



Bike: WLES Resource Guide

The Wheeled Litter Enhancement Seminar (WLES) is an introduction or review session of Wheeled Litter handling. It is designed to provide instruction and guided practice on proper inspection, safety checks, and usage of rescue wheeled litter transportation. The intent is to have experienced Bike instructor trainers (ITs), and/or Bike instructors present the accepted industry standards and techniques to handle unloaded and loaded Wheeled Litters on suitable terrain. This enhancement seminar should be conducted at all cycling areas that utilize this equipment and should encourage patrollers to actively participate regularly.

This resource guide is intended to provide references to instructors to conduct a hands-on practice session and topics that could be covered. This document is not all inclusive or required to be completed for every session. Patrol environment, equipment, student needs and instructor goal considerations will define the overall session format and topics covered.

Rescue procedures using ropes, harnesses, bridles and other Personal Protective Equipment require special skills and are potentially hazardous activities. No rescue personnel should attempt such rescue procedures unless he or she has received instruction and training.

Wheeled Litter Enhancement Seminar

- Describe the Parts of a Wheeled Litter
 - Toboggan / Litter
 - Handles
 - Detachable Wheel
 - Brakes
- Inspect The Wheeled Litter
 - Inspect the Toboggan / Litter
 - Inspect the Litter / Toboggan for damage or wear to the frame and free from cracks or defects that would cause the litter to fail.
 - Ensure that all connection points are free of defects.
 - Ensure all connection points are secured and assembled correctly.
 - Check the Tire Pressure and condition of the Tire.
 - Check the Condition of the brakes if equipped and that they are in good working order.
 - Confirm that all straps are present and in good usable condition.
- Describe terrain that may require more advanced equipment or systems to extricate patients.
 - Describe or demonstrate a Belay System
 - Describe or demonstrate a mechanical advantage system.
 - Terrain classification



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- Flat (0 to 15 degrees)
- Low angle (15 to 30 degrees)
- Steep angle (30 to 60 degrees)
- High angle (60 degrees or greater)
 - (NSP does not teach or certify in steep or high-angle rescue)
- Loading and Unloading the Wheeled Litter
 - List factors that affect loading and unloading.
 - Patient size
 - Patient injuries
 - Environmental Issues
 - Demonstrate loading a patient from a standing position.
 - Demonstrate loading the patient from supine position.
- Demonstrate loading a patient in a Wheeled Litter using;
 - Backboard
 - Scoop stretchers
 - Mega movers
 - From standing
 - Or any other lifting device used in your area.
- Demonstrate traveling with the Wheeled Litter
 - Litter kept perpendicular to the gravity, not the slope.
 - Good communications.
 - Rescuers warn others of hazards.
 - Stabilize the litter and let the wheel carry the weight.
 - Be aware of braking, either by belay or brakes.
 - Never rely solely on those stabilizing to provide braking.
 - Know your access points, roads, slopes etc. specific to your area.
- Demonstrate simple raising and lowering rigging using standard Low Angle Rescue techniques.
 - Knot tying:
 - Figure-eight on a bight
 - Figure-eight follow-through
 - Figure-eight bend (Flemish bend, for joining two ropes)
 - Clove hitch
 - Münter hitch



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- Three-wrap Prusik
- Water knot (to join strands of webbing)
- Improvised harness
- Bowline
- All rescue knots should be dressed with four-inch tails.
 - *Instructors may add knots to this list in accordance with local protocol.
- Anchors
 - wrap-three-pull-two
 - Girth hitch
- Raising systems:
 - 2:1
 - 3:1 (Z-rig)
- Lowering systems
 - ATC Guide with carabiner redirect
 - Other Decent Control Devices
 - Sled dogs (rope to one or two people uphill who just provide power)
- Demonstrate unloading a patient from a wheeled litter into one of the following (depending on your patrol)
 - On-hill medical center/aid room
 - Ambulance
 - Helicopter
 - UTV

Skills Tenders using the litter need:

- A working knowledge of emergency patient-handling procedures;
- The ability to assess, treat and assist the patient;
- A complete understanding of the procedures described in the equipment manual.

MAINTENANCE (Always follow manufacturer recommendations)

If soiled, rinse in clean warm water with non-detergent at appropriate dilution (Ph range 5.5-8.5), thoroughly rinse. When the equipment becomes wet, either from being in use



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or when due to cleaning, it should be allowed to dry naturally and should be kept away from direct heat. Light surface corrosion may be removed with a wire brush (no power tools). Retire if corrosion is heavy.

Disinfection: When required, soak the product in a warm water solution with bleach/water solution for at least 1 hour, then rinse with clean warm water it should be allowed to dry naturally, and should be kept away from direct heat.

On soft goods, do not use enzymatic cleansers.

Two-piece litter threads can be lubricated with white lithium grease.

If the patient straps, back support or mesh liner become damaged, contact authorized service center for replacement.

Cascade Terra Tamer™

<https://www.youtube.com/watch?v=EeWnk8itgPc>



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Installation:

Remove locking pins holding for to the saddle

Remove fork from the saddle and set aside. Recommended to set wheel with the brake rotor side up to prevent damaging or bending the rotor.

Position Saddle on the bottom of the litter under the center of patient mass, remembering that more of the mass is in the upper body

Release ratchet mechanisms, pull straps down toward litter top rail and attach hooks

Pull red tab horizontally to equally tension straps. Tighten with ratchet mechanism.

Do not over-tension straps. Excessive tension can damage your litter.

Three attendant wheel installation – Attendants 1 and 2 raise litter and patient while attendant 3 inserts fork tubes into the saddle receives. Attendant 3 inserts locking pins and attaches brake handle to litter top rail. Secure wheel brake in functional position for attendant.

Two attendant wheel installation – Attendant 1 raises the head of the litter. Attendant 2 inserts locking pins and attaches brake handle.



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Equalizer Handles

Install the equalizer handles with the mark up. Adjust the handles to the level of the incline and the height of the attendant

Attempt to keep patient and litter level with gravity, not the slop of the terrain. One of the attendants at the rear handles should be watching the litter and making decisions about returning to level.