

# OKOLONA FIRE PROTECTION DISTRICT STANDARD OPERATING PROCEDURE

## ROPE RESCUE EQUIPMENT: INVENTORY, MAINTENANCE AND DOCUMENTATION

Page Number:

Page 1 of 4

Effective Date:

6/1//2024

Supersedes Editions:

All

SOP Category:

Operational

**Purpose:** *The purpose of this policy is to establish guidelines for the use, care, storage, inspection and logging of life safety rope and equipment. Guidance for this policy is found in NFPA 1858 and 1983. It is standard procedure to use life safety rope, cord, webbing and hardware during special operations functions such as high and low angle rope rescue, trench rescue, confined space rescue and swift water rescue. During these operations rope can be used as rappel line, lowering line, safety belay line, Stokes basket tag line, and in mechanical advantage systems. Life safety rope is not intended to be used as a tow line, utility line, or any other use that is not directly related to life safety.*

### Types of Rope:

Life Safety Rope (Rescue Rope) - A rope dedicated solely for the purpose of supporting people during rescue, firefighting, other emergency operations, or during training evolutions. Tag lines for stokes basket operations will be considered life safety rope and designated by 6 "of blue tape. All life safety ropes shall be cleaned and inspected after each use or quarterly. Shock loaded or abused life safety rope (rescue ropes) and soft equipment (cords or webbing) that have been shocked loaded or abused for any reason other than normal rescue training, should be taken out of service. Every life safety rope has its own log sheet assigned to it. Use and maintenance of life safety rope shall be recorded in a logbook maintained by Company Officer. The logbook is designed to show when it was placed in service, how it was used, when it was cleaned, and when it was inspected over its lifetime. When the life safety rope is retired the log sheet will be pulled out of the logbook and forwarded to the Assistant Chief of the Fire Division for documentation according to the OFPD's records retention policy.

Search Ropes - Ropes used to search areas with limited visibility. Due to the nature of search ropes, they are not to be considered a life safety rope. The rope type should be cleaned and inspected when needed or at least annually.

Water Ropes - Ropes used for water recovery of victims or rescuers. The rope type should be cleaned and inspected when needed or at least quarterly.

Utility Ropes - Used for anything that is non-life safety, for example lifting equipment up to the next floor or to tie off a ladder. Utility rope will be marked with 6" of black duct tape on each end.

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Page Number:    Effective Date:

Page 2 of 4

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**Cleaning-** When life safety rope is used in rescue functions it will likely become soiled. When this is the case, the rope must be cleaned. At a minimum, the rope shall be cleaned and dried according to the manufacturer's specifications prior to storage. When the rope is excessively dirty it shall be soaked in water and cleaned. Washing Put the ropes, cords, and webbing in a daisy chain. Place the ropes, cords, and webbing in a laundry bag to be washed. Only use the extractor to wash ropes. Run the extractor cycle with just water before washing the rope, to help remove any contaminant from the washer. After it has been washed remove it from laundry bag and undo the daisy chain, Place the ropes, cords, and webbing in a well-ventilated area out of the sun light to dry. Do not heat dry Must be completely dry before inspection and being placed back in service. Before returning any rope to service, it shall be inspected.

**Storage-** Life safety rope should be stored in rope bags in a cool dry place and out of direct sunlight. It should also be kept away from chemical atmospheres such as those found near batteries, engine exhausts and gasoline. Rope should be stuffed or "piled" into the bag, not coiled. After each use the rope ends should be switched so that the end that was used is put in the bag first, to prevent uneven wear. The end of the rope that goes in first should be threaded through the grommet in the end of the bag and tied in a figure eight knot.

**Inspection-** of life safety rope should be done before each rope is put into service and after each use. The rope will then be sealed with a disposable tag indicating that it has been inspected. If a rope bag is not sealed, the rope shall be inspected before it is used. In addition, all life safety ropes will be inspected on a quarterly basis and logged accordingly. The rope should be inspected by at least two people. After each inspection, the inspector is responsible for record keeping and documentation. It will be the Company Officer's responsibility to ensure that all inspections and documentation are assigned and completed quarterly. During inspection the rope should be visually checked for cuts, chafed areas, glazed surfaces, discolorations, and other sheath damage as well as dirt and/or mildew. The inspectors should also look for any unusual or uneven wear on the rope. The rope should also be inspected by holding it firmly in one hand, pulling the rope between your thumb and index finger about 18 inches at a time, while feeling for broken fibers, soft or hard spots, and variations in diameter. This process is performed without gloves on so that the inspector can inspect the rope more thoroughly. If any of the above imperfections are found, the rope should be taken out of service and the Company Officer notified as soon as possible. Also, if the rope has been subject to shock load, fall arrest, or any abuse other than normal rappel or rescue training, the rope should be taken out of service.

# OKOLONA FIRE PROTECTION DISTRICT STANDARD OPERATING PROCEDURE

## ROPE RESCUE EQUIPMENT: INVENTORY, MAINTENANCE AND DOCUMENTATION

Page Number:    Effective Date:

Page 3 of 4

6/1//2024

Supersedes Editions:

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**Record Keeping-** To accurately track the history and use of life safety rope, record keeping must be accomplished. A rope log will be maintained on each rope within OFPD from the date of purchase until the date of retirement from service. The rope log for all life safety rope used by OFPD shall be kept on the apparatus. The use of life safety rope shall be logged for training evolutions, actual incidents, and quarterly inspections. It is essential to always verify that the rope used matches the log on which you are entering the information. Make sure all applicable information is filled out as accurately as possible. This should include the following data: • date the rope was used • location • type of use • exposure • date the rope was inspected • who inspected the rope • any unusual circumstances or events that occurred during use including any damage, shock loads, or use over sharp edges • any additional comments.

**Inventory-** All life safety rope, cord and webbing equipment will be inventoried with the Identification number given using the sequence of: company assigned- length, color, service date (month/year)- numerical sequence. For example, a rescue rope on Rescue 76 will be R76250BW-0624-001. An updated inventory shall be maintained by OFPD. It will be the responsibility of the Company Officer to maintain this inventory.

**Service Life-** All life safety rope, cord, webbing equipment and hardware will have a maximum service life of ten years per manufacturer recommendations and NFPA 1983

**Hardware-** Includes carabiners, D rings (harness and anchor equipment), ascenders, descenders, rigging plates, etc.

**Marking-** Equipment will be marked according to company with device number in clear text. For example Quint 76 will be mark Q76

**Care and maintenance-** All components will be maintained per manufacturer's specifications. Inspections will also include:

**All steel and alloy components-** Clean before inspecting, lubricate with silicon or Teflon™- based lubricant as needed after inspection, do not store wet, store in dry environment

**Connectors (carabiners) -**Lubricate carabiner gates and quick-link threads, Close quick-links before storing to avoid damaging threads.

**Inspection and retirement-** All steel and alloy components- Retire immediately if shock-loaded, dropped from 10 feet or above onto hard surface or if signs of wear are noted. Check

*Standard Operating Procedures are meant only to be guidelines. Actual conditions may warrant alternative actions.*

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## ROPE RESCUE EQUIPMENT: INVENTORY, MAINTENANCE AND DOCUMENTATION

**Page Number:** Page 4 of 4      **Effective Date:** 6/1//2024      **Supersedes Editions:** All      **SOP Category:** Operational

for hairline cracks and deep nicks, deformation, grooving from rope wear, corrosion, Sticky or frozen mechanisms, Signs of shock-loading.

**Carabiners-** In addition to above: Function of locking mechanisms, look for cracking around pin and latches.

**Descenders-** In addition to above check for: Wear of cam (if available, wear indicators), Integrity of bolts, rivets, springs and proper function.

**Ascenders-** In addition to the above check for: Condition of cam, Integrity of bolts, rivets, cables, and springs and proper function.