HEAT STRESS & WILDLAND SMOKE……

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Two New Emergency Temporary Rules Released

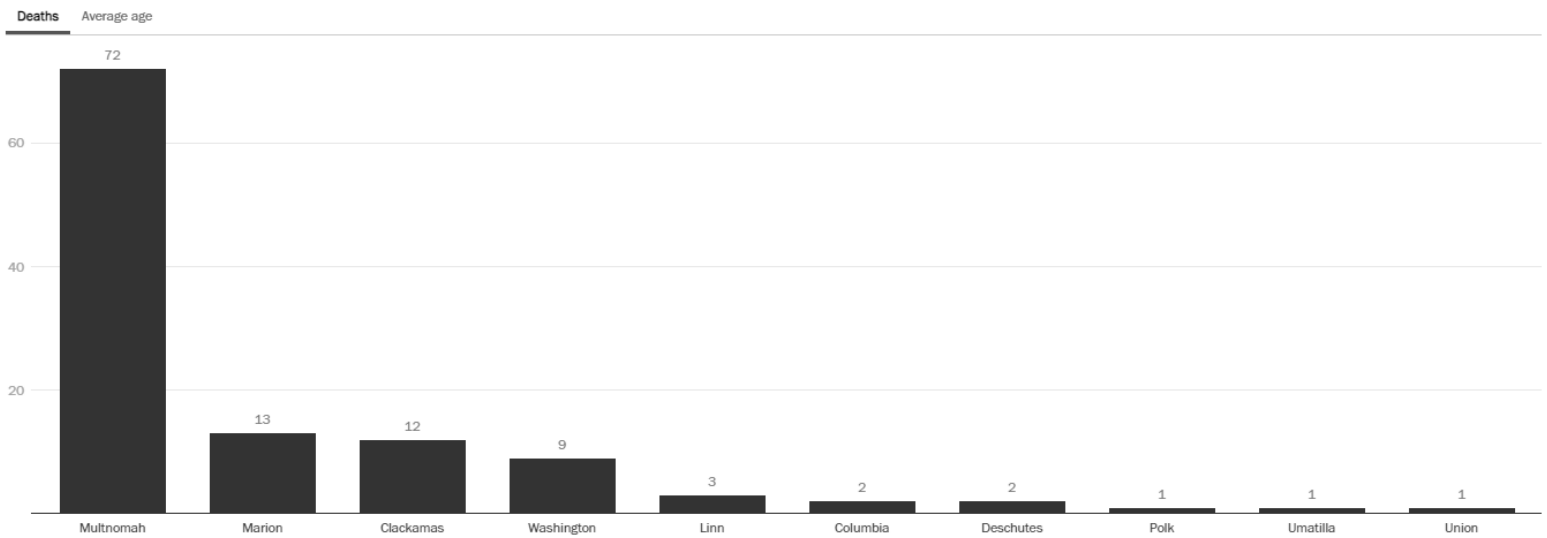
- On July 8, 2021, Oregon adopted two emergency temporary rules – 437-002-0155 and 437-004-1130 – following direction from Oregon Gov. Kate Brown to protect workers from heat-related illnesses.
- The rules' key requirements are identical and **apply to any workplace where extreme heat caused by weather can expose workers to heat-related illnesses** – medical conditions resulting from the body's inability to cope with a particular heat load;
    - 437-004-1130 applies to agricultural workplaces and
    - 437-002-0155 applies **to all other workplaces.**

Why Were These New Rules Issued?

OSHA: “Workers have a right to a safe and healthy workplace, including the right to be safe from the dangers of heat stress.”

From:
Oregonlive.com

Suspected heat-related deaths in Oregon



Updated 7/7/21

Chart: Dave Cansler/Staff • Source: Oregon State Medical Examiner • Get the data

The state’s most populous county, Multnomah County, reported five more deaths Wednesday, bringing the number to 72. The heat wave reached historic levels in Portland June 26-28, several times breaking the state’s record and reporting a high of 116 on June 28.

The # of deaths reported to be due to the June heat wave is **116.**

MARION COUNTY

OSHA: Farm worker dies from heat in Marion County

Worker found unresponsive at end of shift on Saturday

by: The Associated Press

Current
57°
Cloudy

1 Man, w substar

2 Single r strippe

3 Portlan person

4 Atmosp impact

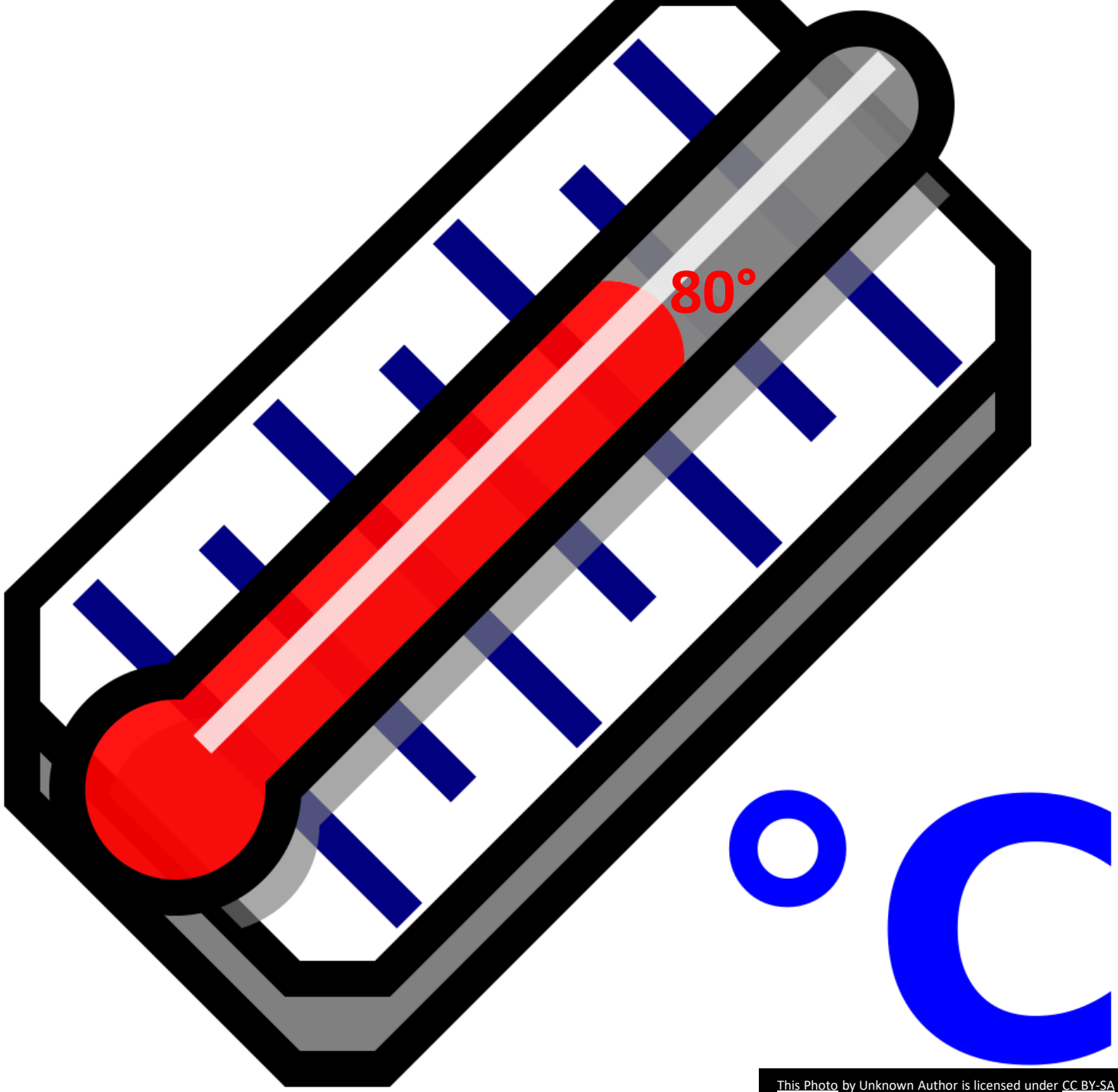
5 2 extric crash ir

Fresno State water tower maintenance worker dies a day after rescue

The temporary rule applies to any workplace – outdoors and indoors – where heat dangers are caused by the weather.

When the heat index is equal to or above 80 degrees Fahrenheit employers are required to provide:

- Access to sufficient shade (specifics below)
- An adequate supply of drinking water (specifics below)



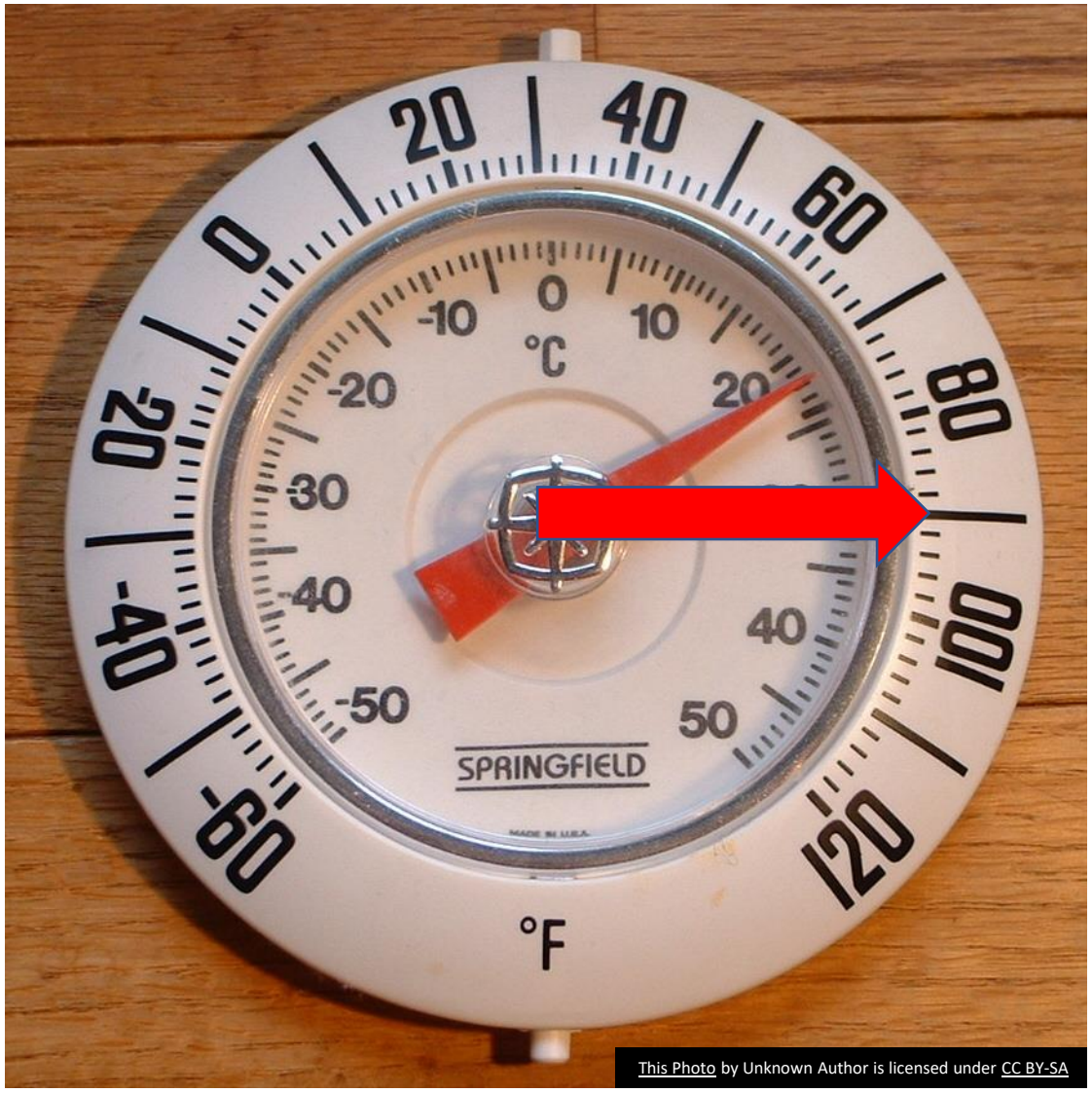
(1) Scope and Application of the Rules:

- This standard applies whenever an employee performs work activities and the heat index (apparent temperature) equals or exceeds 80 degrees Fahrenheit.
- It does **not** apply to *incidental* exposure that exists when an employee is not required to perform covered work activity for more than 15 minutes in any sixty-minute period,
- **nor does it apply to the transportation of employees** inside vehicles when they are *not* otherwise performing work. (I.e. the driving time from home visit to home visit does NOT count, unless the employee is also doing other “work” while driving.)

When the heat index rises above 90 degrees Fahrenheit…

All of the rules for 80 degrees apply and, in addition, employers must:

- Ensure effective communication between an employee and a supervisor is maintained so that an employee can report concerns.
- Ensure that employees are observed for alertness and signs and symptoms of heat illness and monitored to determine whether medical attention is necessary.
- Provide a cool-down rest period in the shade of **10 minutes for every two hours of work**. These preventative cool-down rest periods may be provided concurrently with any other meal or rest period required by policy, rule, or law.
- Develop and implement an emergency medical plan and practices to gradually adapt employees to working in the heat.

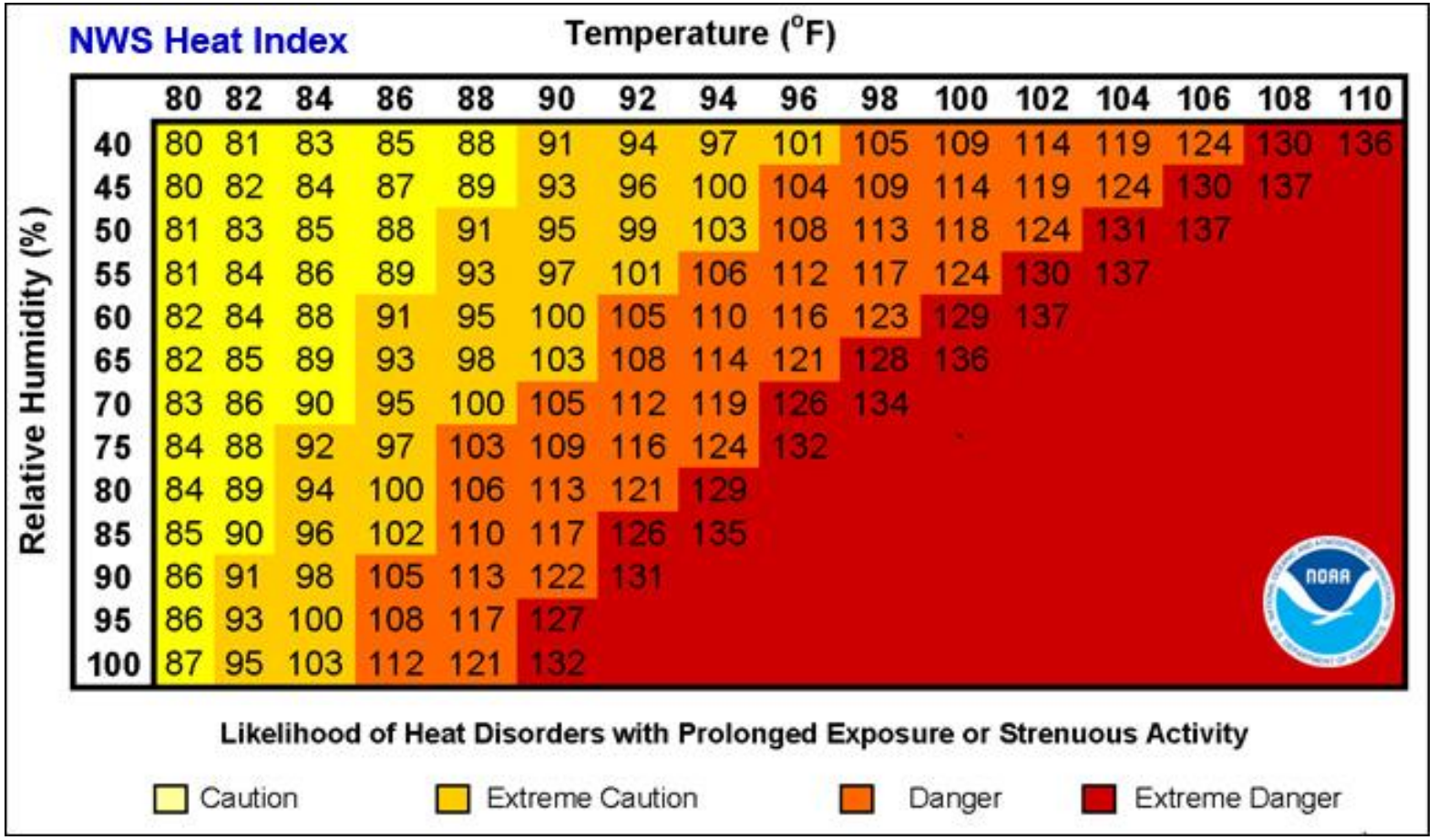


Key Requirements: High Heat Practices

When the heat index exceeds 90 degrees Fahrenheit, employers must implement the following additional high heat practices:

- Ensure that **effective communication** by voice, observation, or electronic means is maintained so that employees working at the site can contact a supervisor when necessary. Cell phones and text messaging may be used for this purpose only if reception in the area is reliable.
- Ensure that **employees are monitored** for signs of heat illness, and whether medical attention is necessary, **using one or more of the following**:
  - **Regular communication with employees working alone** – by radio, **cell phone**, or other alternative means.
  - A mandatory buddy system.
  - Other equally effective means of observation or communication.
- **Designate and equip one or more employees at each site** who can call for emergency medical services.
- **Allow other employees to call for emergency services** when designated employees are not immediately available.
- **Ensure that each employee takes a minimum 10-minute preventive cool-down rest break in the shade at least every two hours**, regardless of the length of the shift.
  - The rest break can take place with any other meal or rest period required by policy, rule, or law if the timing of the break coincides with the required meal or rest period.
  - The preventive cool-down rest break is a work assignment and employees must be compensated accordingly (unless the rest break coincides with an existing unpaid meal period).

Heat Index = “How Hot It Really Feels (in the shade)”



If it’s 90 degrees out and the humidity is 90%, what’s the heat index?
What’s the heat index if it’s 100 degrees out & only 50% humidity?

OSHA–NIOSH Heat Safety Tool App

The OSHA-NIOSH Heat Safety Tool features:

- A visual indicator of the current heat index and associated risk levels specific to your current geographical location
- Precautionary recommendations specific to heat index-associated risk levels
- An interactive, hourly forecast of heat index values, risk level, and recommendations for planning outdoor work activities in advance
- Editable location, temperature, and humidity controls for calculation of variable conditions
- Signs and symptoms and first aid information for heat-related illnesses
- Available from the App Store or Google Play—it's **FREE!**
- It's **fast**!

Symptoms of a Heat-Related Illness

- Heat Illnesses – medical conditions resulting from the body's inability to cope with a particular heat load, and includes heat cramps, heat exhaustion, heat syncope and heat stroke.
- Heat Exhaustion versus Heat Stroke

HEAT EXHAUSTION

What happens to the body:

Headaches, dizziness, or light-headedness, weakness, mood changes, irritability or confusion, feeling sick to your stomach, vomiting, fainting, decreased and dark-colored urine, and pale, clammy skin.

What should be done:

- Move the person to a cool, shaded area. Don't leave the person alone. If the person is dizzy or light-headed, lay him on his back and raise his legs about 6-8 inches. If the person is sick to his stomach, lay him on his side.
- Loosen and remove heavy clothing.
- Have the person drink some cool water (a small cup every 15 minutes) if he is not feeling sick to his stomach.
- Try to cool the person by fanning him. Cool the skin with a cool spray mist of water or wet cloth.
- If the person does not feel better in a few minutes call for emergency help (ambulance or 911.)

(If heat exhaustion is not treated, the illness may advance to heat stroke.)

HEAT STROKE - A Medical Emergency

What happens to the body:

Dry, pale skin (no sweating); hot, red skin (looks like a sunburn); mood changes; irritability, confusion, and not making any sense; seizures or fits, and collapse (will not respond).

What should be done:

- Call for emergency help (ambulance or 911.)
- Move the person to a cool, shaded area. Don't leave the person alone. Lay him on his back and if the person is having seizures, remove objects close to him so he won't hit them. If the person is sick to his stomach, lay him on his side.
- Remove heavy and outer clothing.
- Have the person drink some cool water (a small cup every 15 minutes) if he is alert enough to drink anything and not feeling sick to his stomach.
- Try to cool the person by fanning him or her. Cool the skin with a cool spray mist of water, wet cloth, or wet sheet.
- If ice is available, place ice packs in armpits and groin area.

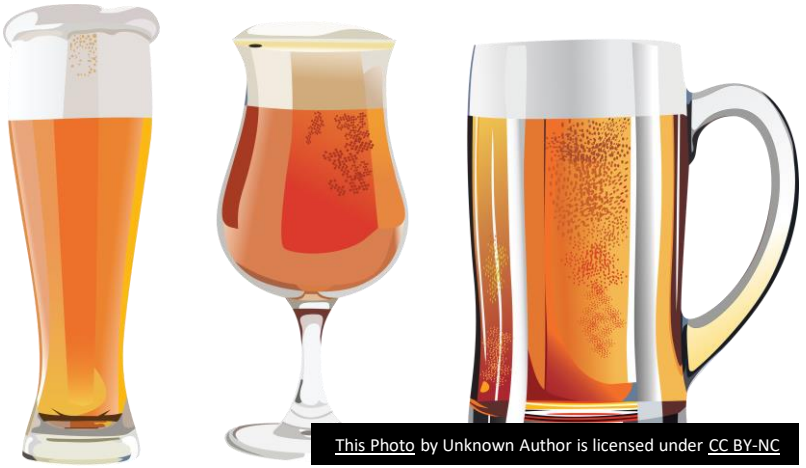
https://osha.oregon.gov/OSHAPubs/3333.pdf

Environmental and personal risk factors for heat illness

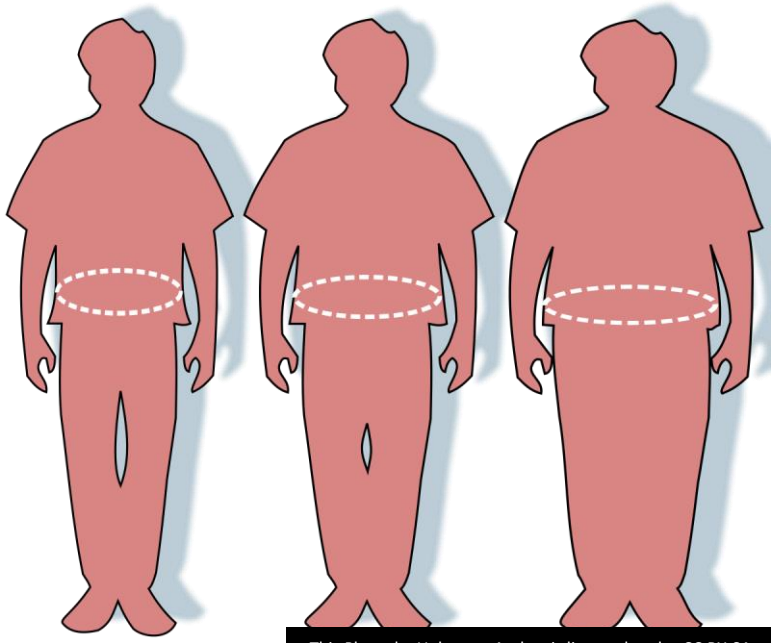
A possible “checklist” for each employee to assess their individual risk level for a heat-related illness:

- Is your vehicle air-conditioned--i.e. does the AC “work”? (Your driving time from home to office or from location to location does **not** “count” under the new temporary rules, but this factor could still impact how you feel and adapt to high heat.)
- On today’s schedule, what is the level of physical exertion that will be required (e.g. hand digging ditches, planting trees, long walk)
- Are you on any medications that increase your risk for heat illness?
- Do you often limit your intake of liquids during the workday to minimize “bathroom breaks”? (This is a common practice among landscapers with no dedicated restroom when mobile work locations)
- Does walking when it’s hot usually cause a strain on your body?
- Are you wearing loose, lightweight clothing?
- Are you overweight?

The Effects of _____ on Tolerance for Heat



- **<u>Alcohol</u> lowers the body's tolerance for heat** and acts as a diuretic—meaning it speeds up dehydration—and affects the body's ability to regulate its temperature. The body loses needed fluids through the urination alcohol induces.
- **<u>Obesity</u>**: compared to participants with normal weights, physiological and thermal perceptual responses were higher in overweight participants. Therefore, overweight individuals should avoid hot/dry weather conditions to decrease the amount of heat strain.
- **<u>Medications</u>**: diuretics, anti-hypertensives, benzodiazepines, calcium channel blockers, laxatives, neuroleptics, thyroid agonists, migraine and allergy medications and other vasoconstrictors, as well as tricyclic antidepressants, phenothiazines, and anticholinergics… = **everyone should check their own medication list to assess their risk!**



From the CDC: “Limiting Heat Burden While Wearing Personal Protective Equipment (PPE)”

https://www.cdc.gov/niosh/topics/ebola/pdfs/limiting-heat-burden-while-wearing-ppe-training-slides-healthcare-workers-site-coordinators.pdf

PPE: A Risk Factor for Heat-related Illness

- *Wearing PPE increases your risk for heat-related illnesses.*
- PPE:
  - Reduces or eliminates exposure to hazardous chemicals, physical hazards, and disease-causing organisms such as Ebola.
  - Reduces the body’s normal way of getting rid of heat by sweat evaporation.
  - Holds excess heat and moisture inside PPE, making the worker’s body even hotter.
  - Increases the physical effort to perform duties while carrying the extra weight of the PPE.

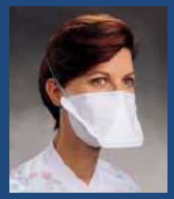


Photo courtesy of Kimberly-Clark

Examples of PPE you may be required to wear.

Department of Health and Human Services
Centers for Disease Control and Prevention
National Institute for Occupational Safety and Health

CDC Workplace

NIOSH

HEAT STRESS TABLE

Be aware of the signs of heat exhaustion and heat stroke when you're working in hot, humid conditions. The table below shows the risks of exposure to high temperature and high humidity:

Heat Index (Apparent Temperature)

Air Temperature °F	Relative Humidity (%) 40	45	50	55	60	65	70	75	80	85	90	95	100
110	136												
108	130	137											
106	124	130	137										
104	119	124	131	137									
102	114	119	124	130	137								
100	109	114	118	124	129	136							
98	105	109	113	117	123	128	134						
96	101	104	108	112	116	121	126	132					
94	97	100	103	106	110	114	119	124	129	135			
92	94	96	99	101	105	108	112	116	121	126	131		
90	91	93	95	97	100	103	106	109	113	117	122	127	132
88	88	89	91	93	95	98	100	103	106	110	113	117	121
86	85	87	88	89	91	93	95	97	100	102	105	108	112
84	83	84	85	86	88	89	90	92	94	96	98	100	103
82	81	82	83	84	84	85	86	88	89	90	91	93	95
80	80	80	81	81	82	82	83	84	84	85	86	86	87

Extreme Danger: Heat stoke highly likely

Danger: Muscle cramps, and/or heat exhaustion likely

Extreme caution: Muscle cramps and/or heat exhaustion possible

Caution: Fatigue possible

Oregon Occupational Safety & Health Division
440-3333E-S (1/06)

Key Requirements: Supervisor and Employee Training

- By **Aug. 1, 2021**, employers must ensure that all employees – including **new employees, supervisory, and nonsupervisory employees** – are trained in the following topics, in a language they can readily understand, **before they begin work at sites where the heat index will be 80 degrees Fahrenheit or higher**:
  - The environmental and personal risk factors for heat illness, including the extra burden of heat caused by exertion, clothing, and personal protective equipment.
  - The procedures for complying with the requirements of this standard, including the employer's responsibility to provide water, daily heat index information, shade, cool-down rests, how to report symptoms of heat-related illness, and access to first aid, as well as the employees' right to exercise their rights under this standard without fear of retaliation.
  - How to adapt to working in a hot environment.
  - The importance of **employees immediately reporting symptoms or signs of heat illness** – in co-workers or themselves.
  - The effects of non-job factors – such as medications, alcohol, and obesity – on tolerance to heat stress.
  - The main types of heat-related illnesses – heat cramps, heat exhaustion, heat syncope, and heat stroke – and their signs and symptoms.

Key Requirements: Access to **Shade**

- **Shade is 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 not adequate when heat in the area of shade defeats the purpose of shade, which is to allow the body to cool. For example, **a car sitting in the sun does not provide acceptable shade to a person inside it, unless the car is running with working air conditioning**.
- Shade may be provided by natural or artificial means that do not expose employees to unsafe or unhealthy conditions and that do not discourage access or use.
- Employers must stablish one or more shade areas when the heat index equals or exceeds 80 degrees Fahrenheit.

Shade must:

- Be open to the air or have mechanical ventilation for cooling.
- Be located as close as practical to the areas where employees are working.
- Accommodate at least the number of employees on recovery, rest, or meal periods so they have room to sit.

Key Requirements: **Drinking water**

- **Employers must ensure that employees have an adequate supply of drinking water at all times and at no cost** when the heat index is 80 degrees Fahrenheit or higher.
- **Enough drinking water must be available so that each employee can consume 32 ounces per hour**. (For an 8-hour shift, this would equal 2 gallons/day.
- **Drinking water must be cool** (66 to 77 degrees Fahrenheit) **or cold** (35 to 65 degrees Fahrenheit).
- Drinking water packaged as a consumer product and electrolyte-replenishing drinks that do not contain caffeine – sports drinks, for example – are acceptable substitutes, but should not completely replace the required water.
- Employers are not required to supply the entire quantity of drinking water for employees at the beginning of a shift; **employers may begin the shift with smaller quantities of water if they have a procedure that ensures any water consumed during the shift will be replaced**.
- Drinking water packaged as a consumer product and electrolyte-replenishing beverages that do not contain caffeine (for example, **sports drinks) are acceptable substitutes**, but should not completely replace the required water.

Drinking Water Must Be “Cool”: what does that mean?

Oregon OSHA’s rules include requirements to ensure that workers are provided with **cold**, **cool**, **tepid**, **warm**, or **hot** water for drinking, bathing, hand washing, laundering clothes, etc. To help employers understand the differences between these water temperature terms, we have provided the following table as a guideline.

Oregon OSHA’s Water Temperature Guidelines*

Requirement	Temperature Range
Cold	35°F - 65°F
Cool	65°F - 77°F
Tepid	77°F - 90°F
Warm	90°F - 98°F
Hot	98°F - 105°F

* *Reference:* ***The Measure of Man and Woman: Human Factors in Design.*** Henry Dreyfuss Associates. John Wiley & Sons, 2002

Key Requirements: Acclimatization

Definition of Acclimatization: temporary adaptation of the body to work in the heat that occurs gradually when a person is exposed to it.

Employers must develop effective acclimatization practices that allow employees to gradually adapt to working at sites where the ambient temperature heat exceeds the heat index of 90 degrees Fahrenheit.

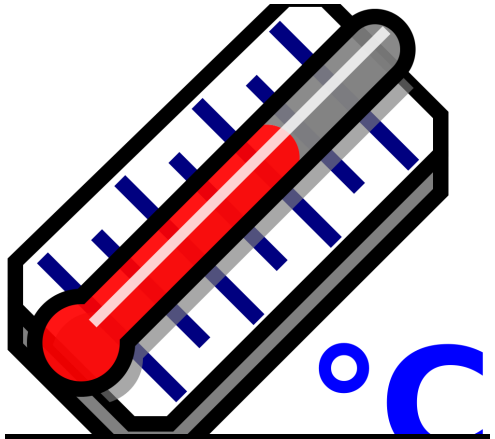
New employees are at the highest risk for heat illness. Acclimatization is crucial to working in hot conditions.

Tips for Acclimatization:

- Heat acclimatization is the improvement in heat tolerance that comes from gradually increasing the intensity or duration of work performed in a hot setting.
- Best results will come from gradually increasing work time in hot conditions over a period of 7 to 14 days and cooling off and fully rehydrating between shifts.
- Pushing to the point of heat exhaustion will hurt, not help, your heat tolerance.
- Typically, acclimatization requires at least two hours of heat exposure per day (which can be broken into two, 1-hour periods).
- The body will acclimatize to the level of work demanded of it.
- Stay hydrated! Dehydration reduces the benefits of heat acclimatization

Possible Strategies to deal with high heat:

- Ask every employee to download the OSHA–NIOSH Heat Safety Tool App on their smart phones, if they have one, and review how to utilize the App.
- Ensure every employee is familiar with the signs and symptoms of heat-related illness and that they know who to call if they feel any symptoms.
- Ask employees to note where any “shade” is located near the settings they are visiting that day.
- Instruct employees to take a 10-minute break every two hours in a shady area or in an air-conditioned business: McDonalds, 7-11, Starbucks, the frozen food aisle of Safeway or Fred Meyers, etc.
- If a staff person has > 1 visit that day in a non-air-conditioned setting, ask them to text a supervisor in between visits to give a status update.
- Purchase cooling vests or neck coolers/scarves for staff to wear if making multiple visits in non-air-conditioned settings. E.g.:
  - https://www.mycoolingstore.com/hyperkewl-cooling-vest-for-women.html or: https://www.mycoolingstore.com/cooling-vests.html or https://www.grainger.com/product/ALLEGRO-Cooling-Vest-3MUG4
  - https://www.mycoolingstore.com/neck-coolers.html or https://www.polarproducts.com/polarshop/pc/viewcategories.asp?idcategory=521



Heat stress

Topic index

Overview

Heat stress happens when your body is no longer able to control its internal temperature. Heat stress can lead to heat exhaustion and heat stroke. The symptoms of heat exhaustion include dizziness, headache, rapid pulse, nausea, and vomiting. The symptoms of heat stroke include high body temperature, confusion, and convulsions. Heat stroke can be fatal.

You can prevent heat stress when you are working in a hot environment by drinking water frequently (even if you are not thirsty), resting in the shade when you need to cool down, and wearing a hat and light-colored clothing.

Filter by → Publications Education Rules Videos Additional

Publications

Brochures/Guides

Heat safety: Water. Rest. Shade.
Describes the two types of heat illness: heat exhaustion and heat stroke. Gives tips on how to stay safe and healthy when working in the heat.
English *Order printed copy* 05/01/2019

Seguridad sobre el calor: Agua. Sombra. Descansos.
Heat safety: Water. Rest. Shade.
Describe el agotamiento por el calor, la insolación, y las maneras importantes para prevenir estas enfermedades.
English *Order printed copy* 05/01/2019

Highlights

Federal OSHA outreach to prevent heat related illness

Related topics

Agriculture

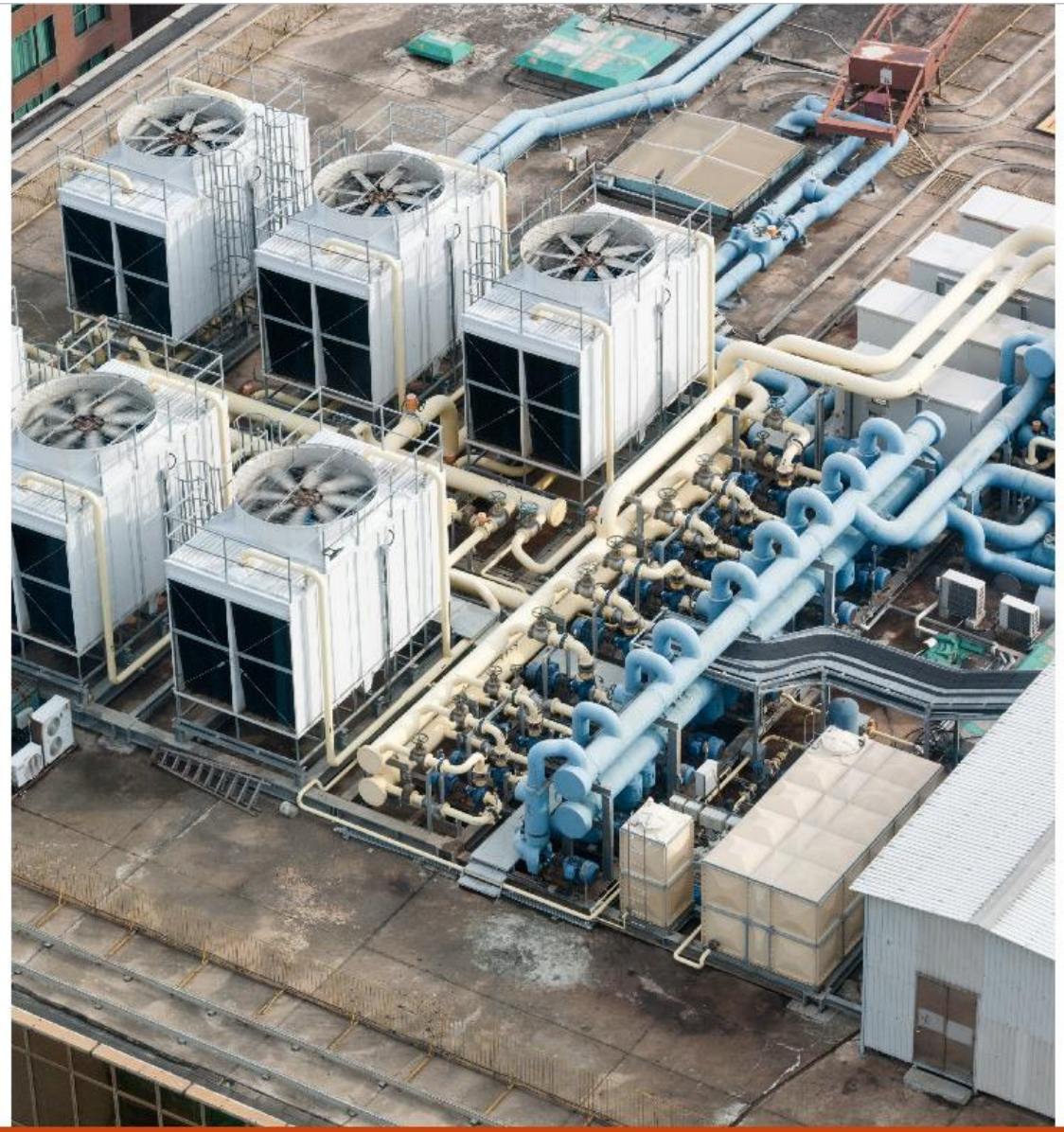
Forest activities

Wildfires

Wildland Fire Smoke Regulation:

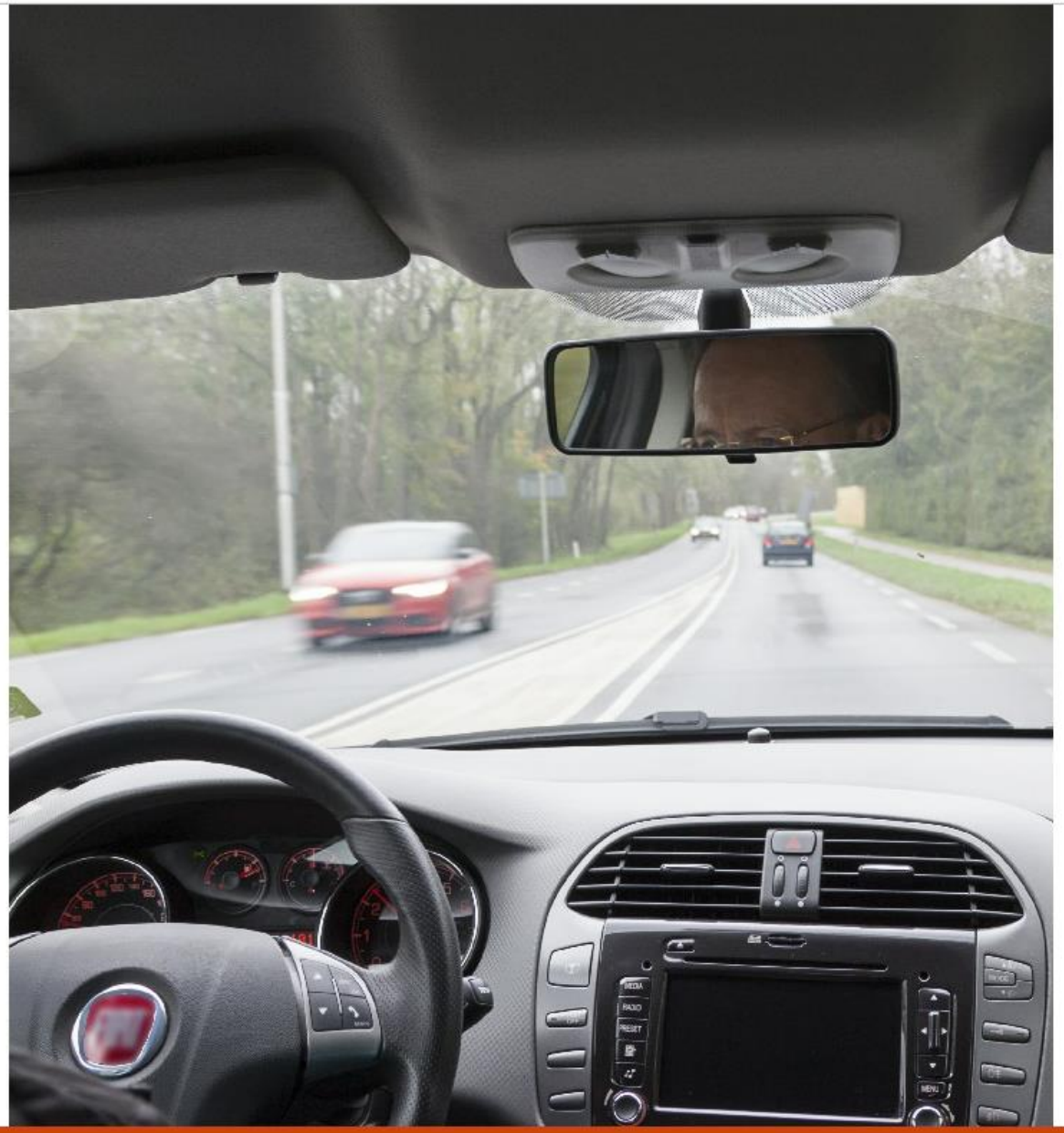
437-002-1080 – general industry

437-004-9790 – Agriculture Operations



Exemptions (Enclosed Buildings)

Before we dive in, it's important to mention that some workplaces and operations are exempt from this rule. The first group includes enclosed buildings and structures where the air is filtered by a mechanical ventilation system and the employer ensures that exterior openings like windows and doors are kept closed, except when necessary to open them.



Exemptions (Enclosed Vehicles)

Another exemption includes enclosed vehicles where the air is filtered by a cabin air filter and the employer ensures that windows, doors, and other openings are kept closed, except when it's necessary to open doors for people to board and exit. Keep in mind that buses, light rail, and other enclosed vehicles used for transit systems where doors are frequently opened, are not included in this exemption.

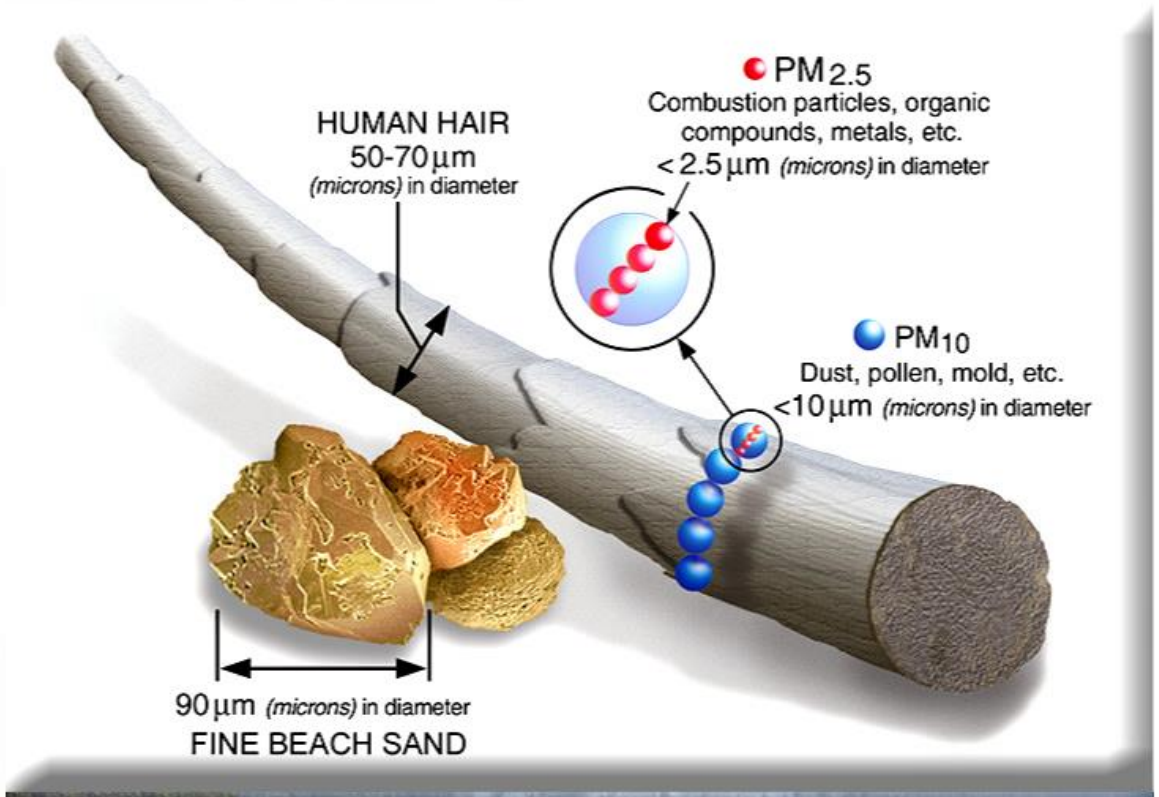
With the exemptions covered, let's get to it!

Wildfire Smoke Training Requirements

Wildfire Smoke

Before workers are exposed to wildfire smoke concentrations of PM2.5 at or above 35.5 ug/m3 (AQI 101), they must receive training and information, most of which are included in this course. To explain how these levels are determined, let's talk about wildfire smoke. It's composed of many elements. It's mostly water vapor, but it also contains gases like carbon monoxide, chemicals produced by the flames, and small bits of ash and other particles. In fact, those airborne particles are the main reason you can see the smoke. If your view is hazy, or the sky is an unusual color, the culprit is the particles in the smoke.

Wildfire Smoke Training Requirements



Air Quality Index

Many governments use a measure called the Air Quality Index or AQI. In the US, the AQI has values ranging from 0 to 500 and has six different categories. This number can reflect any of five different pollutants. Each pollutant is measured separately and the highest of these is what's reported on the Air Quality Index. This means that the AQI is reflecting what's most harmful at the time, and with smoke it's usually airborne particulate matter, or PM for short. For this rule we are going to focus on the particles that are 2.5 microns or smaller, or PM2.5. To put this in perspective, a micron is one millionth of a meter.

Measuring the AQI

When the Air Quality Index (AQI) hits 101, Oregon's wildfire smoke requirements take effect. There are several ways you can check to see what the AQI number is in your area. A popular option is the EPA's AirNow website or app. Go to airnow.gov and enter your location to find out the current AQI. Another option is fire.airnow.gov. This features an interactive map. Simply click on a square in the map and it will display the AQI for that area. In Oregon, the Department of Environmental Quality also publishes air quality data at oraqi.deq.state.or.us. You can also estimate your work location's ambient air concentration for pm2.5 or particulate matter 2.5 microns in size to calculate the AQI. There are a variety of companies that manufacture air meters to help you accomplish this.

If none of these options are practical for you, use the 5-3-1 Visibility Chart to estimate your AQI. Open a tab on your browser and visit dcbspage.org/5-3-1-guide, scroll down a little and you'll see the chart and instructions.

Wondering what the quality of air is? Use the chart below to estimate air quality in your area.

5-3-1 Visibility Guide to Smoke and Air Quality*

		If You Are:		Or You Have:
AQI Category (24-hr average $PM_{2.5}$ in ug/m^3)	Visibility Index (How far you can see)	*An Adult *A Teenager *An Older Child	*Age 65 or older * Pregnant *A Young Child	* Asthma * Respiratory Illness *Lung or Heart Disease
Good (0-12 ug/m^3)	over 15 miles	Air quality is generally good		
5 Moderate (13-35 ug/m^3)	5 – 15 miles	Air quality is moderate. Avoid prolonged exposure to smoke where visibility is closer to 5 mile range.	These smoke sensitive persons may begin to notice deterioration of air quality and should minimize outdoor activity.	
3 Unhealthy for Sensitive Groups (36-55 ug/m^3)	3 – 5 miles	Avoid prolonged exposure to smoke.	Unhealthy air quality. Minimize exposure by staying inside where air is cleaner	
1 Unhealthy (56-150 ug/m^3)	1 – 3 miles	Unhealthy air quality. Minimize exposure by staying inside where air is cleaner	Avoid all outdoor activity – stay inside where air quality is clean.	
Very Unhealthy (151-250 ug/m^3)	1 – 3 miles			
Hazardous (>251 ug/m^3)	Less than 1 mile	Everyone should avoid all outdoor activities. Relief from heavy smoke conditions is best accomplished by leaving for cleaner air.		

No matter how far you can see, if you feel like you are having health effects from smoke exposure, take extra care to stay inside or get to an area

Training Requirements

(3) Information and training. Beginning August 16, 2021, and unless the employer predetermines that operations involving wildfire smoke exposure will be suspended before employees are exposed to a workplace ambient air concentration for PM2.5 at or above 35.5 ug/m^3 (AQI 101), the employer must ensure that employees who may be exposed to such levels have been trained. The information and training must be provided to all affected employees in a manner and language they readily understand. Employers must ensure that such training includes at least the following elements:

(a) Symptoms of wildfire smoke exposure, including:

(A) Eyes: burning sensations, redness, and tearing of the eyes caused by irritation and inflammation of the eyes that can temporarily impair one's vision.

(B) Respiratory system: runny nose, sore throat, cough, difficulty breathing, sinus irritation, wheezing, shortness of breath;

(C) Fatigue, headache, irregular heartbeat, chest pain.

(b) The potential health effects of wildfire smoke, including increased risk of health effects to sensitive groups;
(c) The definition of sensitive groups as defined under section (2);
(d) The employee's right to report health issues related to wildfire smoke exposure and obtain medical treatment for workplace exposure to wildfire smoke without fear of retaliation;
(e) The procedures the supervisor must follow if an employee exhibits severe symptoms of wildfire smoke exposure, including appropriate emergency response procedures;
(f) How employees can obtain the current and forecasted ambient air concentration for PM2.5 and equivalent AQI level;
(g) How to effectively operate and interpret any air quality monitoring device provided by the employer to comply with these rules, for each employee designated by the employer to operate such devices;
(h) The employer's methods to protect employees from wildfire smoke;
(i) The employer's communication system for wildfire smoke hazards covered under section (4); and
(j) The importance, limitations, and benefits of using a filtering facepiece respirator when provided by the employer, and how to properly put them on.

(4) Before employees are exposed to concentrations in ambient air for PM2.5 is at or above 35.5 ug/m^3 (AQI 101), the employer must develop and implement a system to communicate wildfire smoke hazards that must include the following:

(a) Notifying employees when work location ambient air concentration for PM2.5 is at or above 35.5 ug/m^3 (AQI 101);
(b) Notifying employees when work location ambient air concentration for PM2.5 is at or above 150.5 ug/m^3 (AQI 201);
(c) Notifying employees when work location ambient air concentration for PM2.5 is at or above 500.4 ug/m^3 (AQI 501);
(d) Notifying employees when ambient air concentration for PM2.5 drops below levels requiring protective measures; and
(e) Enabling and encouraging employees to inform the employer if any of the following occurs:

(A) When air quality improves and worsens; and

(B) Severe health symptoms that may be the result of wildfire smoke exposure such as asthma attacks, difficulty breathing, and chest pain.

Respirators Voluntary Use

(5) Exposure controls.

(a) Control by voluntary use of respirators. Whenever employee exposure to PM2.5 is at or above 35.5 ug/m^3 (AQI 101), the employer must maintain a sufficient number and sizes of NIOSH-approved respirators that effectively protect wearers from PM2.5 at each work location where employees are

exposed. Such respirators must be provided at no cost and be readily available for voluntary use to all exposed workers at their request.

Engineering/Administrative Controls

exposed workers at their request.

(b) Engineering and administrative controls. Employers must use engineering or administrative controls to reduce employee PM2.5 exposure to less than 150.5 ug/m^3 (AQI 201) whenever feasible. Engineering controls include providing enclosed buildings, structures, or vehicles where the air is adequately filtered. Administrative controls include relocating work to an outdoor location where the current ambient air concentration of PM2.5 is less than 150.5 ug/m^3 (AQI 201) or changing work schedules to a time when ambient air concentration of PM2.5 is less than 150.5 ug/m^3 (AQI 201).

Required Respirator Use

(c) Control by required use of respirators. Whenever employee exposure to PM2.5 is at or above 150.5 ug/m^3 (AQI 201) even after the application of engineering and administrative controls, the employer must ensure that employees wear NIOSH-approved respirators. For filtering facepiece respirators used exclusively to protect employees from wildfire smoke, the employer need not implement a full Respiratory Protection Program provided that the Wildfire Smoke Respiratory Protection Program described in the Appendix to this standard is followed. The requirements of section (5)(c) do not apply to residents of employer-provided housing while they are in the housing.

Going to work in really bad air?

(d) Control by required use of NIOSH-approved respirators. Whenever employee exposure to PM2.5 is at or above 500.4 ug/m^3 (AQI 501), even after the application of engineering and administrative controls, the employer must ensure that employees wear NIOSH-approved respirators. For filtering facepiece respirators used exclusively to protect employees from wildfire smoke, the employer must implement a complete Respiratory Protection Program, in compliance with 1910.134.

POLLING QUESTION ?????

Which one makes for a more “challenging” day?

A.) Working outside when it is 109 degrees

B.) Working outside when there is wildland smoke and the air quality is registering at over 300