

WAC 296-305-05004 Occupational exposure to heat and cold stress.

(1) Fire departments must develop written guidelines that outline a systematic approach for the rehabilitation of members operating at incidents and training exercises. The following components must be included in this guideline:

- (a) Supervisor's role in identifying climate conditions (hot or cold).
- (b) The signs and symptoms of heat or cold stress and how to identify them in subordinates and fellow members.
- (c) How to identify the climatic condition likely to produce heat or cold stress on members operating at emergency scenes or during training exercises.
- (d) What steps the incident commander (IC) must take when the climatic condition poses a heat or cold stress hazard to members.
- (e) What rest-to-work (recovery) schedule the IC must consider during climatic conditions that present a heat or cold stress hazard to members.

Example: NFPA 1584 states that after members use 2 30-minute SCBA bottles or 1 45-to-60-minute SCBA bottle or 40 minutes strenuous work without an SCBA the member should go to rehabilitation for a 10 to 20 minute rest and rehydrate.

- (f) Which active or passive cooling and warming techniques will be used based on the incident type and climatic condition.
 - (g) What rehydration schedule will be followed, including the amount and type of fluids.
 - (h) What the department will do to ensure caloric replacement and electrolyte replacement during longer term emergencies and exercises.
 - (i) What medical monitoring will be provided to members in rehabilitation and what criteria will be used to release members from rehabilitation.
 - (j) What the IC will do when a member is showing signs of heat or cold stress after completing the department's rest-to-work cycle.
 - (k) What medical personnel will be present in rehabilitation to evaluate members sent to rehabilitation during the rest-to-work cycle.
- To determine what temperature triggers action at each worksite, select the general type of clothing or personal protective equipment each employee is required to wear and find the corresponding temperature in Table 1.

**Table 1
Outdoor Temperature Action Levels**

Nonbreathing clothing including vapor-barrier clothing or chemical resistant suits	52°
Double-layer woven clothing including coveralls, jackets and sweatshirts	77°
All other clothing	89°

Note: There is no requirement to maintain temperature records. The temperatures in Table 1 were developed based on Washington state data and are not applicable in other states.

(2) Employee training. Training on the following topics must be provided to all employees who may be exposed to outdoor heat at or above the temperatures listed in Table 1:

- (a) The environmental factors that contribute to the risk of heat-related illness.
- (b) General awareness of personal factors that may increase susceptibility to heat-related illness including, but not limited to, an individual's age, degree of acclimatization, medical conditions, drinking water consumption, alcohol use, caffeine use, nicotine use,

and use of medications that affect the body's responses to heat. This information is for the employee's personal use.

(c) The importance of removing heat-retaining personal protective equipment such as nonbreathable chemical resistant clothing during all breaks.

(d) The importance of frequent consumption of small quantities of drinking water or other acceptable beverages.

(e) The importance of acclimatization.

(f) The different types of heat-related illness and their common signs and symptoms.

(g) The importance of immediately reporting signs or symptoms of heat-related illness in either themselves or in coworkers to the person in charge and the procedures the employee must follow including appropriate emergency response procedures.

(3) Supervisor training. Prior to supervising employees working in outdoor environments with heat exposure at or above the temperature levels listed in Table 1, supervisors must have training on the following topics:

(a) The information required to be provided to employees listed in subsection (1) of this section.

(b) The procedures the supervisor must follow to implement the applicable provisions of this section.

(c) The procedures the supervisor must follow if an employee exhibits signs or symptoms consistent with possible heat-related illness, including appropriate emergency response procedures.

(d) Procedures for moving or transporting an employee to a place where the employee can be reached by an emergency medical service provider if necessary.

(4) The fire department must rotate crews as necessary to allow for rehabilitation.

(5) All members must be provided training and information on how the body regulates core temperatures and how to recognize the signs, symptoms and controls for heat and cold stress.

(6) All members must be provided training on the department's guideline addressing heat and cold stress.

(7) Employees are responsible for monitoring their own personal factors for heat-related illness including consumption of water or other acceptable beverages to ensure hydration.

(8) A rehabilitation area must be designated with features that provide shade or air conditioning with a place to sit for extremely hot environments.

(9) A rehabilitation area must be designated with features that provide dry protected areas out of the wind or rain and a heated area with a place to sit for extremely cold or wet environments.

(10) Multiple rehabilitation areas must be set up if the geographical area or size of the scene creates barriers limiting members' access to rehabilitation.

(11) The rehabilitation area must be of sufficient size to accommodate the number of crews using the area at the same time.

(12) Members entering the rehabilitation area that feel warm or hot must remove their personal protective clothing. Personnel trained in basic life support must evaluate the member and institute active or passive cooling as indicated.

(13) At a minimum, a person trained in basic life support with the knowledge and training needed must be located in the rehabilitation area to conduct medical monitoring and evaluation of crews entering the rehabilitation area.

(14) Members must not be released from rehabilitation until a person trained in basic life support okays their return to work.

(15) Supervisors must assess their crew at least every forty-five minutes and more frequently when climatic conditions warrant to determine their need for rehabilitation.

(16) Members on emergency scenes and during exercises must be provided a minimum of one quart of water per hour when the climatic conditions present heat or cold stress hazards. After one hour, caloric and electrolyte replacement must be considered.

(a) The employer must ensure that a sufficient quantity of drinking water is readily accessible to employees at all times.

(b) Employers must ensure that all employees have the opportunity to drink at least one quart of drinking water per hour.

(c) Employers must encourage employees to frequently consume water or other acceptable beverages to ensure hydration.

(17) Employees showing signs or complaining of symptoms of heat-related illness must be relieved from duty, provided with a sufficient means to reduce body temperature, and monitored to determine whether medical attention is necessary.

Note: For further guidance, sample policies and information please consult the 2008 edition of NFPA 1584, Standard on the Rehabilitation Process for Members During Emergency Operations and Training Exercises or the United States Fire Administration's Emergency Incident Rehabilitation Manual FA-314 issued February 2008.

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, and 49.17.060. WSR 18-22-116, § 296-305-05004, filed 11/6/18, effective 12/7/18. Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, 49.17.060 and 29 C.F.R. 1910.156, Fire brigades. WSR 13-05-070, § 296-305-05004, filed 2/19/13, effective 1/1/14.]