

106 KAR 1:350. Rescue squad minimum equipment.

RELATES TO: KRS 39F.030(1)(d), 39F.040(5), 39F.050(3)(d), 39F.070(3)(d), 39F.120(12), 42.738, 186.650, 189.010, 33 C.F.R. 183

STATUTORY AUTHORITY: KRS 39A.050(2)(m), 39A.070(3), 39F.100, 39F.110, 39F.120(12), 39F.130, 39F.140, 39F.150, 338.031

NECESSITY, FUNCTION, AND CONFORMITY: KRS 39F.120(12) requires a rescue squad to have the minimum equipment necessary to perform a mission and requires the division to promulgate an administrative regulation establishing minimum equipment for a rescue squad. This administrative regulation establishes the minimum equipment requirements for a rescue squad.

Section 1. Definitions. (1) "ANSI" means the American National Standards Institute.

(2) "CE" means the European Community.

(3) "County" means county, including urban-county governments and consolidated local governments.

(4) "Equine rescue squad" means a rescue squad utilizing two (2) or more horses, with a minimum of twelve (12) total members.

(5) "Fund" means the rescue aid fund established in KRS 39F.100(2).

(6) "High angle rescue service" means any rescue-related activity in which a patient or rescuer is raised or lowered vertically or near vertically by means of a rope or cable, or moved across or up or down a fifty (50) degree or greater slope or grade.

(7) "Mission" means one (1) or more activities in which the rescue squad is involved, and which is listed in the mission statement provided by the rescue squad to the Kentucky Division of Emergency Management.

(8) "NFPA" means the National Fire Protection Association.

(9) "UIAA" means the Union Internationale des Associations d'Alpinisme.

(10) "Vehicle" means:

(a) A motor "vehicle" as defined by KRS 189.010(19) that is lawfully operated on the roadways of the commonwealth and that is capable of carrying two (2) or more passengers within an enclosed passenger compartment and carrying the minimum equipment required for the owning rescue squad within an enclosed area;

(b) Any fully enclosed "trailer" as defined by KRS 186.650(1) with a cargo capacity of at least 1,200 pounds and in compliance with Section 12(3) of this administrative regulation; or

(c) Any covered or enclosed horse trailer used by a rescue squad that performs search functions for lost or missing persons and utilizes two (2) or more horses and riders to assist in the performance of the search function.

Section 2. The minimum equipment for a rescue squad that has as a light duty rescue and extrication of persons from vehicles mission shall be:

(1) Twelve (12) pairs of protective eyewear;

(2) Twelve (12) protective coats or jumpsuits;

(3) Twelve (12) rescue helmets;

(4) Two (2) first aid kits, twenty-four (24) unit industrial type or equivalent;

(5) Two (2) full backboards;

(6) One (1) basket litter;

(7) 100 feet of one (1) inch diameter of tubular nylon webbing;

(8) One (1) twelve (12) foot chain, grade 80 or greater, recovery rated;

(9) Two (2) hacksaw frames with spare blades or equivalent saws;

(10) Two (2) pairs of pliers, slip-joint;

- (11) One (1) pair of locking pliers;
- (12) Two (2) pairs wire cutters with insulated grips;
- (13) One (1) center or rescue punch;
- (14) Four (4) screwdrivers, flat blade (slot head), assorted sizes;
- (15)(a) Four (4) Phillips head screwdrivers; and
- (b) Assorted sizes of Allen wrenches, torx drives, and Robertson square head screwdrivers;
- (16) One (1) seat belt cutter;
- (17) One (1) pair tin snips;
- (18) One (1) claw hammer;
- (19) Two (2) adjustable wrenches;
- (20) Two (2) pipe wrenches;
- (21) Two (2) axes, single bit;
- (22) One (1) mattock;
- (23) One (1) bow saw;
- (24) One (1) pair of bolt cutters;
- (25) One (1) sledge hammer;
- (26) One (1) chain saw with fourteen (14) inch bar;
- (27) One (1) rounded point shovel, short handle;
- (28) Two (2) wrecking or pry bars;
- (29) One (1) minimum of one and one-half (1 1/2) ton cable puller or come-along;
- (30) One (1) minimum of ten (10) ton manual hydraulic power supply;
- (31) One (1) minimum of five (5) ton hydraulic jack;
- (32) One (1) halligan tool, or equivalent;
- (33) Two (2) rescue pulleys;
- (34) 200 feet of utility rope;
- (35) 100 feet of half-inch inch static rescue kernmantle rope;
- (36) One (1), eight (8) foot ladder;
- (37) Two (2) tarps or salvage covers;
- (38) One (1), three (3) gallon gas can, safety type;
- (39) Two (2), ten (10) pound fire extinguishers, ABC rated;
- (40) One (1), two-point-five (2.5) KVA portable generator, or equivalent;
- (41) One (1), fifty (50) foot section of No. 10 electrical extension cord, GFI equipped;
- (42) One (1), 100 foot section of No. 10 electrical extension cord, GFI equipped;
- (43) One (1), 100 foot section of No. 12 electrical extension cord, GFI equipped;
- (44) Twelve (12) ANSI-approved traffic safety reflective vests; and
- (45) Five (5), thirty-six (36) inch traffic cones with reflective collars (only required for rescue squads that perform vehicle extrication.)

Section 3. The minimum equipment for a rescue squad specializing in water rescue and recovery operations not utilizing divers and not classified as swiftwater shall be:

- (1) One (1) rigid hull boat, a minimum of (12) feet in length with U.S. Coast Guard required lighting and equipment (33 C.F.R. 183);
- (2) One (1) boat motor, appropriate for boat;
- (3) Two (2) marine-type gas tanks;
- (4) One (1) boat anchor;
- (5) One (1) boat trailer, appropriate for boat;
- (6) Two (2) boat oars or paddles;
- (7) Four (4), Type III personal flotation devices approved by the U.S. Coast Guard (33 C.F.R.

183.101-335);

- (8) Two (2) electric lanterns or spot lights;
- (9) Four (4) buoy markers;
- (10) One (1) tool box;
- (12) One (1) flat blade (slot head) screwdriver;
- (13) One (1) Phillips head screwdriver;
- (14) One (1) pair of pliers, slip joint;
- (15) One (1) pair of locking pliers;
- (16) Two (2) grappling irons or drag hooks;
- (17) Two (2) pike poles, shepherd's hooks, or boat hooks;
- (18) 500 feet of half-inch diameter nylon or polypropylene rope, with rope bags;
- (19) Two (2) water throw bags with seventy-five (75) feet of nylon rope for each bag;
- (20) Two (2) rescue pulleys;
- (21) One (1) full backboard, basket litter, or equivalent;
- (22) One (1) first aid kit, twenty-four (24) unit industrial-type or equivalent; and
- (23) Two (2) flashlights.

Section 4. The minimum equipment for a rescue squad specializing in water rescue and recovery operations utilizing divers shall be:

- (1) For Level 1:
 - (a) One (1) full or partial face mask suitable for snorkeling;
 - (b) One (1) snorkel;
 - (c) One (1) pair of swim fins; and
 - (d) Appropriate swimwear and snorkeling shoes for the environment;
- (2) For Level 2:
 - (a) One (1) full face mask per certified diver;
 - (b) One (1) drysuit per certified diver; and
 - (c) One (1) independent back-up air supply;
- (3) For Level 3, in addition to the equipment established in subsection (2) of this section, at a minimum surface supplied air and redundant air supply; and
- (4) For Level 4, in addition to the equipment established in subsections (2) and (3) of this section, at a minimum fully encapsulated HAZMAT drysuit; and
- (5) In addition to the equipment established in this section, all squads shall have the minimum equipment listed in Section 3 of this administrative regulation.

Section 5. The minimum equipment for a rescue squad specializing in cave rescue shall be:

- (1) One (1) litter, basket style;
- (2) One (1) litter, flexible, full length, vertical lift capability;
- (3) One (1) splint kit;
- (4) Thirty (30) carabiners, locking, D's;
- (5) Twelve (12) rescue helmets, with hands-free or helmet lighting;
- (6) Four (4) friction devices, G-rated, 5 bar minimum, with tie-off;
- (7) Two hundred (200) feet of webbing;
- (8) Two (2) pulleys, two (2) inch, single, prusik minding;
- (9) Four (4) pulleys, two (2) inch double, prusik minding;
- (10) One (1) pulley - knot passing;
- (11) Four (4) sets of prusik cords, matched for pulleys;
- (12) Six (6) edge protection, appropriate for cave environment;
- (13) One (1) flexible ladder, fifteen (15) feet;

- (14) One (1) swivel;
- (15) One (1) radium load release hitch, or equivalent;
- (16) Six (6) rope grabs, mechanical;
- (17) Three (3) ropes, seven-sixteenths (7/16), two hundred (200) static kernmantle lifeline;
- (18) One (1) rope, ten and five-tenths (10.5) mm, or 7/16 inches, 150 feet, dynamic kernmantle lifeline (UIAA approved);
- (19) 400 feet, half-inch diameter static kernmantle lifeline;
- (20) 200 feet, half-inch diameter static kernmantle lifeline; and
- (21) Six (6) rope bags, with drain hole or waterproof.

Section 6. The minimum equipment for a rescue squad specializing in high angle rescue service shall be:

- (1) Six (6) helmets with chin straps and designed for working at heights and meeting ANSI Z89.1-2014 or equivalent standard;
- (2) Six (6) pairs of gloves, styled for rope rescue work;
- (3) Six (6) flashlights designed for hands-free operation;
- (4) Four (4) full body (Class III) harnesses designed for rope rescue work and meeting ANSI Z359.11 NFPA 1983, or equivalent;
- (5) 400 feet of half-inch diameter rescue rope;
- (6) 300 feet of webbing;
- (7) Ten (10) sets of prusik or utility cord;
- (8) Two (2) load release straps or web system configured for load release systems;
- (9) Two (2) pick-off straps;
- (10) Two (2) etrier, ladder, or multi-loop straps;
- (11) Six (6) rope storage bags;
- (12) Thirty (30) locking carabiners;
- (13) Four (4) anchor plates;
- (14) Six (6) rescue pulleys
- (15) Four (4) friction devices;
- (16) Six (6) rope grabs or ascenders;
- (17) One (1) large knot passing pulley;
- (18) One (1) victim seat or harness;
- (19) One (1) litter or basket;
- (20) One (1) litter harness;
- (21) One (1) litter patient tie in system;
- (22) Two (2) edge protectors; and
- (23) One (1) radium load release hitch, or equivalent.

Section 7. The minimum equipment for a rescue squad specializing in swiftwater shall be:

- (1) All equipment listed in Section 3(4) through (23) of this administrative regulation;
- (2) Six (6) Personal Flotation Devices (PFD), Class V, with tethers;
- (3) Six (6) rescue or dive knives;
- (4) Six (6) whistles;
- (5) Six (6) vented helmets suitable for water rescue;
- (6) 400 feet of 7/16 inches polypropylene or nylon rope;
- (7) One (1), twelve (12) foot self-bailing, inflatable rescue raft or inflatable rescue boat, or equivalent;
- (8) Six (6), seventy-five (75) foot throw bags (in addition to those required by Section 3 of this administrative regulation);

- (9) Four (4) dry suits;
- (10) Four (4) paddles; and
- (11) 100 feet of messenger line or rope.

Section 8. The minimum equipment for a single-handler rescue squad utilizing dogs and specializing in a search for lost, trapped, or missing persons shall be:

- (1) Three (3) flashlights with extra batteries;
- (2) One (1) GPS unit, capable of U.S. Geographic Service (USGS) data;
- (3) Two (2) rolls, 100 feet each flagging or surveyor tape; and
- (4) One (1) portable radio with two (2) batteries or battery packs and one (1) charger per radio (or equivalent multi-charger unit). This requirement may be satisfied by the handler being accompanied by another individual with appropriate communications.

Section 9. The core equipment for a rescue squad specializing in a search for lost, trapped, or missing persons shall be:

- (1) One (1) basket litter;
- (2) Topographical maps of primary response area, 1:24000m (may be electronic);
- (3) Two (2) full backboards;
- (4) One (1) basket litter;
- (5) 100 feet of one (1) inch diameter tubular nylon webbing;
- (6) One (1) first aid kit, twenty-four (24) unit industrial type or equivalent; and
- (7) Twelve (12) reflective or high-visibility vests or clothing.

Section 10. The core equipment for an equine rescue squad utilizing horses (equines) shall be:

- (1) All equipment listed in Section 9 of this administrative regulation;
- (2) Fifty (50) feet, 1,850-lb rated braided rope;
- (3) One (1) equine first aid kit;
- (4) Two (2) portable corrals;
- (5) Two (2) carabiners – locking;
- (6) Two (2) USTM or SEI certified equine rider helmets;
- (7) Two (2) equine tack mounted flashlights;
- (8) Two (2) equine care multi-purpose tools; and
- (9) Two (2) sets of reflective tack for identification.

Section 11. The core communications equipment established in this section shall be required for rescue squads, in addition to any other minimum equipment required for that rescue squad by any other section of this administrative regulation.

(1) A rescue squad that performs light duty rescue or vehicle crash extrication functions shall have:

- (a) One (1) base radio;
- (b) One (1) antenna for the base radio;
- (c) One (1) radio antenna tower or functional alternative structure for elevating the base radio antenna at least fifty (50) feet above ground level;
- (d) One (1) mobile radio with mobile antenna for the rescue squad's required vehicle, if the vehicle is a motor vehicle; and
- (e) Six (6) portable radios with two (2) batteries or battery packs and one (1) charger per radio (or equivalent multi-charger unit).

(2) A rescue squad providing search and rescue functions for lost or missing persons (except a search team utilizing dogs covered by Section 8 of this administrative regulation and water rescue,

covered by Sections 3, 4, and 7 of this administrative regulation), shall have:

(a) One (1) mobile radio with mobile antenna for the rescue squad's required vehicle, if the vehicle is a motor vehicle; and

(b) Six (6) portable radios with two (2) batteries or battery packs and one (1) charger per radio (or equivalent multi-charger unit).

(3) All requirements for base and mobile radios and antennas established by this section shall include all required signal transmission line or coaxial cable, connectors, power supplies, and other ancillary items required to render the radio functional for voice communications.

(4) Any portable (hand-held) or mobile radio owned by another agency, or by a city or county, and assigned to the rescue squad for its exclusive use may be counted toward the requirement established by subsection (1)(c) and (f) of this section, regardless of if the rescue squad does not hold actual ownership of the radios.

(5) A rescue squad that performs light duty rescue or vehicle crash extrication functions shall not be required to have the equipment required by subsection (1)(a) through (c) of this section if dispatch services for the rescue squad are provided by another agency or by a public safety dispatch center.

(6) Any rescue squad receiving rescue aid funds for the purchase of radio equipment shall, prior to expending the funds, provide the Division of Emergency Management with documentation verifying the completion of a written agreement or memorandum of understanding between the rescue squad and the Kentucky State Police, authorizing the rescue squad and its members to use the Kentucky Mutual Aid and Interoperability (KMAI) radio frequencies for mutual aid and multi-agency interoperability purposes.

(7) Any radio purchased with rescue aid funds shall comply with all standards established by the Kentucky Wireless Interoperability Executive Committee (KWIEC), or any lawful successor to that body, including a project review as required by KRS 42.738.

Section 12. Sections 2 through 11 of this administrative regulation, unless otherwise indicated, shall be the minimum for a rescue squad based upon the mission or missions included in the affiliation agreement, and shall not include equipment personally owned by a rescue squad member, including headgear, eyewear, clothing, footwear, handwear, personal packs, and lighting sources.

(1) In the case of equine teams and K9 teams, most, if not all, animal tack, gear, harnesses, as well as the animal itself, will be personally owned by the member.

(2) All rescue squads shall ensure the provision of any equipment required to ensure compliance with relevant standards under the Occupational Safety and Health Administration (OSHA), including high-visibility clothing and protective headgear, eyewear, clothing, footwear, and handwear, whether squad provided or personally owned, depending upon the mission.

(3) Any trailer, as defined by KRS 186.650(1) and 189.010(19) shall include a standard size ball, and the ball, receiver slide, and pin, as well as the electric adapter, shall remain with the trailer continuously, including if not connected to a towing vehicle.

Section 13. Unless otherwise listed in another section of this administrative regulation, the following minimum criteria shall apply to webbing, rescue ropes, carabiners, rescue pulleys, harnesses, and high angle rescue harnesses purchased after July 1, 2017 with rescue aid funds, and to any item purchased by rescue squads using funds from any source after July 1, 2017 if the item in question is used to meet the requirements of any section of this administrative regulation:

(1) All carabiners required by this administrative regulation that are not to be used for a lifeload shall have a rated strength along the long axis, with the gate closed and secured, of not less than twenty-seven (27) kiloNewtons (3,034 lbf). These items may also be called "T" rated under NFPA 1983, Selected Equipment Performance Requirements – Carabiners;

(2) All carabiners required by this administrative regulation that may be used for a rescue or lifeload shall have a rated strength along the long axis, with the gate closed and secured, of not less than forty (40) kiloNewtons (8,992 lbf). These items may also be called "G" rated under NFPA 1983, Selected Equipment Performance Requirements – Carabiners;

(3) All pulleys required by this administrative regulation that are listed or described as "rescue" pulleys but that are not also listed or described as "large" shall have a minimum rated strength of twenty-two (22) kiloNewtons (4,946 lbf);

(4) All pulleys required by this administrative regulation that are listed or described as "rescue" pulleys and that are also listed or described as "large" shall have a minimum rated strength of thirty-six (36) kiloNewtons (8,093 lbf);

(5) All mechanical ascenders required by this administrative regulation shall hold a test load of five (5) kiloNewtons (1,124 lbf) without causing permanent damage to the rope;

(6) All rope grabs required by this administrative regulation shall hold a test load of eleven (11) kiloNewtons (2,473 lbf) without causing permanent damage to the rope;

(7) Mechanical descenders, including figure 8 descenders and rappel racks, shall withstand a load of thirteen and five-tenths (13.5) kiloNewtons (3,34 lbf) without failure;

(8) Nylon webbing required by this administrative regulation shall be one (1) inch or greater in diameter, with a minimum breaking strength of seventeen and eight-tenths (17.8) kiloNewtons (4,000 lbf);

(9) Rescue rope with a minimum required diameter of 7/16 inch required by this administrative regulation shall have a minimum breaking strength of twenty (20) kiloNewtons (4,496 lbf);

(10) Rescue rope with a minimum required diameter of one half (1/2) inch required by this administrative regulation shall have a minimum breaking strength of forty (40) kiloNewtons (8,992 lbf);

(11) Rescue rope required by this administrative regulation that is listed or described as "static" shall have a maximum elongation, if loaded at ten (10) percent of its rated minimum breaking strength, of ten (10) percent or less of its total length;

(12) Helmets required by this administrative regulation for use in high angle rescue service shall be designed and intended for climbing, rappelling, working at heights, or high angle rescue use and shall be certified or approved under the standards of the UIAA, NFPA, ANSI, or CE;

(13) Harnesses required by this administrative regulation shall be deemed by the manufacturer to be suitable for rappelling, climbing, working at heights, or high angle rescue and shall be certified or approved under the standards of the UIAA, NFPA, ANSI, or CE;

(14) Manufacturers' written or published specifications for the equipment established in subsections (1) through (13) of this section shall be sufficient to establish compliance with this section. A rescue squad shall not be required to conduct independent testing to verify the compliance of equipment where written or published specifications from the equipment manufacturer indicate that the equipment is compliant with this section;

(15) A rescue squad may request rescue aid funds to replace any equipment listed or referenced in subsections (1) through (13) of this section that has a maximum safe service life specified by the manufacturer, upon the expiration of the equipment's maximum service life, without need to demonstrate that the equipment is otherwise unserviceable. The equipment may be requested as new minimum equipment as established in this administrative regulation; and

(16) Any equipment replaced under the provisions of subsection (15) of this section shall be:

(a) Returned to the Division of Emergency Management for disposal or for use in nonlife safety training activities; or

(b) Retained by the rescue squad, with the written approval of the Director of the Division of Emergency Management, for use only in non-life safety training activities. Any item of equipment retained for training use under the provisions of this sub-section shall be clearly and permanently

marked to indicate that it is for non-life safety training use only and shall not be used in any life safety application.

Section 14. If a rescue squad engages in more than one (1) specialized rescue squad activity or general rescue squad activity, the equipment listed for rescue squads specializing in water rescue and recovery, water rescue and recovery utilizing divers, high angle rescue service, cave rescue, or search for lost, trapped, or missing persons, shall not have to be duplicated in order to meet the requirements of this administrative regulation. The provisions of this section shall not apply to radio communications equipment required by Section 11 of this administrative regulation, which shall be required in addition to any other equipment required by other sections of this administrative regulation.

Section 15. The capacities and sizes of equipment, as well as the number of units of each item of equipment, established within this administrative regulation are minimum requirements. Unless specifically prohibited by the text of the applicable subsection, the requirement for any particular item of equipment may be met by an item of the same type having greater size, length, capacity, or capability than the stated minimum required by this administrative regulation.

Section 16. Material Incorporated by Reference. (1) The following material is incorporated by reference:

- (a) "Kentucky Mutual Aid and Interoperability (KMAI) radio frequencies", October 4, 2011; and
- (b) "Mutual Aid and Interoperability Memorandum of Understanding for the Commonwealth of Kentucky", October 1, 2014.

(2) This material may be inspected, copied, or obtained, subject to applicable copyright law, at the Department of Military Affairs, Division of Emergency Management, 100 Minuteman Parkway, Boone National Guard Center, Frankfort, Kentucky 40601, Monday through Friday, 8 a.m. to 4:30 p.m. (27 Ky.R. 1997; 2848; eff. 5-14-2001; 44 Ky.R. 1603; 1963; eff. 4-6-2018.)