

August 17, 2022

Carmyn Shute  
Department of Ecology, Headquarters  
P.O. Box 47600  
300 Desmond Drive  
Olympia, WA 98504-7600

Dear Ms. Shute:

Washington State University Tri-Cities has reviewed the Discussion Draft of proposed changes to the Ambient Heat Exposure rule, Washington Administrative Code (WAC) 296-62-09510 through -09560, and respectfully requests consideration of the following comments:

1. 296-62-09520 Definitions: The definition of “Risk factors for heat-related illness” acknowledges relative humidity as a factor that increases susceptibility to heat-related illness, but the rule does not account for this or other factors. Particularly with the reduction in trigger temperature, relative humidity is a significant risk factor which is not uniform across the state. Recommend modifying the trigger from a temperature reading to a heat index value to account for this.
2. 296-62-09530 Employer and employee responsibility:
  - Items (1) and (2) refer separately to the “outdoor heat exposure safety program” and to the “heat-related illness prevention program.” These titles should be made consistent throughout.
  - Item (2): change “heat illness” to “heat-related illness” (if this title is maintained).
  - Item (2)(a): provide some guidance regarding what is “sufficiently cool.” During stakeholder meetings, a temperature of 60 degrees was mentioned, but a range would be helpful.
  - Item (2)(f): revise to read “...close observation (as defined in WAC 296-62-09555(2))...”
  - Item (3): change “heat illness” to “heat-related illness” (if this title is maintained).
  - Table 1: Heat index should be used in order to determine protections, rather than a direct temperature reading, in order to account for variations in humidity. Identical dry-bulb temperatures in arid eastern Washington and humid western Washington do not have the same risks due to humidity, and should not be treated in the same manner. As an example, 78 degrees at 90% humidity and 82 degrees at 30% humidity have exactly the same heat index (80), but under the current draft, no protection is required at 78 degrees. I'd argue that the employee working at 90% humidity is more miserable and in at least as much danger as the one at 30%. I'd also hazard a guess that the heat-related illness data referenced during the stakeholder meetings, indicating a continuing prevalence at lower temperatures, was significantly biased toward areas with higher humidity.  
This also ignores worker acclimatization. Eastern Washington employees are likely to be much better acclimated to temperatures in the low to mid-80s (or even higher) than those in western Washington, due to increased frequency of occurrence.

3. 296-62-09540 Drinking water:
  - Item (1): Delete everything before “When employee exposure...”. This is superfluous narrative, not part of the rule. The information is also codified in item (1)(b).
  - Item (1)(a):
    - Make terminology consistent (“sufficiently cool” v. “suitably cool”)
    - Provide guidance on what this means.
    - Delete “a sufficient quantity of”. This is already addressed in (1)(b)
4. 296-62-09545 Acclimatization: Definition of “heat wave”:
  - Existing definition implies a heat wave is a single day
  - This definition also allows for an extended period of high temperatures to no longer qualify as a heat wave. As an example, during the week of July 24-30 at Pasco, high temperatures were 100, 104, 106, 108, 110, 112, and 109. Under this definition, this was not a heat wave.
  - Item (2) bases the determination of a “heat wave” on the *predicted* high temperature. It should be determined based on the actual observed temperature – close observation should be required at any time during which the actual observed temperature exceeds the threshold level.
  - Note 1 to Table 1 (296-62-09530) states “There is no requirement to maintain temperature records.” However, Item (2) makes it necessary to maintain at least 5 days of daily high temperatures.
5. 296-62-09555 High Heat Procedures:
  - Again, use heat index rather than dry bulb temperature.
  - Item (2)(a): What is “regular”?
  - Many of the symptoms of heat-related illness are not observable without direct observation.

Additionally, the discussion included questions regarding appropriate approaches to work/rest cycles. The idea of a fixed table was proposed. This is problematic for a number of reasons. First, as mentioned above, use of trigger temperature values is inappropriate. Humidity is a significant factor, so heat index values should be used. Second, a table ignores acclimatization – which will be different in various temperature zones across the state – as well as personal factors, type/intensity of work, radiant heat from other objects, and other factors. The second alternative – allowing establishment of work/rest cycles based on local factors, *must* be selected. A baseline of 10 minutes/2 hours could be established, with rest periods increased based on the heat index and the relevant work factors.

Sincerely,

Scott Tomren  
Director, Campus Safety & Security  
Washington State University Tri-Cities  
2710 Crimson Way  
Richland, WA 99354

(509) 372-7163