

Heat Stress

For the wine industry there are two main sections of the Washington Administrative Code (WAC) that apply. 296-307 for Agriculture and 296-800 for General Industry. Most wineries fall under General Industry so that is the focus of this outline.

Definition: Heat related illness is a well-recognized hazard in the outdoor work environment. Heat stress or heat illness refers to a medical condition 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.

Examples within a winery: Working outside in high temperatures (i.e., on the crushpad in September) or working while wearing vapor barrier clothing (i.e., wearing rain gear while digging out skins and seeds from a fermentation tank).

Regulatory Summary (with emphasis on application for wineries covered under General Industry):

1. Heat Stress and subsequent heat related illnesses can occur when either working in outside temperature extremes or in combination with specific out door temperatures combined with the type of clothing or Personal Protective Equipment (PPE) being worn (see #5 below).
2. DOSH provides standards for all employers whose employees perform outdoor work, or work while wearing vapor barrier clothing, and may be exposed to heat stress (WAC 296-62-095 through WAC 296-62-09560).
3. Wineries whose workers may be exposed to heat stress must have a written Heat Stress safety plan and provide documented training. As long as the written Heat Stress safety plan meets all of the requirements under the code, it can be a section or chapter within your written Accident Prevention Program (APP).
4. Heat stress can lead to injuries such as falls, or accidents from operation of equipment when experiencing heat stress.
5. The WISHA standards listed in #2 above apply under these conditions:
 - Employees are working outside and temperatures are 89°F or above, or
 - When employees are wearing double layer woven clothes (including overalls) and temperatures are 77°F or above, or
 - When employees are wearing non-breathable or vapor barrier clothing (for PPE) and the temperatures are 52°F or above
6. Heat stress and related illnesses can include, but are not limited to:
 - Sunburn
 - Heat cramps
 - Heat exhaustion

- Heat stroke
7. Symptoms of heat related illness can include, but are not limited to:
- Disorientation/confusion
 - Fainting
 - Heavy Sweating
 - Weakness
 - Cold, pale, and clammy skin
 - Fast, weak pulse
 - Nausea or vomiting
8. Appropriate steps to take if an employee shows signs or symptoms of heat related stress:
- Move the employee to a cooler location
 - Remove the employee from their work duties
 - Have the employee lie down and loosen any tight clothing
 - Apply cool, wet cloths to skin surfaces
 - Sip water
 - If the employee has a high body temperature (above 103°F), has hot, red, dry or moist skin, has vomited and the vomiting continues, has a rapid and strong pulse, or is unconscious, call 911 immediately – this is a medical emergency.
9. It is the responsibility of both employers and employees to monitor factors that can help to avoid heat stress. Most important are:
- Frequent consumption of water or other appropriate beverages to ensure hydration (1 quart per employee per hour, avoiding caffeine and alcohol or large amounts of sugar)
 - Access to cool and shaded areas for all breaks
 - Encourage employees to wear loose-fitting, long sleeved shirts and long pants, wide brim hats, use sunscreen, and wear UV absorbent sunglasses
 - If employees are wearing non-breathable clothing or PPE, said clothing/PPE should be removed during breaks
10. All winery personnel should be trained in responding to the signs of heat stress illnesses. The link to an OSHA fact sheet on 'Working Outdoors in Warm Climates' is listed below.
11. Separate downloadable documents are provided at the following links and under the Winery Safety tab at www.winerywise.com:
- **PPE Hazard Assessment:** <http://apps.leg.wa.gov/wac/default.aspx?cite=296-800-160>
 - **Safety and Health Core Rules:** <http://apps.leg.wa.gov/wac/default.aspx?cite=296-800>
 - **General Safety and Health Standards:** <http://apps.leg.wa.gov/wac/default.aspx?cite=296-24>
 - **Link to WAC 296-62-09520:** <http://apps.leg.wa.gov/wac/default.aspx?cite=296-62-09510>

- **LNI Safety Topics, Outdoor Heat Exposure:**
<http://www.lni.wa.gov/safety/topics/atoz/heatstress/>
- **LNI Outdoor Heat Exposure Enforcement Procedures:**
<http://www.lni.wa.gov/Safety/Rules/Policies/PDFs/WRD1015.pdf>
- **OSHA Fact Sheet – Working Outdoors in Warm Climates:**
https://www.osha.gov/OshDoc/data_Hurricane_Facts/working_outdoors.pdf