

New Mexico Environment Department Proposed Heat Illness and Injury Prevention Rule

TITLE 11 LABOR AND WORKERS COMPENSATION
CHAPTER 5 OCCUPATIONAL HEALTH AND SAFETY
PART 7 OCCUPATIONAL HEALTH AND SAFETY- HEAT ILLNESS AND INJURY
PREVENTION

11.5.7.1 ISSUING AGENCY: New Mexico Environmental Improvement Board.
[11.5.7.1 NMAC- N x/x/xx]

11.5.7.2 SCOPE: All employment and places of employment, including indoor and outdoor places of employment covered by the standards for General Industry, Construction Industry, Agriculture, and Convenience Stores, subject to the provisions of the Occupational Health and Safety Act.

1. The following situations are exempt from the requirements of this standard.
 - a. Incidental heat exposures of fifteen minutes or less that require employee exposure to environments with a heat index exceeding 80 degrees Fahrenheit (27 degrees Celsius) and up to 90 degrees Fahrenheit within a one-hour period; and
 - b. All emergency response operations that are directly involved in the protection of life or property, or the restoration of essential services, such as evacuation, rescue, medical, structural firefighting, law enforcement, public utilities, and communications when employees are engaged in those operations; and
 - c. Telework (i.e., work done from home or another remote location of the employee's choosing); and
 - d. Buildings, structures, motor vehicles, and motorized equipment that have a mechanical ventilation system that keeps the heat index below 80 degrees Fahrenheit for all working areas.

[11.5.7.2 NMAC- N x/x/xx]

11.5.7.3 STATUTORY AUTHORITY: NMSA 1978, Sections 50-9-7 and 74-1-8.
[11.5.7.3 NMAC- N x/x/xx]

11.5.7.4 DURATION: Permanent.
[11.5.7.4 NMAC- N x/x/xx]

11.5.7.5 EFFECTIVE DATE: 07/01/2025, unless a later date is cited at the end of a section.
[11.5.7.5 NMAC- N x/x/xx]

11.5.7.6 OBJECTIVE: To establish standards related to the occupational health and safety of employees to prevent heat illnesses and related injuries.
[11.5.7.6 NMAC- N x/x/xx]

11.5.7.7 DEFINITIONS: General: Unless otherwise specified, the following definitions, in addition to those contained in 11.5.1.7 NMAC and the state act, are applicable to this part.

- A. **“Acclimatization”** means temporary adaptation of the body to work in the heat that occurs gradually when a person is exposed to it. Acclimatization peaks in most people within four to fourteen days of regular work for at least two hours per day in the heat.
- B. **“Drinking water”** is water that is suitable to drink (potable), suitably cool (typically less than 60 degrees Fahrenheit or 15 degrees Celsius) in temperature and stored out of direct sunlight.
- C. **“Heat Index”** is a measure of how hot it really feels when relative humidity is factored with the actual air temperature. The heat index is widely published by reliable weather services such as the National Weather Service (NWS). Heat index is expressed as a temperature value as measured in shade conditions. Exposure to direct sunlight can increase heat index values by up to 15 degrees Fahrenheit (9 degrees).

- D. **“High Heat Conditions”** means any workplace environment that exceeds 95 degrees Fahrenheit (35 degrees Celsius). The level of caution associated with high heat conditions should increase in proportion to the increase in heat index. See Index Table 2 and Table 3 for guidance on the level of caution associated with increases in heat index.
- E. **“Heat Illnesses”** means a group of medical conditions resulting from the body's inability to cope with a particular heat load, and includes, but is not limited to, heat cramps, heat rash, heat exhaustion, fainting, and heat stroke.
- F. **“Heat Related Injury”** is a secondary injury that occurs as a consequence of heat exposure’s effects on human performance and judgement. Examples include injuries from slips, trips, or falls caused by heat-induced dizziness or disorientation and accidents due to heat-related reduced mental alertness
- G. **“Personal risk factors for heat illness”** means factors such as an individual's age, degree of acclimatization, health, water consumption, alcohol consumption, caffeine consumption, and use of prescription medications that affect the body's water retention or other physiological responses to heat.
- H. **“Shade”** means the blockage of direct sunlight. One indicator that blockage is sufficient is when objects do not cast a shadow in the area of blocked sunlight. Shade is inadequate when ambient heat and/or humidity prevents a person's body from cooling in the shaded area. For example, a car sitting in the sun does not provide acceptable shade to a person inside it, unless the car is running with air conditioning. Shade may be provided by any natural or artificial means.

[11.5.7.7 NMAC- N x/x/xx]

11.5.7.8 Heat Illness and Injury Prevention Plan: The employer shall establish, implement, and maintain, an effective heat illness prevention plan. The plan shall be in writing in both English and the language understood by the majority of the employees and shall be made available at the worksite to employees and to representatives of the Occupational Health and Safety Bureau upon request. The plan must contain at least the following information:

- A. How employers will conduct a heat assessment to identify control measures.
- B. The procedures for implementing required control measures.
- C. The procedures for implementing control measures in high heat conditions.
- D. Acclimatization methods and schedules.
- E. The procedures for implementing indoor heat requirements, where applicable.
- F. Emergency medical care identification and procedures.
- G. The methods and procedures for training supervisors and employees.

[11.5.7.8 NMAC- N x/x/xx]

11.5.7.9 Heat Exposure Assessment: Employers shall conduct a heat exposure assessment when a heat index threshold of 80 degrees F is met or exceeded. Employers shall include the heat exposure assessment when conducting any job hazard assessments as part of the normal scope of work.

Due to the variable presence of heat in many work environments, the assessment of an employee's exposure to heat as a hazard must take into account local conditions at the work site. The following criteria must be considered when assessing employee exposure to heat illness:

- A. Heat index of the work environment: Heat index can be calculated by measuring the temperature and relative humidity and applying those numbers to Index Table 2. The heat index for most outdoor work environments of the state of New Mexico are available through the National Weather Service.
- B. The effect of direct sunlight.
- C. Intensity of the work performed (see Index Table 3).
- D. Acclimatization of the employee.
- E. Personal risk factors for heat illness.
- F. The heat retaining effects of required protective clothing and PPE (see Index Table 1)

[11.5.7.9 NMAC- N x/x/xx]

11.5.7.10 Control Measures: For all outdoor and indoor working environments where the heat index exceeds 80 degrees Fahrenheit or 27 degrees Celsius employers shall implement the measures below:

- A. **Acclimatization Methods:**

- a. An employee who has been newly assigned to a work area where the heat index exceeds 80 degrees Fahrenheit (27 degrees Celsius) shall be closely observed by a supervisor or designee for the first seven days of the employee's employment.
 - b. A work schedule must be no more than 20% of the usual duration of work in the heat on day one and a no more than 20% increase on each additional day.
 - c. For workers returning from an absence of seven or more days, the work schedule must be no more than 50% of the usual duration of work in the heat on day one, 60% on day two, 80% on day three, and 100% thereafter.
- B. Provision of Fluids** Suitable hydrating fluids must be provided by the employer in sufficient quantities throughout the day when working in the heat. Suitable hydrating fluids include drinking water and drinks containing carbohydrates and electrolytes.
- a. Employees shall have access to at least one quart of drinking water per hour.
 - b. Drinking water shall be located as close as practical to the areas where employees are working.
 - c. Drinking water shall be made available at no cost to the employee.
 - d. Employers must provide sufficient pauses in continuous work to allow workers to drink fluids.
 - e. Employers shall encourage workers to drink 8 ounces of fluids every fifteen minutes.
- C. Regular Rest Breaks:** Employers must provide paid rest breaks to employees when working in the heat. Rest periods may be provided concurrently with any other meal or rest period required by policy, rule, or law if the timing of the preventative rest break coincides with the otherwise required meal or rest period. Rest periods must either:
- a. Follow the rest schedule provided in Index Table 3, or
 - b. Establish a rest schedule in the written heat illness and injury prevention plan that is at least as effective as presented in Index Table 3.
- D. Cooling Areas:** Cooling areas include shade and artificial cooling such as mechanical ventilation systems, such as air conditioning and/or fans. Employers must establish and maintain one or more cooling area for employees who work in the heat.
- a. Before work begins, the supervisor shall assess shade options for each job site.
 - b. The shade area must either be open to the air or provide mechanical ventilation for cooling.
 - c. The shade must be located as close as practical to the areas where employees are working.
 - d. The amount of shade present must be at least sufficient to accommodate the number of employees in a sitting position with normal posture during recovery or rest periods.
 - e. Shade present during meal periods must be large enough to accommodate the number of employees on the meal period that remain onsite.
 - f. The employer is responsible for ensuring that shade equipment is available, functional, transported, and set up properly.
 - g. When a work environment is equipped with mechanical ventilation systems, the employer shall ensure those systems are operated and maintained as follows:
 - i. Outside air shall be provided to all workrooms at a minimum rate of 15 cubic feet per minute, per person unless prevented by process requirements.
 - ii. HVAC systems shall be properly maintained according to the manufacturer's recommendations and in good working condition.
 - h. When the employer can demonstrate that providing access to shade is not safe or feasible, cooling measures other than shade such as the use of misters or active cooling garments may be provided in lieu of shade if the employer can demonstrate that these measures are at least as effective as shade in allowing employees to cool.
- E. Personnel Monitoring:** Employers must implement one or more of the following to promptly identify when an employee may be experiencing heat illness:
- a. Regular communication with employees who are working alone by radio, cellular phone, or other reliable means of communication.
 - b. Create a mandatory buddy system in which employees are trained to recognize signs of heat related illness and are authorized to contact emergency services or render first aid in the absence of emergency services within near proximity to the worksite.
 - c. Require self-monitoring and communication with supervisors on symptoms of heat illness experienced.
 - d. Other equally effective means of observation and communication.

- e. Conducting pre-shift meetings before the commencement of work to review the signs of heat illness.

[11.5.7.10 NMAC- N x/x/xx]

11.5.7.11 Emergency Medical Care: Employers shall comply with the provisions of 29 CFR Part 1910.151 - Medical Services and First Aid, 29 CFR Part 1926.50 - Medical Services and First Aid, or 11.5.4.12 NMAC – Emergency Medical Care, as appropriate.

[11.5.7.11 NMAC- N x/x/xx]

11.5.7.12 Training: All training must be conducted at the employer’s expense and in a language and vocabulary readily understood by all employees. Training must contain details specific to the workplace practices. All employees shall be trained on the following topics:

- A. Environmental and personal risk factors for heat illness.
- B. Procedures for identifying, evaluating, and controlling exposures to environmental and personal risk factors for heat illness.
- C. Rest break and provision of fluids methods and procedures.
- D. Acclimatization methods and schedules for new and returning workers.
- E. Different types of heat illness and the common signs and symptoms of heat illness.
- F. Procedures for observing, reporting, and responding to symptoms of heat illness.
- G. Procedures for communicating with emergency personnel.
- H. Supervisors should be provided with appropriate training about how to monitor weather reports and weather advisories.
- I. Training must be conducted at the beginning of employment for each employee and annually thereafter.

[11.5.7.12 NMAC- N x/x/xx]

11.5.7.13 Record Keeping: Under this standard, employers must keep the following records for a minimum of 5 years:

- A. An accurate record of the heat acclimatization schedule and procedures for all new and returning employees.
- B. The employer must keep a record of Heat Illness training, including a list of attendees
- C. A record of all heat illness or related injuries:
 - a. Including those that only require first aid.
 - b. Heat index and working conditions at the time of the illness or injury.

[11.5.7.14 NMAC- N x/x/xx]

Appendix I: Tables

Personal Protective Equipment (PPE) Clothing Adjustment Factor (CAF)

The table below presents the clothing adjustment factors that assist in assessment of heat retaining effects of required protective clothing and PPE. To use the table correctly, add the clothing adjustment factor number to the ambient heat index temperature. Be sure to match the temperature scale (Celsius or Fahrenheit) that you're using with the CAF in the table.

Heat Index + Solar Radiation + CAF = Heat experienced by the worker.

Solar Radiation: add 7 degrees F to the heat index for partial sun exposure and add 13 degrees F for full sun exposure.

Example: A job requires that the worker wear double layer woven clothing and works in partial sun exposure, where the heat index is 85 degrees F. The heat experienced by the worker would be equal to 97.4 degrees F.

[85 degrees F + 7 degrees F + 5.4 degrees F = 97.4 degrees F]

Table 1 Clothing Adjustment Factors

Clothing Worn	CAF (°C)	CAF (°F)
Work clothes (long sleeves and pants). Examples: Standard cotton shirt/pants.	0	0
Coveralls (w/only underwear underneath). Examples: Cotton or light polyester material.	0	0
Double-layer woven clothing.	3	5.4
SMS Polypropylene Coveralls	0.5	.9
Polyolefin coveralls. Examples: Micro-porous fabric (e.g., Tyvek™).	1	1.8
Limited-use vapor-barrier coveralls. Examples: Encapsulating suits, whole-body chemical protective suites, firefighter turn-out gear.	11	19.8

Table 2: National Weather Service Heat Index

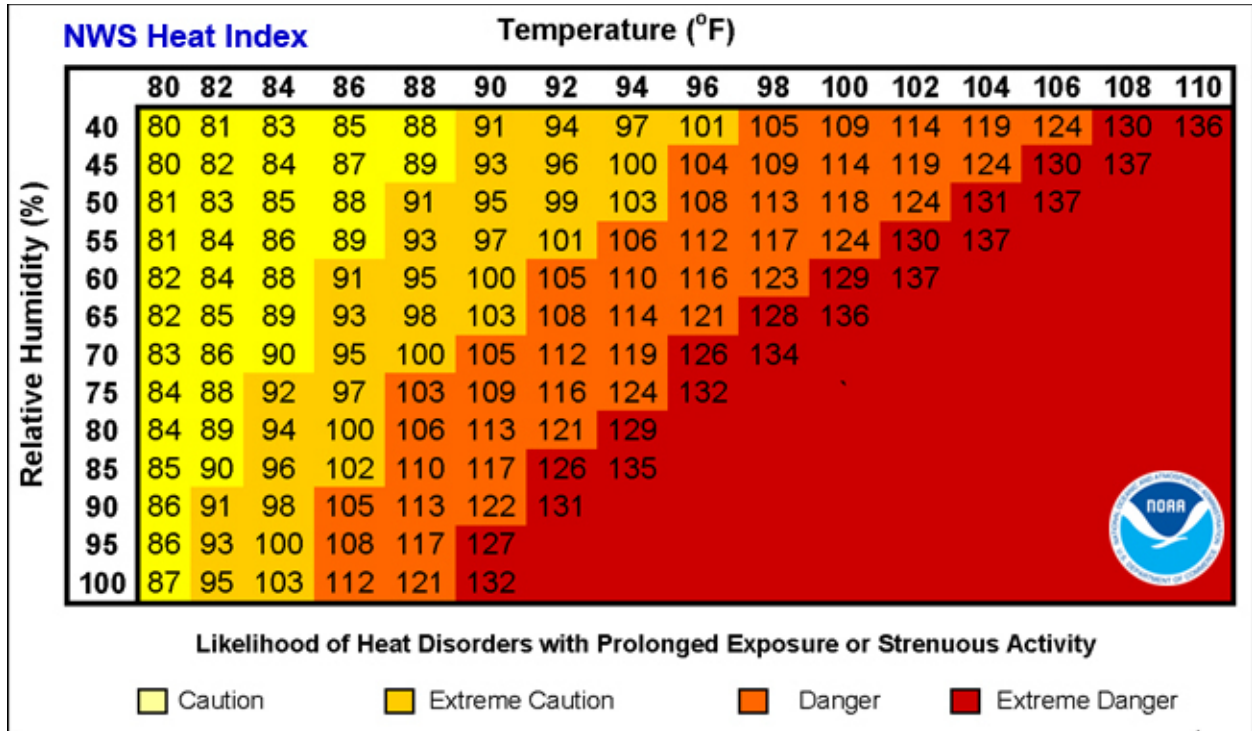


Table 3: Work Rest Schedule

Work/rest schedules for workers wearing normal work clothing				
Heat Index (°F)	Light Work (minutes work/rest)	Moderate Work (minutes work/rest)	Heavy Work (minutes work/rest)	
90	Normal	Normal	Normal	
91	Normal	Normal	Normal	
92	Normal	Normal	Normal	
93	Normal	Normal	Normal	
94	Normal	Normal	Normal	
95	Normal	Normal	45/15	
96	Normal	Normal	45/15	
97	Normal	Normal	40/20	
98	Normal	Normal	35/25	
99	Normal	Normal	35/25	
100	Normal	45/15	30/30	
101	Normal	40/20	30/30	
102	Normal	35/25	25/35	
103	Normal	30/30	20/40	
104	Normal	30/30	20/40	
105	Normal	25/35	15/45	
106	45/15	20/40	Caution‡	
107	40/20	15/45	Caution‡	
108	35/25	Caution‡	Caution‡	
109	30/30	Caution‡	Caution‡	
110	15/45	Caution‡	Caution‡	
111	Caution‡	Caution‡	Caution‡	
112	Caution‡	Caution‡	Caution‡	

With the assumption that workers are acclimated, physically fit, well-rested, fully hydrated, under age 40, and have adequate water intake.

*Note: Add relevant adjustment factors such as:

Clothing Adjustment Factors from Table 1

The effect of direct sunlight, add 7°F to the heat index for partial sun exposure and add 13°F for full sun exposure

‡High levels of heat stress; consider rescheduling activities.

Adapted from EPA [1993].