners:

- 4.1 Carabiners shall only be loaded on their long axis and shall not be tri-loaded. (A rigging plate, delta link or other device shall be used to prevent tri-loading of carabiners.)
- 4.2 Carabiners shall never be placed where they will be loaded against a sharp edge.
- 4.3 Carabiners should be installed in systems where gates are facing away from the ground or other surfaces that would rub against the gate screws.

5 Knots:

- 5.1 Only approved knots shall be tied in ropes and webbing used in rope rescue systems.

6 Progress Capture Devices:

- 6.1 During non-horizontal systems, a proper progress capture device shall be installed to prevent the load from inadvertently dropping or sliding downslope.

7 Safety Inspections:

- 7.1 All rope rescue systems shall be inspected by the Safety Officer or a competent responder other than the person(s) who rigged the system to ensure that all components are properly assembled. These inspections shall include:
 - 7.1.1 Anchor points meet minimum standards
 - 7.1.2 All knots are properly tied
 - 7.1.3 All carabiner gates are properly locked
 - 7.1.4 Haul lines are not twisted or subject to being fouled
 - 7.1.5 Progress capture devices are properly installed
 - 7.1.6 Points of friction or abrasion to haul lines have been properly mitigated
 - 7.1.7 Haul teams understand intended tasks and commands that will be given

NOTE: All personnel should review *Basic Rope Rescue Systems*
http://www.whmentors.org/evac/rope_systems01.html