
Personal Protective Equipment

913.1 PURPOSE AND SCOPE

The purpose of this policy is to reasonably protect Blue Ridge Fire District members by providing and maintaining, at no cost to the member, personal protective equipment (PPE), safety devices and safeguards for workplace activities (29 CFR 1910.132; AAC § R20-5-602). PPE information related to patient care is found in the Communicable Diseases Policy.

913.2 POLICY

It is the policy of the Blue Ridge Fire District to provide PPE and safeguards of the proper type, design, strength and quality needed to reasonably eliminate, preclude or mitigate a hazard.

The Blue Ridge Fire District shall also establish a written maintenance, repair, servicing and inspection program for protective clothing and equipment to reduce the safety and health risks associated with improper selection, poor maintenance, inadequate care, excess wear and improper use of PPE.

913.3 PPE STANDARDS AND REQUIREMENTS

The District will provide approved PPE that is appropriate for the hazard to members who are located in a workplace where there is a risk of injury. Members shall be expected to wear the PPE any time there is a risk of exposure to a hazard. PPE shall include all of the following guidelines, requirements and standards (29 CFR 1910.132; AAC § R20-5-602):

- (a) The PPE provided shall minimally meet the standards approved by the American National Standards Institute (ANSI) or other recognized authority.
- (b) When no authoritative standard exists for PPE or a safety device, the use of such equipment shall be subject to inspection and acceptance or rejection by the supervisor in charge of where the equipment will be used.
- (c) PPE shall be distinctly marked so as to facilitate easy identification of the manufacturer.
- (d) The Training Coordinator shall ensure that the member is properly instructed and uses PPE in accordance with the manufacturer's instructions.
- (e) The District shall ensure that all PPE, whether provided by the District or the member, complies with the applicable state standards.
- (f) Members are responsible for maintaining their assigned PPE in a safe and sanitary condition.
- (g) Supervisors are responsible for ensuring that all PPE is maintained in a safe and sanitary condition.
- (h) PPE shall be of such design, fit and durability as to provide adequate protection against the hazards for which they are designed.

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- (i) PPE shall be reasonably comfortable and shall not unduly encumber member movements that are necessary to perform work.

913.3.1 HEAD PROTECTION

Members working in locations where there is a risk of head injuries from flying or falling objects and/or electric shock and burns shall wear an approved protective helmet. Each protective helmet shall bear the original marking required by the ANSI standard under which it was approved. At a minimum, the marking shall identify the manufacturer, the ANSI designated standard number and date, and the ANSI designated class of helmet. Where there is a risk of injury from hair entanglements in moving parts of machinery, combustibles or toxic contaminants, members shall confine their hair to eliminate the hazard (29 CFR 1910.135; AAC § R20-5-602).

913.3.2 FACE AND EYE PROTECTION

Members working in locations where there is a risk of eye injuries, such as punctures, abrasions, contusions or burns from contact with flying particles, hazardous substances, projectiles or injurious light rays that are inherent in the work or environment, shall be safeguarded by means of face or eye protection. Suitable screens or shields isolating the hazardous exposure may be considered adequate safeguarding for nearby members. The District shall provide and require that members wear approved face and eye protection suitable for the hazard and in accordance with previously cited national standards (29 CFR 1910.133; AAC § R20-5-602).

913.3.3 BODY PROTECTION

Body protection may be required for members whose work exposes parts of their bodies that are not otherwise protected from hazardous or flying substances or objects. Clothing appropriate for the work being done shall be worn. Loose sleeves, tails, ties, lapels, cuffs or other loose clothing that can be entangled in moving machinery shall not be worn. Clothing saturated with flammable liquids, corrosive substances, irritants or oxidizing agents shall either be removed and not worn until properly cleaned, or shall be destroyed (29 CFR 1910.132; AAC § R20-5-602).

913.3.4 HAND PROTECTION

Hand protection shall be required for members whose work involves unusual and excessive exposure of hands to cuts, burns, harmful physical or chemical agents or radioactive materials that are encountered and capable of causing injury or impairment.

Hand protection (e.g., gloves) shall not be worn where there is a danger of the hand protection becoming entangled in moving machinery or materials. Use of hand protection around smooth-surfaced rotating equipment does not constitute an entanglement hazard if it is unlikely that the hand protection will be drawn into the danger zone.

Wristwatches, rings or other jewelry should not be worn while working with or around machinery with moving parts in which such objects may be caught or around electrical equipment (29 CFR 1910.138; AAC § R20-5-602).

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913.3.5 FOOT PROTECTION

Appropriate foot protection shall be required for members who are exposed to foot injuries from electrical hazards; hot, corrosive or poisonous substances; falling objects; or crushing or penetrating actions, or who are required to work in abnormally wet locations. Footwear that is defective or inappropriate to the extent that its ordinary use creates the possibility of foot injuries shall not be worn. Footwear shall be appropriate for the hazard and shall comply with recognized national standards (29 CFR 1910.136; AAC § R20-5-602).

913.4 SELECTION, CARE AND MAINTENANCE OF PPE

PPE exists to provide the member with an envelope of protection from multiple hazards and repeated exposures. For structural firefighting, PPE is a system of components designed to work as an ensemble. Typical firefighting PPE consists of a hood, helmet, jacket, trousers, gloves, wristlets and footwear. A program for selection, care and maintenance of PPE consists of the following.

913.4.1 SELECTION

The PPE selection process should be conducted through a labor-management committee utilizing members from labor and representatives from management.

Prior to procurement, a risk assessment may be performed to include expected hazards, frequency of use, past experiences, geographic location and climatic conditions. The selection process should evaluate comparative information on all ensemble elements to ensure they will interface and perform based on the risk assessment. The process should consider the following:

- (a) PPE performance expectations, to include thermal and physiological effects
- (b) Style and design for user comfort and wear performance
- (c) Construction for quality, durability and garment life
- (d) Manufacturer ability to meet performance demand requirements, technical information, service, warranty and customer support needs

913.4.2 INSPECTION

There are two primary types of PPE inspection:

Routine inspection - Each firefighter shall conduct a routine inspection of his/her issued PPE each time the elements are exposed or are suspected of having been exposed to damage or contamination.

- (a) Coat, trouser, gloves and hood should be checked for the following:
 - 1. Soiling
 - 2. Contamination from hazardous materials or biological agents
 - 3. Physical damage, such as:
 - (a) Rips, tears and cuts

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- (b) Damaged/missing hardware and closure systems
 - (c) Thermal damage, such as charring, burn holes and melting
 - (d) Damaged or missing reflective trim
 - (e) Shrinkage
 - (f) Loss of elasticity or flexibility at openings
- (b) Helmets should be checked for the following:
- 1. Soiling
 - 2. Contamination from hazardous materials or biological agents
 - 3. Physical damage to the shell, such as:
 - (a) Cracks, crazing (small cracks), dents and abrasions
 - (b) Thermal damage to the shell, such as bubbling, soft spots, warping or discoloration
 - 4. Physical damage to ear flaps, such as:
 - (a) Rips, tears and cuts
 - (b) Thermal damage, such as charring, burn holes and melting
 - 5. Damaged or missing components of suspension and retention systems
 - 6. Damaged or missing components of the goggle system including:
 - (a) Discoloration
 - (b) Crazing (small cracks)
 - (c) Scratches to goggle lens, limiting visibility
 - 7. Damaged or missing reflective trim
- (c) Footwear should be checked for the following:
- 1. Soiling
 - 2. Contamination from hazardous materials or biological agents
 - 3. Physical damage, such as:
 - (a) Cuts, tears and punctures
 - (b) Thermal damage, such as charring, burn holes and melting
 - (c) Exposed or deformed steel toe, steel midsole and shank
 - (d) Loss of water resistance

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Advanced inspection - Advanced inspection of PPE ensembles and elements shall be conducted a minimum of every 12 months or whenever routine inspections indicate a problem may exist.

Advanced inspections shall only be conducted by trained and certified members or a manufacturer-approved vendor certified to conduct advanced inspections. All findings from advanced inspections shall be documented on an inspection form. Universal precautions shall be observed, as appropriate, when handling elements. Advanced inspections shall include, at a minimum, the inspection criteria outlined in the applicable National Fire Protection Association (NFPA) standard and manufacturer guidelines.

913.4.3 CLEANING AND DECONTAMINATION

The following rules and restrictions shall apply to the cleaning and decontamination of PPE:

- (a) Soiled and contaminated PPE elements shall not be taken home, washed in the home or washed in public laundries unless the business is dedicated to handling firefighting protective clothing.
- (b) Commercial dry cleaning shall not be used.
- (c) The District will examine the manufacturer's label and user information for specific cleaning instructions.
- (d) Chlorine bleach or chlorinated solvents shall not be used to clean or decontaminate PPE elements.
- (e) Scrubbing or spraying with high-velocity water jets, such as a power washer, shall not be used.
- (f) All contract cleaning or decontamination businesses shall demonstrate procedures for cleaning and decontamination that do not compromise the performance of PPE ensembles and elements. District standards identify and define three primary types of cleaning: routine, advanced and specialized.
 - 1. **Routine cleaning** - After each use, any elements that are soiled shall receive routine cleaning. It is the firefighter's responsibility to routinely clean his/her PPE ensemble or elements using the following process:
 - (a) When possible, initiate cleaning at the incident scene.
 - (b) Brush off any dry debris.
 - (c) Gently rinse off debris with a water hose.
 - (d) If necessary, scrub gently with a soft bristle brush and rinse off again if necessary. Spot clean utilizing a utility sink.
 - (e) Inspect for soiling and contamination and repeat the process if necessary.
 - (f) All elements shall be air-dried in an area with good ventilation. Do not dry in direct sunlight or use a machine dryer.

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2. **Advanced cleaning** - Should routine cleaning fail to render the elements clean enough to be returned to service, advanced cleaning is required. In addition, elements that have been issued, used and soiled shall undergo advanced cleaning every six months, at a minimum.
 - (a) The district's Health and Safety Officer (HSO) shall manage all advanced cleaning utilizing a qualified contract cleaner.
 - (b) Advanced cleaning will be coordinated with the HSO by either the crew or by the individual. Loaner PPE will be provided for any member scheduled to work.
 - (c) Station laundering machines shall not be used to clean PPE elements.
3. **Specialized cleaning** - PPE elements that are contaminated with hazardous materials or biological agents shall undergo specialized cleaning as necessary to remove the specific contaminants.
 - (a) The PPE elements that are contaminated or suspected to be contaminated shall be isolated, tagged, bagged and removed from service until they undergo specialized cleaning to remove the specific contaminant. All bagged PPE shall include the member's name, company and shift. Universal precautions shall be observed when handling known or suspected contaminated PPE elements. For more information on decontamination of PPE after exposure, refer to the Communicable Diseases Policy.
 - (b) The district's HSO shall manage all specialized cleaning and will utilize a qualified contract cleaner. The District, if possible, shall identify the suspected contaminant and consult the manufacturer for an appropriate decontamination agent and process.

913.4.4 REPAIR OF PPE

The district's HSO shall manage all PPE repairs utilizing a manufacturer-recognized repair facility. All elements shall be subject to an advanced or specialized cleaning before any repair work is done. Loaner PPE is available to members while repairs are being made.

913.4.5 ISSUING PPE

All PPE ensembles or elements shall be issued through the district's HSO. All fittings shall be completed by the HSO and/or by a manufacturer's representative.

- Members shall only use district-issued PPE.
- Members shall minimize the public's exposure to soiled or contaminated PPE and avoid wearing PPE to non-fire related emergencies.
- Members shall not wear PPE inside station living quarters or other district facilities.

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913.4.6 STORAGE OF PPE

The parameters for the storage of all PPE ensembles or elements include the following:

- (a) PPE shall not be stored in direct sunlight or exposed to direct sunlight when it is not being worn.
- (b) PPE shall be clean, dry and well ventilated before storage.
- (c) PPE shall not be stored in airtight containers unless the container is new and unused.
- (d) PPE shall not be stored at temperatures below 40 degrees F or above 180 degrees F.
- (e) PPE shall be stored in a protective case or bag to prevent damage if stored in compartments or trunks.
- (f) PPE shall not be subjected to sharp objects, tools or other equipment that could damage the ensemble or elements.
- (g) PPE shall not be stored inside living quarters or with personal belongings, or taken or transported within the passenger compartment of personal vehicles unless it is stored in a protective case or bag.
- (h) PPE shall not be stored in contact with hydraulic fluids, solvents, hydrocarbons, hydrocarbon vapors or other contaminants.

913.4.7 PPE TRAINING

The Training Coordinator shall be responsible for the following:

- (a) Upon issue, all members shall be provided training on this policy along with the manufacturer's written instructions on the care, use and maintenance of their PPE, including any warnings issued by the manufacturer.
- (b) New firefighters shall receive training in the care, use and maintenance of their PPE before participating in live fire training or operations. All other firefighters shall receive training as needed when PPE ensembles or elements are upgraded or changed.

913.4.8 PPE RECORD KEEPING

The District shall maintain or require contracted vendors to maintain records on all structural firefighting ensembles or elements to include:

- (a) The name of the member to whom the element is issued.
- (b) The date and condition of the element when issued.
- (c) The manufacturer, model name or design.
- (d) The manufacturer's identification number, lot number or serial number.
- (e) The month and year of manufacture.
- (f) The dates and findings of all advanced inspections.

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- (g) The dates of advanced cleaning, specialized cleaning or decontamination, and by whom it was performed.
- (h) The date of any repairs, the person who repaired the PPE and a brief description of the repair.
- (i) The date the element was removed from service (retirement).
- (j) The date and method the element was disposed.

913.4.9 PPE RETIREMENT

All PPE ensembles and elements that are worn or damaged to the extent that the District deems that it is not possible or cost effective to repair shall be retired. All PPE ensembles and elements that are no longer useful for emergency operations but are not contaminated, defective or damaged shall be retired.

Retired PPE ensembles and elements shall be destroyed or disposed of by the District in a manner ensuring that they will not be used in any firefighting or emergency activities, including training. Retired PPE may only be used for training when that training does not include live fire. Any PPE used for training shall be clearly marked: "Training only. No live fire."

913.4.10 SPECIAL INCIDENT PROCEDURE

If any member of the Blue Ridge Fire District suffers a serious injury or death while wearing PPE, the following procedure should be followed:

- (a) The PPE will immediately be removed from service.
- (b) Custody of the PPE will be maintained by the Fire Chief or the authorized designee, and the PPE shall be kept in a secure location with controlled, documented access.
- (c) All PPE shall be non-destructively tagged and stored only in paper or cardboard containers to prevent further degradation or damage. Plastic airtight containers shall not be used.
- (d) The PPE shall be made available to the district's investigation team (see the Line-of-Duty Death and Serious Injury Investigations Policy) or outside experts as approved by the Fire Chief or the authorized designee, to determine the condition of the PPE.
- (e) The Fire Chief or the authorized designee shall determine the retention period for storage of the PPE.