George W. Goodman, OSB #794984
gwg@cumminsgoodman.com
James S. Anderson, OSB #051885
jsa@cumminsgoodman.com
Cummins, Goodman, Denley & Vickers, P.C.
P.O. Box 609
Newberg, OR 97132-0609
Telephone: (503) 476-8200
Attorneys for Plaintiffs.

UNITED STATES DISTRICT COURT

DISTRICT OF OREGON

MEDFORD DIVISION

OREGON MANUFACTURERS AND COMMERCE, an Oregon non-profit association, **ASSOCIATED OREGON LOGGERS, INC.,** an Oregon non-profit association, **and OREGON FOREST & INDUSTRIES COUNCIL,** an Oregon non-profit association,

Plaintiffs,

v.

OREGON OCCUPATIONAL SAFETY AND HEALTH DIVISION, a division of the Oregon Department of Consumer and Business Services, **RENEE STAPLETON,** in her official capacity as acting administrator for the Oregon Occupational Safety and Health Division, **OREGON DEPARTMENT OF CONSUMER AND BUSINESS SERVICES,** an Agency of the State of Oregon, **and ANDREW STOLFI,** in his official capacity as the Director of the Oregon Department of Consumer and Business Services,

Defendants.

CASE NO. 1:22-cv-00875

COMPLAINT

NOW COMES OREGON MANUFACTURERS AND COMMERCE, ASSOCIATED OREGON LOGGERS, INC., AND OREGON FOREST & INDUSTRIES COUNCIL,

(collectively Plaintiffs), and file this Complaint for declaratory and injunctive relief stating as follows:

PARTIES

1.

Plaintiff Oregon Manufacturers and Commerce ("OMC") is an Oregon non-profit corporation. It is an association of approximately 16 Oregon companies employing thousands of Oregonians which is dedicated to promoting, protecting, and advancing Oregon manufacturers and their allied partners in commerce.

2.

Plaintiff Associated Oregon Loggers, Inc. ("AOL") is an Oregon non-profit corporation. It is a statewide trade association representing some 1,000 member companies engaged in the harvest and sustainable forest management of Oregon's 30 million acres of forestland.

3.

Plaintiff Oregon Forest & Industries Council ("OFIC") is an Oregon non-profit corporation. It is a trade association representing more than 50 Oregon forestland owners and forest products manufacturers. OFIC members protect and manage more than five million acres of Oregon forestlands, employ nearly 60,000 Oregonians, and make Oregon the nation's largest state producer of softwood lumber and plywood.

4.

Defendant Oregon Occupational Safety and Health Division ("OR-OSHA") is a Division of the Oregon Department of Consumer and Business Services.

5.

Defendant Renee Stapleton is the Acting Administrator of OR-OSHA.

6.

Defendant Oregon Department of Consumer and Business Services ("DCBS") is an Oregon State Agency.

7.

Defendant Andrew Stolfi is the Director of the Oregon DCBS.

JURISDICTION AND VENUE

8.

This action arises under federal law, including the 14th Amendment to the United States Constitution, 42 U.S.C. §1983 and §1988, to redress the deprivation, under the color of state law, of rights, privileges, and immunities secured to Plaintiffs by the Constitution of the United States.

9.

Subject matter jurisdiction is appropriate in this Court under 28 U.S.C. §1331 and 28 U.S.C. §1343.

10.

Supplemental jurisdiction over the state law claims stated herein is appropriate under 28 U.S.C. §1367, as the claims are so related to the claims over which the Court has original jurisdiction that they form part of the same case or controversy between the parties.

11.

This Court has personal jurisdiction over Defendants because they have committed acts in this District that violate the rights of Plaintiffs' members which are protected by the Constitution of the United States.

12.

Venue is appropriate under 28 U.S.C. §1391 as the events giving rise to these claims occurred in this judicial district and will affect Plaintiffs' members' activities within the judicial district.

13.

Divisional venue pursuant to LR 3-2 is appropriate as the challenged rules will have a substantial impact upon the activities of Plaintiffs' members within this District.

14.

Plaintiffs request a declaration of their rights under the Constitution of the United States. The Court may declare the rights of Plaintiffs and grant further necessary and proper relief based thereon, including injunctive relief under to Fed. Civ. P. 65. 28 U.S.C. §§ 2201-2202.

FACTUAL ALLEGATIONS

15.

Plaintiffs' members are substantially comprised of Oregon employers who will be subject to regulations recently adopted by Defendant OR-OSHA related to regulation of employee exposure to wildfire smoke and apparent temperatures (heat index) in excess of 80 degrees Fahrenheit.

16.

As employers subject to enforcement of OR-OSHA's recently adopted regulations, Plaintiffs' members have standing to bring this action in their own right and, in consideration of judicial economy and efficiency, have requested that Plaintiffs bring the action to the court on behalf of their respective members.

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17.

The interests Plaintiffs seek to protect are germane to Plaintiffs' purposes as trade associations.

A. The Wildfire Smoke Rules

18.

On May 10, 2022, Defendant Oregon Occupational Safety and Health Division ("OR-OSHA") adopted Oregon Administrative Rules ("OAR") 437-002-1081 and 437-004-9791. (Ex. 1.).

19.

Both rules are entitled "Protection from Wildfire Smoke" and have an effective date of July 1, 2022.

20.

While the text of the rules is identical in relevant manner for purposes of this Complaint, OAR 437-002-1081 applies to general industry, while OAR 437-004-9791 applies to places of employment subject to the rules for agriculture in Division 2 of Chapter 437.

21.

Defendant OR-OSHA's "Rulemaking Summary" makes clear that employers covered under Division 3 (Construction) and Division 7 (Forest Activities) of Chapter 437, must also comply with OAR 437-002-1081.

22.

The Scope and Application sections of both OAR 437-002-1080 and OAR 437-004-9791 are identical and provide in part that: "This standard applies to public and private sector employers whose employees **are or will be exposed to wildfire smoke** where the ambient air

concentration for fine particulate matter (PM2.5) is at or above 35.5 µg/m3 (Air Quality Index value of 101 for PM2.5)." Emphasis added.

23.

The rules' requirements therefore apply to employers whose employees are or will be exposed to wildfire smoke when such exposure coincides with a PM2.5 Air Quality Index level of at least 101 for a particular work location but do not distinguish between contributions to the Air Quality Index level from wildfire smoke in comparison to other pollutants.

24.

Both OAR 437-002-1080 and OAR 437-004-9791 contain an identical definition of wildfire smoke: "Emissions from unplanned fires in wildlands, which may include adjacent developed and cultivated areas to which the fire spreads or from where it originates."

25.

Both OAR 437-002-1080 and OAR 437-004-9791 contain an identical definition of the AQI: "The Air Quality Index (AQI) was developed by the U.S. Environmental Protection Agency (EPA) as an indicator of overall air quality and is based on the five criteria pollutants regulated under the Clean Air Act: ground-level ozone, particulate matter, carbon monoxide, sulfur dioxide, and nitrogen dioxide."

26.

Both OAR 437-002-1080 and OAR 437-004-9791 contain provisions requiring employers to provide training, perform exposure assessments, and implement exposure controls if employees may be or are exposed to ambient air concentration not limited to wildfire smoke in particular, but to PM 2.5 at or above an AQI of 101.

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27.

Both OAR 437-002-1080 and OAR 437-004-9791 contain provisions advising employers that they can comply with the requirements to monitor the AQI for PM2.5 levels at their work sites by:

(a) checking the current average and forecasted AQI value for PM2.5 from the Oregon Department of Environmental Quality, U.S. EPA AirNow or Interagency Wildland Fire Air Quality Response Program websites, or equivalent source;

(b) checking notifications of air quality advisories due to wildfire smoke issued by the Oregon Department of Environmental Quality or local government health agencies;

(c) directly measuring workplace ambient air concentration for PM2.5 in accordance with the testing device manufacturer's user instructions; or

(d) if the employer determines and can demonstrate that none of the methods in subsections (3)(a) through (3)(c) of this standard are available for their work location, the employer can then use the 5-3-1 Visibility Index provided in Appendix B, Table 1 of this standard to estimate the current air concentration for PM2.5, and equivalent AQI value, during daylight hours.

28.

Neither OAR 437-002-1080 nor OAR 437-004-9791 contains any method by which an employer can determine whether any particulates from wildfire smoke are contained within the PM2.5 contaminants present at a given work site, no less the extent of contribution, which in turn makes it infeasible to identify when and if the rules are applicable to a particular work site.

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B. The Ambient Heat Rules

29.

On May 9, 2022, Defendant Oregon Occupational Safety and Health Division ("OR-OSHA") adopted Oregon Administrative Rules ("OAR") 437-002-0156 and 437-004-1131. (Ex. 2).

30.

Both rules are entitled "Heat Illness Prevention" and have an effective date of June 15, 2022.

31.

While the text of the rules is identical in relevant manner for purposes of this Complaint, OAR 437-002-0156 applies to general industry, while OAR 437-004-1131 applies to places of employment subject to the rules for agriculture in Division 2 of Chapter 437.

32.

Defendant OR-OSHA's "Rulemaking Summary" makes clear that employers covered under Division 3 (Construction) and Division 7 (Forest Activities) of Chapter 437 must also comply with OAR 437-002-0156.

33.

The Scope and Application sections of both OAR 437-002-0156 and OAR 437-004-1131 are identical and provide in part that the standard apply: "whenever an employee performs work activities, whether in indoor or outdoor environments, where the heat index (apparent temperature) equals or exceeds 80 degrees Fahrenheit."

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/ / / /

34.

Both OAR 437-002-0156 and OAR 437-004-1131 contain requirements for employers to develop and implement a written heat illness prevention rest break schedule for workers when the heat index at a work site is 90 degrees Fahrenheit or greater.

35.

While the rest breaks are permitted to coincide with other unpaid breaks required by law, both rules specifically state that if the heat rest breaks do not coincide with existing unpaid mail breaks, the heat illness prevention rest break is a "work assignment."

36.

By designating the heat illness prevention work breaks as a "work assignment," Defendants are effectively requiring employers to pay workers for these mandated heat illness prevention breaks.

37.

Both OAR 437-002-0156 and OAR 437-004-1131 contain requirements for employers to develop and implement a written acclimatization plan for workers.

38.

While the rules permit employers to develop and implement their own plans, the rules do not provide requirements for exactly when such plans are triggered, how long such plans must be implemented if the weather changes or what type of employer-specific plan would be considered not in compliance.

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FIRST CLAIM FOR INJUNCTIVE RELIEF

AS TO OAR 437-002-1080 AND OAR 437-004-9791

Count 1

(Violation of Constitutional Due Process)

39.

Plaintiffs re-allege and incorporate the allegations set forth in Paragraphs 1-38 above as if fully set forth herein.

40.

OAR 437-002-1080 and OAR 437-004-9791 fail to provide employers, including Plaintiffs' members, with a means to determine if wildfire smoke particulates are contained within the PM2.5 contaminants at a particular work site, thus making the rules applicable to that work site.

41.

OAR 437-002-1080 and OAR 437-004-9791 provide inconsistent requirements as to what metric should be utilized to measure the PM2.5 levels at a work site (AQI, AQI Now, AQI average) rendering employers, including Plaintiffs' members, unable to definitively determine whether they are in compliance with the rules' requirements.

42.

OAR 437-002-1080 and OAR 437-004-9791 require use of a metric for measuring PM2.5 contaminants (the AQI) which will be predictably imprecise for a particular worksite, rendering the rule subject to arbitrary and capricious enforcement.

43.

The 14th Amendment to the United States Constitution prohibits any state from depriving

any person of life, liberty or property, without due process of law. The provisions of OAR 437-002-1080 and OAR 437-004-9791 are so vague that they do not provide employers, including Plaintiffs' members, with fair notice of what conduct is required or proscribed, and as such are violative of the due process protections of the 14th Amendment to the United States Constitution.

44.

Plaintiffs are entitled to a declaration that OAR 437-002-1080 and 437-004-9791 are unconstitutionally vague and therefore violate the rights of Plaintiffs' members under the 14th Amendment to the United States Constitution.

Count 2

(Lack of Statutory Authority)

45.

Plaintiffs re-allege and incorporate the allegations set forth in Paragraphs 1-44 above as if fully set forth herein.

46.

Defendant OR-OSHA, under the designated authority of Defendant Stolfi, derives its authority to adopt regulations from the Oregon Safe Employment Act ("OSEA") set forth in ORS Chapter 654 et seq.

47.

The Oregon Legislature adopted the OSEA in 1973 and set forth the purpose of the OSEA in 654.003. The purpose of the OSEA is "to ensure as far as possible safe and healthful working conditions for every working person in Oregon, to preserve our human resources and to reduce the substantial burden, in terms of lost production, wage loss, medical expenses, disability compensation payments and human suffering, that is created by occupational injury and disease."

48.

To accomplish the purpose of the OSEA, the legislature stated it intended to "provide a procedure that would, among other things:

"(3) Authorize the Director of the Department of Consumer and Business Services and the designees of the director to set reasonable, mandatory, occupational safety and health standards for all employments and places of employment;… and

(6) Assure that Oregon assumes fullest responsibility, in accord with the federal Occupational Safety and Health Act of 1970 (29 U.S.C. 651 et seq.), for the development, administration and enforcement of safety and health laws and standards."

49.

The OSEA provides the Director of the DCBS and his designees with authority to adopt reasonable regulations to address occupational hazards.

50.

The OSEA does not provide the Director of the DCBS and/or his designees with the authority to regulate general societal hazards which affect employees in and out of the work environment.

51.

OAR 437-002-1080 and OAR 437-004-9791 regulate a hazard of daily life, air pollution tied to PM2.5 contaminants. These regulations are a significant and unauthorized expansion of OR-OSHA's regulatory authority in that they amount to a general health measure which may fall within the authority of the Oregon Health Authority or the Department of Environmental Quality, but is outside of OR-OSHA's statutory mission.

/ / / /

52.

The Oregon Legislature stated overtly its intent that the statutory authority provided in the OSEA would be in accord with the federal Occupational Safety and Health Act of 1970 for the development, administration, and enforcement of safety and health laws and standards.

53.

OAR 437-002-1080 and OAR 437-004-9791 are inconsistent with the Oregon Legislature's stated intent that the OSEA would be administered and enforced in accord with the Federal Occupational Safety and Health Act of 1970, in that those standards regulate a general societal hazard rather than an occupational hazard which, as such, are not authorized by, nor in accord with, the federal OSH Act.

54.

Defendants have exceeded their statutory authority to regulate occupational hazards in adopting OAR 437-002-1080 and OAR 437-004-9791. The rules are irreconcilably inconsistent with the intent of the Oregon Legislature that the OSEA be administered and enforced in accordance with the Federal Occupational Safety and Health Act of 1970.

55.

Defendants' unauthorized promulgation of OAR 437-002-1080 and 437-004-9791 require Plaintiffs' members to expend resources in an effort to develop exposure plans, implement exposure controls, and train employees on such plans and controls.

56.

Defendant OR-OSHA's anticipated enforcement of the requirements of OAR 437-002-1080 and 437-004-9791 will require employers, including Plaintiffs' members, to expend resources to defend against said enforcement actions despite their improper promulgation with

no available provision in law to allow recovery of those expenses should they prevail.

57.

Plaintiffs are entitled to a declaration that OR-OSHA exceeded its statutory authority in promulgating OAR 437-002-1080 and 437-004-9791.

SECOND CLAIM FOR INJUNCTIVE RELIEF

AS TO OAR 437-002-0156 AND OAR 437-004-1131

Count 1

(Violation of Constitutional Due Process)

58.

Plaintiffs re-allege and incorporate the allegations set forth in Paragraphs 1-57 above as if fully set forth herein.

59.

OAR 437-002-0156 and OAR 437-004-1131 fail to provide employers, including Plaintiffs' members, with a means to determine when the acclimatization plan is required to be triggered on a particular work site, how long such plans must be implemented if the weather changes or what type of employer-specific plan would be considered not in compliance

60.

The lack of any direction in OAR 437-002-0156 and OAR 437-004-1131 as to what triggers implementation of the plan procedures or how long the procedures must be implemented, renders employers, including Plaintiffs' members, unable to definitively determine whether they are in compliance with the rules' requirements.

61.

OAR 437-002-0156 and OAR 437-004-1131 require implementation of acclimatization

procedures without definitive requirements for when such procedures must be implemented on a particular work site, rendering the rule subject to arbitrary and capricious enforcement.

62.

The 14th Amendment to the United States Constitution prohibits any state from depriving any person of life, liberty or property, without due process of law. The provisions of OAR 437-002-0156 and OAR 437-004-1131 are so vague that they do not provide employers, including Plaintiffs' members, with fair notice of what conduct is required or proscribed, and as such are violative of the due process protections of the 14th Amendment to the United States Constitution.

63.

Plaintiffs are entitled to a declaration that OAR 437-002-1080 and 437-004-9791 are unconstitutionally vague and therefore violate the rights of Plaintiffs' members under the 14th Amendment to the United States Constitution.

Count 2

(Lack of Statutory Authority)

64.

Plaintiffs re-allege and incorporate the allegations set forth in Paragraphs 1-63 above as if fully set forth herein.

65.

Defendant OR-OSHA, under the designated authority of Defendant Stolfi, derives its authority to adopt regulations from the Oregon Safe Employment Act ("OSEA") set forth in ORS Chapter 654 et seq.

66.

The Oregon Legislature adopted the OSEA in 1973 and set forth the purpose of the

OSEA in 654.003. The purpose of the OSEA is "to ensure as far as possible safe and healthful working conditions for every working person in Oregon, to preserve our human resources and to reduce the substantial burden, in terms of lost production, wage loss, medical expenses, disability compensation payments and human suffering, that is created by occupational injury and disease."

67.

To accomplish the purpose of the OSEA, the legislature stated it intended to "provide a procedure that would, among other things:

"(3) Authorize the Director of the Department of Consumer and Business Services and the designees of the director to set reasonable, mandatory, occupational safety and health standards for all employments and places of employment;… and

(6) Assure that Oregon assumes fullest responsibility, in accord with the federal Occupational Safety and Health Act of 1970 (29 U.S.C. 651 et seq.), for the development, administration and enforcement of safety and health laws and standards."

68.

The OSEA provides the Director of the DCBS and his designees with authority to adopt reasonable regulations to address occupational hazards.

69.

The OSEA does not provide the Director of the DCBS and/or his designees with the authority to regulate general societal hazards which affect employees in and out of the work environment.

70.

OAR 437-002-0156 and OAR 437-004-1131 regulate a hazard of daily life, exposure to apparent temperatures in excess of 80 degrees Fahrenheit. These regulations are a significant

expansion of OR-OSHA's regulatory authority and amount to a general health measure which may fall within the authority of the Oregon Health Authority.

71.

OAR 437-002-0156 and OAR 437-004-1131 contain provisions which provide: "Except when the heat illness prevention rest breaks coincide with the existing unpaid meal break, the heat illness prevention rest break is a work assignment." By mandating that a heat illness prevention break is a "work assignment," OR-OSHA is regulating employee wages.

72.

The OSEA provides no statutory authority for Defendants to regulate wages in the form of paid rest periods or otherwise. Rather the Oregon Legislature provided statutory authority over regulation of wages to the Bureau of Labor and Industries.

73.

The Oregon Legislature stated that its intent that the statutory authority provided in the OSEA would be in accord with the Federal Occupational Safety and Health Act of 1970 for the development, administration and enforcement of safety and health laws and standards.

74.

OAR 437-002-0156 and OAR 437-004-1131 are inconsistent with the Oregon Legislature's stated intent that the OSEA would be administered and enforced in accord with the Federal Occupational Safety and Health Act of 1970, in that those standards regulate a general societal hazard rather than an occupational hazard which is not authorized by the Federal Act.

75.

Defendants exceed their statutory authority to regulate occupational hazards in adopting OAR 437-002-0156 and OAR 437-004-1131. The rules are further inconsistent with the intent

of the Oregon Legislature that the OSEA be administered and enforced in accordance with the Federal Occupational Safety and Health Act of 1970.

76.

Defendants' unauthorized promulgation of OAR 437-002-0156 and 437-004-1131 require Plaintiffs' members to expend resources developing heat illness and acclimatization plans, implementing acclimatization plans and paid break schedules, and training employees on such plans and controls.

77.

Defendant OR-OSHA's anticipated enforcement of the requirements of OAR 437-002-1080 and 437-004-9791 will require employers, including Plaintiffs' members, to expend resources to defend against said enforcement actions despite their improper promulgation with no available provision in law to recover those expenses should they prevail.

78.

Plaintiffs are entitled to a declaration that OR-OSHA exceeded its statutory authority in promulgating OAR 437-002-0156 and 437-004-1131.

WHEREFORE, Plaintiffs pray that this Honorable Court:

1. Enter Judgment in favor of Plaintiffs on each and every Claim for Relief;
2. Issue a declaration that OAR 437-002-1080 and 437-004-1080 are unconstitutionally vague.
3. Issue a declaration that Defendants exceeded their statutory authority in promulgating OAR 437-002-1080, OAR 437-002-0156, OAR 437-004-9791 and OAR 437-004-1131;
4. Issue a temporary restraining order, preliminary injunction, and permanent

injunction against Defendants prohibiting enforcement of OAR 437-002-1080, OAR 437-002-0156, OAR 437-004-9791 and OAR 437-004-1131;

5. Charge all costs of this action against Defendants;

6. Award reasonable attorneys' fees to Defendant pursuant to 42 U.S.C. §1983 and all other basis in law and equity; and

7. Award such other relief as the Court deems just and proper.

DATED this 15th day of June, 2022.

CUMMINS, GOODMAN,
DENLEY & VICKERS, P.C.

/s/ George W. Goodman
George W. Goodman, OSB #794984
gwg@cumminsgoodman.com
James S. Anderson, OSB #051885
jsa@cumminsgoodman.com
Cummins, Goodman, Denley & Vickers, P.C.
100 S. College Street
Newberg, OR 97132-0609
Telephone: (503) 476-8200
Of Attorneys for Plaintiffs

Trial Attorney: George W. Goodman, OSB #79498

Oregon
Kate Brown, Governor

Department of Consumer and Business Services
Oregon Occupational Safety & Health Division (Oregon OSHA)
350 Winter Street NE, PO Box 14480, Salem, OR 97309-0405
Phone: 503-378-3272, Toll Free: 1-800-922-2689, Fax: 503-947-7461
osha.oregon.gov

May 9, 2022

Text of rule changes
Comments and decisions

Oregon OSHA's Adoption of Rules to Address Employee and Labor Housing Occupant Exposure to High Ambient Temperatures

Oregon OSHA adopted these permanent rules to prevent heat illness when employees are exposed to high ambient temperatures. Without specific rule requirements, Oregon OSHA recognized that both employers and workers may not clearly understand expectations of what must be done to prevent work-related heat illness. The deadly heat wave of June 2021, which contributed to multiple workplace hospitalizations and fatalities, underscored the need for such rules to protect workers against the serious risk of work-related heat illness.

The adopted rules apply to all workers in Oregon covered under the Oregon Safe Employment Act (OSEAct). OAR 437-004-1131 applies to employers covered under Division 4 (Agriculture), while OAR 437-002-0156 applies to work activities covered under Division 2 (General Industry). Since worker exposure to high temperature conditions that can increase the risk of heat illness is not limited to a specific industry, work activities covered under Division 3 (Construction) or Division 7 (Forest Activities) would also be required comply with OAR 437-002-0155, per additional applicability requirements under OAR 437-003-0005 and OAR 437-007-0004, respectively.

On March 10, 2020, Governor Brown issued Executive Order 20-04 (EO 20-04) which directed certain state agencies to reduce greenhouse gas emissions and mitigate the impacts of climate change. EO 20-04 included a directive to the Oregon Health Authority (OHA) and Oregon OSHA to jointly develop a proposal for standards to protect employees from workplace exposures to excessive heat and wildfire smoke. In response to EO 20-04, Oregon OSHA, in collaboration with the OHA, a rulemaking advisory committee, and stakeholders, developed these rules to protect employees from the serious risk of work-related heat illness.

Beginning in March 2021, Oregon OSHA convened nine virtual Rules Advisory Committee (RAC) meetings over an 8-month period, engaging over 100 stakeholders representing labor and business interests. Oregon OSHA presented multiple rule drafts and a fiscal impact survey for stakeholder comment. In addition, Oregon OSHA hosted four virtual listening sessions with Spanish translators, held in May and September 2021, to provide an opportunity for workers and other stakeholders to share their experience on the challenges of wildfire smoke in the workplace, in addition to hearing about how Oregon OSHA's temporary rule affected their workplaces.

Given the unprecedented heat event of June 2021, while the formal rulemaking process was

underway, Oregon OSHA adopted temporary heat rules, they included: Administrative Order 6-2021: Temporary Rules to Address Employee Exposure to High Ambient Temperatures in effect from July 8, 2021 through January 3, 2022 and Administrative Order 8-2021: Temporary Amendment OAR 437-004-1120 to Address High Ambient Temperatures in Labor Housing.in effect from August 9, 2021 through February 4, 2022.

On January 28, 2022, Oregon OSHA proposed permanent rules to address employee and labor housing occupant exposure to high ambient temperatures. Three public hearings were held in February 2022 to hear oral testimony, including one held primarily in Spanish. Additionally, interested persons were provided the ability to submit public comment by email, letter, fax and by voicemail message. The formal public comment period closed March 18, 2022.

During the public comment period of the proposed heat rules, the agency received over 300 comments. Oregon OSHA considered all comments received. Oregon OSHA, based on comments received, made minor adjustments, as follows. The exemption language in section (1) was clarified and the word “feasibility” was removed from the definitions section (2). Language was updated in section (5) to make the heat illness prevention schedule options clearer; additionally, two notes that were in the proposed rules were modified into rule requirements, a note was added, and lastly the location of option A was moved below the required considerations. In section (6), which addresses the Emergency Medical Plan, applicable standards outside of this rule were added for ease to the reader. The remainder of the sections remain largely unchanged. The full summary of comments and agency decisions, available on Oregon OSHA’s website, provides additional details on the agency decision-making and modifications made prior to adoption.

As adopted, OAR 437-004-1131 and OAR 437-002-0156 offer multiple exemptions for certain conditions. Workplaces and operations exempt from these rules include incidental heat exposures where an employee is not required to perform work activities for more than 15 minutes in any sixty-minute period; exposures to heat generated from the work process – such as occurs in bakeries; all emergency 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, utilities, and communications; and lastly buildings and structures that have a mechanical ventilation system that keeps the heat index below 80 degrees Fahrenheit.

Other workplaces have partial exemptions, including employers whose employees perform either “rest” or “light” workloads (as defined in the rule); associated support activities for wildland firefighters such as fire camp services and fire management; and, employees who work from home are subject only to training and documentation requirements.

Overall, the adopted requirements of OAR 437-004-1131 and OAR 437-002-0156 address the following: access to shade; drinking water; high heat practices, including the development of heat illness prevention break schedules for certain temperature thresholds; emergency medical and actions plans; acclimatization plan; heat illness prevention plan; supervisor and employee training; and training documentation.

Additionally, this rulemaking amended OAR 437-004-1120 to address the issue of heat in employer-provided labor housing. Oregon OSHA recognizes the effect of heat in such housing, and that its impact is magnified on workers because of their limited ability to recover from hot outdoor working conditions.

The new adopted provisions in OAR 437-004-1120 in section (25) require that when the heat index is at or above 80 degrees Fahrenheit outside the housing units, housing without suitable temperature control (able to keep indoor temperatures under 78 degrees Fahrenheit) must include common areas to provide some relief. Employers can provide indoor cooling rooms (using air conditioners, evaporative coolers, air purifiers with coolers, or other reliable means) or shaded outdoor rest areas open to the breeze equipped with cooling devices. Other requirements include strategies to minimize heat in housing units, including window coverings and fans. In the proposal, thermometers are required in all housing units, and humidity gauges are encouraged. Lastly, the new provisions call for employers to ensure that the occupants in labor housing have information about heat illness, how to avoid it, and how to contact emergency medical care in the event of serious illness.

This rulemaking adopted non-substantive changes in the labor housing rules in Division 4 to correct scrivener's errors related to outlining, and updates rule references; these changes were necessary to adopt the amendments. The changes in 437-004-1120 apply to all employer-provided labor housing, including those that fall under OAR 437-002-0142.

This is Oregon OSHA Administrative Order 3-2022, adopted May 9, 2022 and effective June 15, 2022.

Oregon OSHA contacts:
Heat Illness Prevention rules - Theodore Bunch Jr., Salem Central Office @ 503-378-3272, or email at Theodore.BUNCH@dcbs.oregon.gov.
Agricultural Labor Housing rule – Sarah Rew, Salem Central Office @ 503-378-3272, or email at Sarah.C.REW@dcbs.oregon.gov.

Please visit our website osha.oregon.gov/rules to view our adopted rules, or select other rule activity from this page.

Note: In compliance with the Americans with Disabilities Act (ADA), this publication is available in alternative formats by calling 503-378-3272.

Secretary of State
Certificate and Order for Filing

PERMANENT ADMINISTRATIVE RULES

I certify that the attached copies* are true, full and correct copies of the PERMANENT Rule(s) adopted on May 9, 2022 by the
Date prior to or same as filing date

Department of Consumer & Business Services/Oregon Occupational Safety & Health Division 437
Agency and Division — Administrative Rules Chapter Number

Lisa Appel | 350 Winter Street NE, Salem OR 97301-3882 | 503-947-7449
Rules Coordinator — Address — Telephone

to become effective June 15, 2022 as Oregon OSHA Administrative Order 3-2022.
Date upon filing or later

Rulemaking Notice was published in the February 2022 Oregon *Bulletin*. **
Month and Year

RULE CAPTION

Rules to Address Employee and Labor Housing Occupant Exposure to High Ambient Temperatures
Not more than 15 words that reasonably identifies the subject matter of the agency's intended action.

RULEMAKING ACTION

ADOPT: OAR 437-002-0156, 437-004-1131

ORS 654.025(2), 654.035, 656.726(4)
Stat. Auth. — Other Authority

ORS 654.001 through 654.295
Stats. Implemented

AMEND: OAR 437-004-1120

ORS 654.025(2), 654.035, 656.726(4) ORS 658.750, 658.755, 658.780, 658.785, 658.790, 658.805
Stat. Auth. — Other Authority

ORS 654.001 through 654.295

RULEMAKING SUMMARY

Oregon OSHA adopted these permanent rules to prevent heat illness when employees are exposed to high ambient temperatures. Without specific rule requirements, Oregon OSHA recognized that both employers and workers may not clearly understand expectations of what must be done to prevent work-related heat illness. The deadly heat wave of June 2021, which contributed to multiple workplace hospitalizations and fatalities, underscored the need for such rules to protect workers against the serious risk of work-related heat illness.

The adopted rules apply to all workers in Oregon covered under the Oregon Safe Employment Act (OSEAct). OAR 437-004-1131 applies to employers covered under Division 4 (Agriculture), while OAR 437-002-0156 applies to work activities covered under Division 2 (General Industry). Since worker exposure to high temperature conditions that can increase the risk of heat illness is not limited to a specific industry, work activities covered under Division 3 (Construction) or Division 7 (Forest Activities) would also be required comply with OAR 437-002-0155, per additional applicability requirements under OAR 437-003-0005 and OAR 437-007-0004, respectively.

On March 10, 2020, Governor Brown issued Executive Order 20-04 (EO 20-04) which directed certain state agencies to reduce greenhouse gas emissions and mitigate the impacts of climate change. EO 20-04 included a directive to the Oregon Health Authority (OHA) and Oregon OSHA to jointly develop a proposal for standards to protect employees from workplace exposures to excessive heat and wildfire smoke. In response to EO 20-

04, Oregon OSHA, in collaboration with the OHA, a rulemaking advisory committee, and stakeholders, developed these rules to protect employees from the serious risk of work-related heat illness.

Beginning in March 2021, Oregon OSHA convened nine virtual Rules Advisory Committee (RAC) meetings over an 8-month period, engaging over 100 stakeholders representing labor and business interests. Oregon OSHA presented multiple rule drafts and a fiscal impact survey for stakeholder comment. In addition, Oregon OSHA hosted four virtual listening sessions with Spanish translators, held in May and September 2021, to provide an opportunity for workers and other stakeholders to share their experience on the challenges of wildfire smoke in the workplace, in addition to hearing about how Oregon OSHA's temporary rule affected their workplaces.

Given the unprecedented heat event of June 2021, while the formal rulemaking process was underway, Oregon OSHA adopted temporary heat rules, they included: Administrative Order 6-2021: Temporary Rules to Address Employee Exposure to High Ambient Temperatures in effect from July 8, 2021 through January 3, 2022 and Administrative Order 8-2021: Temporary Amendment OAR 437-004-1120 to Address High Ambient Temperatures in Labor Housing.in effect from August 9, 2021 through February 4, 2022.

On January 28, 2022, Oregon OSHA proposed permanent rules to address employee and labor housing occupant exposure to high ambient temperatures. Three public hearings were held in February 2022 to hear oral testimony, including one held primarily in Spanish. Additionally, interested persons were provided the ability to submit public comment by email, letter, fax and by voicemail message. The formal public comment period closed March 18, 2022.

During the public comment period of the proposed heat rules, the agency received over 300 comments. Oregon OSHA considered all comments received. Oregon OSHA, based on comments received, made minor adjustments, as follows. The exemption language in section (1) was clarified and the word "feasibility" was removed from the definitions section (2). Language was updated in section (5) to make the heat illness prevention schedule options clearer; additionally, two notes that were in the proposed rules were modified into rule requirements, a note was added, and lastly the location of option A was moved below the required considerations . In section (6), which addresses the Emergency Medical Plan, applicable standards outside of this rule were added for ease to the reader. The remainder of the sections remain largely unchanged. The full summary of comments and agency decisions, available on Oregon OSHA's website, provides additional details on the agency decision-making and modifications made prior to adoption.

As adopted, OAR 437-004-1131 and OAR 437-002-0156 offer multiple exemptions for certain conditions. Workplaces and operations exempt from these rules include incidental heat exposures where an employee is not required to perform work activities for more than 15 minutes in any sixty-minute period; exposures to heat generated from the work process – such as occurs in bakeries; all emergency 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, utilities, and communications; and lastly buildings and structures that have a mechanical ventilation system that keeps the heat index below 80 degrees Fahrenheit.

Other workplaces have partial exemptions, including employers whose employees perform either "rest" or "light" workloads (as defined in the rule); associated support activities for wildland firefighters such as fire camp services and fire management; and, employees who work from home are subject only to training and documentation requirements.

Overall, the adopted requirements of OAR 437-004-1131 and OAR 437-002-0156 address the following: access to shade; drinking water; high heat practices, including the development of heat illness prevention break schedules for certain temperature thresholds; emergency medical and actions plans; acclimatization plan; heat illness prevention plan; supervisor and employee training; and training documentation.

Additionally, this rulemaking amended OAR 437-004-1120 to address the issue of heat in employer-provided labor housing. Oregon OSHA recognizes the effect of heat in such housing, and that its impact is magnified on workers because of their limited ability to recover from hot outdoor working conditions.

The new adopted provisions in OAR 437-004-1120 in section (25) require that when the heat index is at or above 80 degrees Fahrenheit outside the housing units, housing without suitable temperature control (able to keep indoor temperatures under 78 degrees Fahrenheit) must include common areas to provide some relief. Employers can provide indoor cooling rooms (using air conditioners, evaporative coolers, air purifiers with coolers, or other reliable means) or shaded outdoor rest areas open to the breeze equipped with cooling devices. Other requirements include strategies to minimize heat in housing units, including window coverings and fans. In the proposal, thermometers are required in all housing units, and humidity gauges are encouraged. Lastly, the new provisions call for employers to ensure that the occupants in labor housing have information about heat illness, how to avoid it, and how to contact emergency medical care in the event of serious illness.

This rulemaking adopted non-substantive changes in the labor housing rules in Division 4 to correct scrivener's errors related to outlining, and updates rule references; these changes were necessary to adopt the amendments. The changes in 437-004-1120 apply to all employer-provided labor housing, including those that fall under OAR 437-002-0142.

INDIVIDUAL RULE SUMMARY (By rule number)

Provide a brief summary of the rule (if new adoption), or a brief summary of changes made to the rule (if amending)

OAR 437-002-0156 – New rule adoption to establish protections for working in high temperatures.
OAR 437-004-1131 – New rule adoption to establish protections for working in high temperatures.
OAR 437-004-1120 – Amends rule to protect labor housing occupants from the dangers of a high-heat environment, and corrects scrivener's errors related to outlining from the 2008 rulemaking and updates rule references.

Please visit the rules and laws section of our website at osha.oregon.gov/rules and select *adopted rules* in the rule making column to view our adopted rules.

Renee Stapleton — Authorized Signer

Renee Stapleton — Printed Name

5/9/2022 — Date

*With this original, file one photocopy of certificate, one paper copy of rules listed in Rulemaking Actions, and electronic copy of rules.
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CHAPTER 437
DEPARTMENT OF CONSUMER AND BUSINESS SERVICES
OREGON OCCUPATIONAL SAFETY AND HEALTH DIVISION

FILING CAPTION: Rules to Address Employee and Labor Housing Occupant Exposure to High Ambient Temperatures

EFFECTIVE DATE: 06/15/2022

AGENCY APPROVED DATE: 05/09/2022

CONTACT: Lisa Appel
503-947-7449
Lisa.Appel@dcbs.oregon.gov

350 Winter Street NE
Salem,OR 97301

Filed By:
Lisa Appel
Rules Coordinator

RULES:
437-002-0156, 437-004-1120, 437-004-1131

ADOPT: 437-002-0156

NOTICE FILED DATE: 01/28/2022

RULE SUMMARY: OAR 437-002-0156 – New rule adoption to establish protections for working in high temperatures.

CHANGES TO RULE:

437-002-0156
Heat Illness Prevention
(1) Scope and application. This standard applies whenever an employee performs work activities, whether in indoor or outdoor environments, where the heat index (apparent temperature) equals or exceeds 80 degrees Fahrenheit.¶
Note: When another applicable standard addresses other hazards that may be present, employers must comply with the requirements of that standard and this standard. Where the requirements of one standard are more protective than another for the same hazard, employers must follow the requirements that provide the higher level of employee protection.¶
(a) The following workplaces and operations are exempt from the requirements of this standard.¶
(A) Incidental heat exposures where an employee is not required to perform work activities for more than 15 minutes in any sixty-minute period.¶
(B) Exposures to heat generated from the work process - such as occurs in bakeries - is not subject to this standard. In such cases, employers must follow the requirements of OAR 437-002-0144(2). ¶
(C) All emergency 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, utilities, and communications, when employees are engaged in those operations. ¶
(D) Buildings and structures that have a mechanical ventilation system that keeps the heat index below 80 degrees Fahrenheit. ¶
(b) The following workplaces and operations are partially exempt from certain requirements of this standard.¶
(A) Employers whose employees perform either "rest" or "light" workloads, as defined in Table 1.1 of Appendix A: Mandatory Information for Heat Illness Prevention, are exempt from the requirements of sections (3) through (10) only when the heat index is less than 90 degrees Fahrenheit.¶
(B) Associated support activities for wildland firefighters, such as fire camp services and fire management, are

exempt only from the requirements of section (7). ¶
(C) Employees who work from home are subject only to the training requirements in sections (9) and (10). ¶
(2) Definitions.¶
(a) Acclimatization - 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 seven to fourteen days of regular work for at least two hours per day in the heat. This time frame applies to fit individuals with no underlying medical conditions.¶
(b) Drinking water - Potable water that is suitable to drink and that is cool (66 oF - 77 oF) or cold (35 oF - 65 oF). ¶
(c) 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.¶
(d) Shade - Blockage of direct sunlight is shade. One indicator that blockage is sufficient is when objects do not cast a shadow in the area of blocked sunlight. Shade is not sufficient 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 any natural or artificial means that does not expose employees to unsafe or unhealthy conditions, and that does not deter or discourage access or use.¶
(e) Temperature-controlled environment - an indoor setting where the temperature is maintained with a mechanical cooling system.¶
(3) Access to shade. Establish and maintain one or more shade areas that are immediately and readily available to exposed employees that are outdoors when the heat index in the work area equals or exceeds 80 degrees Fahrenheit. The shade areas must meet the following criteria:¶
(a) The shade area must either be open to the outside air (at least three open sides) or provide mechanical ventilation for cooling. ¶
(b) The amount of shade present must be at least enough to accommodate the number of employees on recovery or rest period, so that they can sit in a normal posture fully in the shade. Employees must remove any PPE that retains heat, such as chemical resistant suits, during recovery and rest periods.¶
(c) The shade must be located as close as practical to the areas where employees are working. ¶
(d) Shade present during meal periods must be large enough to accommodate the number of employees on the meal period that remain onsite.¶
(e) If trees or other vegetation are used to provide shade, such as in orchards or forests, the thickness and shape of the shaded area must provide sufficient shadow to protect employees.¶
Exception: When the employer can demonstrate that providing access to shade is not safe or it interferes with the ability of employers and employees to complete the necessary work in a particular situation, for example, during high winds or when an employee is walking through range land, employers must identify and implement alternative cooling measures that provide equivalent protection such as providing cooling vests (either with fans or ice packs), water-dampened cotton clothing, or similar effective measures. The Heat Illness Prevention Plan under section (8) must include the use, care, and maintenance of the alternative cooling methods, in writing.¶
(4) Drinking water. Ensure that a sufficient supply of drinking water is immediately and readily available to exposed employees at all times, at no cost, when the heat index in the work area equals or exceeds 80 degrees Fahrenheit.¶
(a) Supplied drinking water must be either cool or cold, see subsection (2)(b).¶
(b) Supply each employee with enough drinking water to enable them to consume up to 32 ounces per hour. Employers are not required to supply the entire quantity of drinking water needed for all employees on a full shift at the beginning of the shift. Employers may begin the shift with smaller quantities of drinking water when effective procedures are established to replenish the water consumed during the shift. ¶
(c) Employees must have ample opportunity to drink water required under this section.¶
Note: 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 required water supplies.¶
(5) High-heat practices. When engineering controls (such as fans or air conditioning) and administrative controls (such as scheduling work during the cooler part of the day or limiting an employee's exposure) do not reduce an employee's exposure to a heat index of less than 90 degrees Fahrenheit, implement and maintain high-heat practices and procedures by following subsections (5)(a) through (e) below. ¶
(a) Communication must occur in a language and vocabulary readily understood by all employees, by voice, electronic, or other equally-effective means, so that employees at the worksite can contact a supervisor at any time, when necessary. An electronic device, such as a cell phone, may be used for this purpose only if reception in the area is constant and reliable.¶
(b) Implement one or more of the following to promptly identify any employee suspected of experiencing heat-related illness:¶
(A) Regular communication with employees working alone, such as by radio, cellular phone, or other alternative

means;¶
(B) Create a mandatory buddy system; or¶
(C) Implement other equally-effective means of observation or communication.¶
(c) Designate and equip one or more employees at each worksite as authorized to call for emergency medical services, and allow other employees to call for emergency services when designated employees are not immediately available; such a practice supplements existing requirement to ensure that emergency medical care is immediately available in all workplaces, as required by OAR 437-002-0161(4), 29 CFR 1910.50, or OAR 437-007-0220.¶
(d) When employees work in buildings and structures that do not have a mechanical ventilation system, employers must:¶
(A) Directly measure the temperature and humidity in these places at the same time and location when occupied by employees to determine the current indoor heat index; ¶
(B) Use the National Institute for Occupational Safety and Health's (NIOSH) Heat Safety Tool app to determine the heat index outside of the building or structure and assume that it is the same inside (See section 2 in Appendix A: Mandatory Information for Heat Illness Prevention); or¶
(C) If the structure is designed or otherwise known to be affected by outdoor humidity, for example, hoop houses and greenhouses in nursery operations, the employer must measure and use the actual humidity inside the structure. ¶
(e) Develop and implement a written heat illness prevention rest break schedule that protects employees exposed to a heat index equal to or greater than 90 degrees Fahrenheit. Employers must choose and implement only one of the three options; choose either (A), (B), or (C) as described below.¶
Note: The purpose of the heat illness prevention rest breaks is to allow the body to cool down and recover from working when the heat index equals or is greater than 90 degrees Fahrenheit.¶
Note: Option (A) allows an employer to implement a self-designed schedule by building on a minimum rest break schedule using four specified elements. Option (B) allows an employer to implement a schedule by using an example heat illness prevention plan designed by NIOSH. Option (C) allows an employer to implement a schedule by using a simplified schedule designed by Oregon OSHA and based on a high-heat scenario in the NIOSH plan.¶
(A) Employer-designed heat illness prevention rest break schedule: Implement a written employer-specific, heat illness prevention rest break schedule using the minimum rest break durations and intervals in Table 1. Employers must protect employees from heat illness by integrating the elements in subsections (i) through (iv) into to their heat illness prevention rest break schedule, which may increase the duration or interval of the rest break beyond the minimum requirements to be protective.¶
(i) The effect of personal protective equipment (PPE) on the body's ability to retain heat;¶
(ii) The effect of the type of work clothing on the body's ability to retain heat;¶
(iii) Relative humidity, whether work activities are indoors or outdoors; and¶
(iv) The intensity of the work being performed.¶
Note: Employers should consider the effect of exposure to direct sunlight when developing employer-specific heat illness prevention rest break schedule.¶
[Table 1. Minimum employer-designed heat illness prevention rest break schedule, upon which subsections (i) through iv) must be applied:]¶
(B) NIOSH work/rest schedule: Implement a written heat illness prevention rest break schedule using the information found in section 3 of Appendix A: Mandatory Information for Heat Illness Prevention based on NIOSH recommendations.¶
Note: The NIOSH work/rest schedule uses unadjusted ambient temperatures (in degrees Fahrenheit), and employers must follow the instructions underneath Table 3.1 in Appendix A: Mandatory Information for Heat Illness Prevention. Employers must be aware that different work/rest schedules exist for those wearing chemical-resistant suits; see Table 3.2 in Appendix A: Mandatory Information for Heat Illness Prevention.¶
(C) Simplified heat illness prevention rest break schedule: Implement a written simplified heat illness prevention rest break schedule using Table 2.¶
[Table 2. Minimum simplified rest break schedule:]¶
Note: The Table 2 heat illness prevention rest break schedule is only required during the specified heat index.¶
(f) The heat illness prevention rest breaks under subsection (5)(e) are only required during the specified heat index, and 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. However, the heat illness prevention rest break must be calculated using only the time spent in the shade and when employees are not performing work other than "rest" or "light" work. The requirement for heat illness prevention rest breaks does not prohibit "rest" or "light" work-related activities conducted in a temperature-controlled environment, such as paperwork, at the discretion of the employee.¶
(g) Except when the heat illness prevention rest breaks coincide with the existing unpaid meal break, the heat

illness prevention rest break is a work assignment. Heat illness prevention rest breaks are only required during the time of the shift that the heat index equals or exceeds 90 degrees Fahrenheit. ¶
(6) Emergency medical plan. The employer's Emergency Medical Plan must address employee exposure to excessive heat, in accordance with OAR 437-002-0161(4). When employers are performing Construction activities, they must also comply with 29 CFR 1926.50. For those employers that fall under Division 7 Forest activities, they must comply with OAR 437-007-0220. These plans must address the types medical situations that employees could encounter, including those conditions relating to excessive heat exposure.¶
(7) Acclimatization plan. Develop and implement an acclimatization plan and procedures in writing. Employers must choose between two options, either (a) or (b) as described below, and implement the chosen plan.¶
(a) Employer-designed acclimatization plan option: Employers who develop their own acclimatization plan must integrate and implement the following factors into their program:¶
(A) Acclimated and unacclimated workers;¶
(B) The effects of clothing and personal protective equipment on adding to the heat burden of workers;¶
(C) The personal and environmental risk factors that put workers at a higher risk of heat-related illness;¶
(D) Re-acclimatizing workers as necessary, either due to changes in the weather or a worker spending more than seven days away from the job; and¶
(E) The use and maintenance of auxiliary cooling systems such as water-cooled garments, air-cooled garments, cooling vests, and wetted overgarments.¶
(b) NIOSH acclimatization plan option: Employers that choose not to develop their own acclimatization plan must follow the acclimatization plan developed by the Centers for Disease Control and Prevention and NIOSH; see section 4, Appendix A: Mandatory Information for Heat Illness Prevention.¶
Note: Based upon the variable weather patterns across the state, Oregon OSHA recognizes that there is no "one-size-fits-all" acclimatization plan. Employers should be aware that acclimatization to heat takes longer for unfit individuals compared to fit individuals. ¶
Note: Employers should consider the effect of exposure to direct sunlight when developing their acclimatization plan.¶
(8) Heat illness prevention plan. Develop, implement, and maintain an effective heat illness prevention plan in writing. The plan must be made available at the worksite to employees and to Oregon OSHA upon request. The plan must contain at least the following information:¶
(a) How employees will be trained on the hazards of heat exposure and the necessary steps to prevent heat-related illnesses;¶
(b) How to recognize the symptoms of dehydration, and how to respond to suspected heat-related illnesses in others; ¶
(c) How sufficient amounts of cool, potable water in work areas will be provided;¶
(d) How employees will be provided frequent opportunities and encouragement to stay hydrated by drinking water; ¶
(e) How employees will be provided sufficient space to rest in a shaded area or cool climate-controlled area, and where heat-affected employees may cool off and recover when signs and symptoms of heat-related illnesses are recognized;¶
(f) How the employer will implement the heat illness prevention rest break schedule when necessary to keep employees safe; and¶
(g) How the employer will implement heat acclimatization procedures for new employees or employees returning to work from extended absences of seven or more days.¶
(9) Supervisor and employee training. Provide heat illness prevention training to all employees, including new employees, supervisory and non-supervisory employees in a language and vocabulary readily understood, and in a manner that facilitates employee feedback. Such training must be provided annually before employees begin work that should reasonably be anticipated to expose them to the risk of heat illness, and include at least the following: ¶
(a) The environmental and personal risk factors (for example, chronic obstructive pulmonary disease, asthma, kidney disease, obesity, etc.) for heat illness that may limit an individual's tolerance to excessive heat, as well as the added burden of heat load on the body caused by exertion, clothing (See section 5 in Appendix A: Mandatory Information for Heat Illness Prevention), and personal protective equipment;¶
(b) The employer's procedures for complying with the requirements of this standard, including, but not limited to, the employer's responsibility to provide water, heat index information (including the risks to experiencing a heat-related illness), shade, preventative rest breaks, and access to first aid, as well as how employees can exercise their rights under this standard without fear of retaliation;¶
(c) The importance of frequent consumption of small quantities of water, up to 32 ounces per hour, when the work environment is hot and employees are likely to be sweating more than usual in the performance of their duties;¶
(d) The concept, importance, and methods of the acclimatization plan pursuant to the employer's procedures

under section (8);¶
(e) The different types of heat illness, the common signs and symptoms of heat illness, and the appropriate first aid and emergency response to the different types of heat illness, including how heat illness may progress quickly from mild signs and symptoms to a serious and life-threatening condition;¶
(f) The importance for employees to immediately report to the employer, directly or through the employee's supervisor, signs and symptoms of heat illness in themselves or in others; and¶
(g) The effects of nonoccupational factors (drugs, alcohol, obesity, etc.) on tolerance to occupational heat stress.¶
(10) Training documentation. Verify compliance with section (9) by preparing and maintaining written or electronic training records that can be provided to Oregon OSHA upon request. Such records must contain the name or identification of each employee trained, the date(s) of the training, and the name of the person who conducted the training. The most recent annual training record for each affected employee must be maintained.
Statutory/Other Authority: ORS 654.025(2), 654.035, 656.726(4)
Statutes/Other Implemented: ORS 654.001 through 654.295

RULE ATTACHMENTS DO NOT SHOW CHANGES. PLEASE CONTACT AGENCY REGARDING CHANGES.

Tables in OAR 437-002-0156

Table reference in (5)(e)(A) in High-heat practices section (5)

Table 1. Minimum employer-designed heat illness prevention rest break schedule, upon which subsections (i) through iv) must be applied:

Heat index (° F)	Rest break durations and intervals
90 or greater	10 minutes every two hours
100 or greater	15 minutes every hour

Table reference in (5)(e)(C) in High-heat practices section (5)

Table 2. Minimum simplified rest break schedule:

Heat index (° F)	**Rest break durations and intervals**
90 or greater	10 minutes every two hours
95 or greater	20 minutes every hour
100 or greater	30 minutes every hour
105 or greater	40 minutes every hour

Note: The Table 2 heat illness prevention rest break schedule is only required during the specified heat index.

OAR 437-002-0156
Appendix A:
Mandatory Information for Heat Illness Prevention

To protect the health and safety of employees from heat-related illnesses, employers should consider using the resources in this appendix. Please note that some resources may use temperatures in Celsius instead of Fahrenheit. To convert to degrees Fahrenheit, use this formula: Fahrenheit (°F) = (Celsius x 1.8) + 32

1. Most heat-related illnesses affect workers who do strenuous physical activity. When workers engage in intense work, their bodies create heat. This "metabolic" heat combines with environmental heat (from temperature, sunlight, humidity, etc.) so workers' core temperature can rise to dangerous levels. To prevent a hazardous combination of environmental and metabolic heat, employers should be aware of workers' activity level.

Workload can be classified as rest, light, moderate, heavy, or very heavy.

- Light: Sitting or standing with minimal arm and leg work.
- Moderate: Continuous modest intensity, such as light pushing/pulling or normal walking.
- Heavy: Intense upper body work such as carrying loads or sawing.
- Very heavy: Intense activity at an almost maximum pace.

Table 1.1 Metabolic Heat and Workload (Physical Activity Level)

Level of Workload / Physical Activity *	Examples	Metabolic Rate in Watts, “typical” recognizing that different ways of doing the same task may lead to dramatically different wattage
Rest	• Sitting • Thinking	115
Light	• Sitting with minimal hand and arm work • Sewing • Writing or drawing • Driving a car • Occasional or slow walking • Stooping, crouching, or kneeling • Standing watch	180
Moderate	• Pushing and pulling light carts • Hammering nails • Picking fruit or vegetables	300

	• Continuous normal walking • Driving or operating mobile equipment • Raking • Mopping or vacuuming floors • Scraping, painting, or plastering • Laundry/dry cleaning • Tapping and drilling • Machining • Molding • Packaging • Laboratory work • Cooking • General carpentry • Using hand tools • Light pushing/pulling or normal walking.	
Heavy	• Intense arm and trunk work • Carrying loads • Shoveling • Sawing or heavy carpentry • Roofing • Pushing and pulling heavy carts or wheelbarrows • Fast walking (> 4 mph) • Landscaping • Casting • Manual raising and lowering loads • Stacking lumber • Truck and automobile repair • Waxing and buffing by hand • Welding • Heavy item assembly • Grinding and cutting • Drilling rock or concrete • Mixing cement • Felling trees	415
Very heavy	• Any activity done at near maximum pace • Climbing stairs, ladder, or ramp • Using an axe • Intense shoveling or digging • Sledgehammer use • Stacking concrete • Brick or stone masonry	520

* Workers who are overweight or obese might produce more metabolic heat than other workers who perform the same tasks. The above table assumes a 70-kg (154-pound) worker.

Table 1.1 is copied from federal OSHA's guidance on Heat Hazard recognition, which can be accessed at: https://www.osha.gov/heat-exposure/hazards under the Metabolic Heat and Workload (Physical Activity Level) tab

2. The OSHA-NIOSH Heat Safety Tool app is a useful resource for planning outdoor work activities based on how hot it feels throughout the day. It features real-time heat index and hourly forecasts specific to your location, as well as occupational safety and health recommendations from OSHA and NIOSH. It can be accessed and downloaded at: https://www.osha.gov/heat/heat-app

3. NIOSH Work/rest schedules.

A. Table 3.1. Work/rest schedules for workers wearing normal work clothing*

Adjusted temperature (˚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 physically fit, well-rested, fully hydrated, under age 40, and have adequate water intake and that there is 30% RH [relative humidity] and natural ventilation with perceptible air movement.

†Note: Adjust the temperature reading as follows before going to the temperature column in the table: Full sun (no clouds): Add 13˚
Partly cloudy/overcast: Add 7˚
No shadows visible/work is in the shade or at night: no adjustment
Per relative humidity:
10%: Subtract 8˚
20%: Subtract 4˚
30%: No adjustment
40%: Add 3˚
50%: Add 6˚
60%: Add 9˚

‡High levels of heat stress; consider rescheduling activities.

Adapted from EPA [1993]
Table 3.1 above is copied from the following publication; see page 76 in NIOSH [2016*]. NIOSH criteria for a recommended standard: occupational exposure to heat and hot environments*. By Jacklitsch B, Williams WJ, Musolin K, Coca A, Kim J-H, Turner N. Cincinnati, OH: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health, DHHS (NIOSH) Publication 2016-106.

B. Table 3.2 Work/rest schedules for those wearing chemical resistant suits.

	Light work			Moderate work			Heavy work		
Air Temp (˚F)	Full sun	Partly cloudy	No sun†	Full sun	Partly cloudy	No sun†	Full sun	Partly cloudy	No sun†
75	Normal	Normal	Normal	Normal	Normal	Normal	35/25‡	Normal	Normal
80	30/30	Normal	Normal	20/40	Normal	Normal	10/50	40/20	Normal
85	15/45	40/20	Normal	10/50	25/35	Normal	Caution§	15/45	40/20
90	Caution§	15/45	40/20	Caution§	Caution§	25/35	Stop work	Caution§	15/45
95	Stop work	Stop work	15/45	Stop work	Stop work	Stop work	Stop work	Stop work	Stop work

*With the assumption that workers are heat-acclimatized, under the age of 40, physically fit, well-rested, fully hydrated, and wearing Tyvek coveralls, gloves, boots, and a respirator. Cooling vests may enable workers to work for longer periods. Adjustments must be made when additional protective gear is worn.

†No shadows are visible or work is in the shade or at night.

‡35 minutes work and 25 minutes rest each hour.

§High levels of heat stress; consider rescheduling activities.

Adapted from EPA [1993]

Table 3.2 above is copied from the following publication; see page 77 in NIOSH [2016*]. NIOSH criteria for a recommended standard: occupational exposure to heat and hot*

environments. By Jacklitsch B, Williams WJ, Musolin K, Coca A, Kim J-H, Turner N. Cincinnati, OH: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health, DHHS (NIOSH) Publication 2016-106.

4. Acclimatization.

Table 4.1 Acclimatization in workers

Topics	Additional information
Disadvantages of being unacclimatized	• Readily show signs of heat stress when exposed to hot environments. • Difficulty replacing all of the water lost in sweat. • Failure to replace the water lost will slow or prevent acclimatization.
Benefits of acclimatization	• Increased sweating efficiency (earlier onset of sweating, greater sweat production, and reduced electrolyte loss in sweat). • Stabilization of the circulation. • Work is performed with lower core temperature and heart rate. • Increased skin blood flow at a given core temperature.
Acclimatization plan	• Gradually increase exposure time in hot environmental conditions over a period of 7 to 14 days. • For new workers, the schedule should be no more than 20% of the usual duration of work in the hot environment on day 1 and a no more than 20% increase on each additional day. • For workers who have had previous experience with the job, the acclimatization regimen should be no more than 50% of the usual duration of work in the hot environment on day 1, 60% on day 2, 80% on day 3, and 100% on day 4. • The time required for non-physically fit individuals to develop acclimatization is about

	50% greater than for the physically fit.
Level of acclimatization	• Relative to the initial level of physical fitness and the total heat stress experienced by the individual.
Maintaining acclimatization	• Can be maintained for a few days of non-heat exposure. • Absence from work in the heat for a week or more results in a significant loss in the beneficial adaptations leading to an increased likelihood of acute dehydration, illness, or fatigue. • Can be regained in 2 to 3 days upon return to a hot job. • Appears to be better maintained by those who are physically fit. • Seasonal shifts in temperatures may result in difficulties. • Working in hot, humid environments provides adaptive benefits that also apply in hot, desert environments, and vice versa. • Air conditioning will not affect acclimatization.

Adapted from [Moseley 1994; Armstrong and Stoppani 2002; DOD 2003; Casa et al. 2009; ACGIH 2014; OSHA-NIOSH 2011].

Table 4.1 above is copied from the following publication; see page 34. NIOSH [2016*]. NIOSH criteria for a recommended standard: occupational exposure to heat and hot environments.* By Jacklitsch B, Williams WJ, Musolin K, Coca A, Kim J-H, Turner N. Cincinnati, OH: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health, DHHS (NIOSH) Publication 2016-106.

5. Clothing adjustment factors.

Table 5.1 Clothing adjustment factors exist for various types of clothing.

	Clothing adjustment factors (°C-WBGT)	
Clothing	Previous	2006
Work clothing (baseline)	0	0
Cloth coveralls	3.5	0
Double-layer cloth clothing	5	3

Spunbound melt-blown synthetic (SMS) coveralls	-	0.5
Polyolefin coveralls	-	1
Limited-use vapor-barrier coveralls	-	11

Adapted from Bernard TE, Threshold Limit Values for Physical Agents Committee, ACGIH [2014].

Table 5.1 above is copied from the following publication; see page 19. NIOSH [2016*]. NIOSH criteria for a recommended standard: occupational exposure to heat and hot environments.* By Jacklitsch B, Williams WJ, Musolin K, Coca A, Kim J-H, Turner N. Cincinnati, OH: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health, DHHS (NIOSH) Publication 2016-106.

AMEND: 437-004-1120

NOTICE FILED DATE: 01/28/2022

RULE SUMMARY: OAR 437-004-1120 – Amends rule to protect labor housing occupants from the dangers of a high-heat environment, and corrects scrivener's errors related to outlining from the 2008 rulemaking and updates rule references.

CHANGES TO RULE:

437-004-1120
Agricultural Labor Housing and Related Facilities ¶

(1) Application.¶
(a) These rules apply to any place, or area of land, where there are living areas, manufactured or prefabricated homes or dwellings or other housing provided by a farmer, farm labor contractor, agricultural employer or other person in connection with the recruitment of workers on an agricultural establishment.¶
(b) These rules apply to any type of labor housing and related facilities together with the tract of land, established, or to be established, operated or maintained for housing workers with or without families whether or not rent is paid or collected.¶
(c) Manufactured dwellings and homes must comply with specifications for construction of sleeping places, unless they comply with ORS 446.155 to 446.185 and OAR 918-500-0020(2) that have the requirements and specifications for sanitation and safety design for manufactured dwellings.¶
(d) These rules apply to housing given to, rented, leased to or otherwise provided to employees for use while employed and provided or allowed either by the employer, a representative of the employer or a housing operator.¶
(e) These rules, unless otherwise stated, apply to all occupants of the labor housing and facilities.¶
(f) These rules apply to all labor housing sites owned, operated, or allowed to operate on property under the jurisdiction of any state or municipal authority.¶
(g) Violations relating to the occupants' personal housekeeping practices in facilities that are not common use will not result in citations to the employer.¶
(h) For the purposes of OAR 437-004-1120, labor contractors as defined in ORS 658.405 are employers.¶
(2) These rules do not apply to:¶
(a) hotels or motels that provide similar housing commercially to the public on the same terms as they do to workers.¶
(b) accommodations subject to licensing as manufactured dwelling parks, organizational camps, traveler's accommodations or recreation vehicle parks and open to the general public on the same terms.¶
(c) manufactured homes or dwellings being moved regularly from place to place because of the work when at parks or camps meant for parking mobile vehicles and open to the general public on the same terms.¶
(3) Charging occupants for required services. Operators may not charge for services required by this rule (OAR 437-004-1120). This prohibits pay-per-use toilets, pay-per-use bathing facilities or any other method of paying for individual service requirements.¶
(4) Definitions.¶
(a) Clean means the absence of soil or dirt or removal of soil or dirt by washing, sweeping, clearing away, or any method appropriate to the material at hand.¶
(b) Common use facilities are those for use by occupants of more than one housing unit or by occupants of dormitory-style housing.¶
(c) Common use cooking and eating facility is a shared area for occupants to store, prepare, cook, and eat their own food.¶
(d) Dining hall is an eating place with food furnished by and prepared under the direction of the operator for consumption, with or without charge, of the occupants.¶
(e) Facility means a living area, drinking water installation, toilet installation, sewage disposal installation, food handling installation, or other installation required for compliance with the labor housing and related facility rules.¶
(f) Garbage means food wastes, food packaging materials or any refuse that has been in contact with food stuffs.¶
(g) Housing site is a place where there are living areas.¶
(h) Livestock operation is any place, establishment or facility with pens or other enclosures in which livestock is kept for purposes including, but not limited to, feeding, milking, slaughter, watering, weighing, sorting, receiving, and shipping. Livestock operations include, among other things, dairy farms, corrals, slaughterhouses, feedlots, and stockyards. Operations where livestock can roam on a pasture over a distance are outside this definition.¶

(i) Living area is any room, structure, shelter, tent, manufactured home or dwelling or prefabricated structure, vehicle or other place housing one or more persons.¶
(j) Manufactured dwelling is a residential trailer, built before January 1, 1962, for movement on the highway, that has sleeping, cooking and plumbing facilities; or, a mobile home, constructed for movement on the highway, that has sleeping, cooking and plumbing facilities, built between January 1, 1962 and June 15, 1976 and meeting the requirements of Oregon mobile home law in effect at the time of construction.¶
(k) Manufactured home is a structure built for movement on the highway that has sleeping, cooking and plumbing facilities and is used as a residence. Built on or after June 15, 1976 to comply with federal manufactured housing standards and regulations in effect at the time of construction. More information on these definitions is in ORS 446.003(26).¶
(l) Operator means any person or company that operates labor housing and/or related facilities.¶
(m) Potable water is water meeting the bacteriological and other requirements of the Public Health Division of the Oregon Department of Human Services.¶
(n) Prefabricated structure means a building or subassembly which has been in whole or substantial part manufactured or assembled using closed construction at an off-site location to be wholly or partially assembled on-site; but does not include a manufactured home or dwelling. Prefabricated structures are manufactured in accordance with the Oregon state building code and rules adopted by the Building Codes Division of the Oregon Department of Consumer and Business Services in OAR 918-674.¶
(o) Privy is the same as outhouse or pit toilet but is not the same as portable toilets.¶
(p) Recyclable material means containers that are returnable for refund of a deposit or materials gathered as part of a recycling program.¶
(q) Refuse includes waste materials such as paper, metal, discarded items, as well as debris, litter and trash.¶
(r) Sanitary means free from agents that may be injurious to health.¶
(s) Sewage means the water-carried human and animal wastes, including kitchen, bath, and laundry wastes from residences, buildings, industrial establishments, or other places, together with such ground-water infiltration, surface waters, or industrial wastes as may be present.¶
(t) Toilet room is a room in or on the premises of any labor housing, with toilet facilities for use by employees and occupants of that housing.¶
(5) Housing registration requirements.¶
(a) ORS 658.7~~0~~50 requires the operator of Agricultural Labor Housing and Related Facilities to register such housing with Oregon OSHA as in (b) below, except the following as defined by ORS 658.705:¶
(A) Housing occupied solely by members of the same family,¶
(B) Housing occupied by five or fewer unrelated persons, ~~and~~or¶
(C) Housing on operations that do not produce or harvest farm crops (Oregon OSHA considers "production of crops" to mean production of farm crops for sale").¶
(b) Each year, before occupancy, the operator or employer must register agricultural labor housing and related facilities with Oregon OSHA as set out below.¶
(A) The operator must contact Oregon OSHA at least 45 days before the first day of operation or occupancy of the housing and related facilities. Instructions and additional information will come later by mail.¶
(B) If the housing and related facilities were not registered in the previous year, the operator must call Oregon OSHA to request a consultation visit to the housing. Oregon OSHA will register housing and related facilities not previously registered only after a pre-occupancy consultation that finds the housing or facility to be substantially in compliance with all applicable safety and health rules.¶
(C) If there were significant changes in the circumstances of the housing or facilities since the last registration, Oregon OSHA may, at its discretion, refer the employer for a consultation prior to re-registering the housing and facilities.¶
(D) Once registered, the operator must display the registration certificate provided by Oregon OSHA in a place frequented by employees. The operator must also provide and display a translation of the certificate in the language or languages used to communicate with employees.¶
(c) The Director of the Department of Consumer and Business Services or designee may revoke a labor housing and related facilities registration if Oregon OSHA determines that any of the following apply:¶
(A) The application had any negligent or willful material misrepresentation, or false statement.¶
(B) The conditions under which the registration was accepted no longer exist or have changed.¶
(C) The housing and related facilities are not substantially in compliance with the applicable safety and health rules.¶
(d) When Oregon OSHA revokes the registration of agricultural labor housing and related facilities, operators or their agents have 30 days to file a written appeal. On receipt of such appeal, the Director of the Department of Consumer and Business Services will hold a contested case hearing on that appeal under ORS 183.413, et seq.¶
(e) Any group or individual may protest the proposed registration, continued registration or renewal of any labor

housing and related facilities registration under the following conditions:¶
(A) The signed and dated protest must be submitted in writing and received by the Director before issuance of the registration or renewal.¶
(B) The protest must include the name, address and phone number of the individual or group filing it.¶
(C) The protest must clearly identify which housing and related facilities is the subject of the protest, including the exact physical location and name of the applicant.¶
(D) The protest must clearly state the facts and reasons for the protest. Such facts and reasons must be based on factors that are within the scope of ORS 654, 658.705 through 658.850 and any relevant regulations.¶
(E) When the above provisions are met, such group or individual may participate in the contested case as a party or limited party under OAR 137-003-0005.¶
(6) Site requirements:¶
(a) The grounds of labor housing and related facilities must be substantially free from waste water, sewage, garbage, recyclable material, refuse or noxious plants such as poison oak and poison ivy.¶
(b) During housing occupancy, grass, weeds and brush must be cut back at least 30 feet from buildings.¶
(c) All housing site land must have adequate drainage. The site must not be subject to flooding when occupied.¶
(d) Adequately dispose of the waste water and food waste under outside water hydrants.¶
(e) The operator of labor housing is responsible for the maintenance and operation of the housing and its facilities.¶
(f) Store all toxic materials such as pesticides, fertilizers, paints and solvents in a safe place.¶
(g) Do not leave empty pesticide containers such as drums, bags, cans, or bottles in the housing area.¶
(h) Prevent or control the breeding of mosquitoes, flies, and rodents in the immediate housing area and within 200 feet of any labor housing and related facilities owned or under lawful control or supervision of the operator.¶
(i) Do not locate labor housing within 500 feet of livestock operations unless the employees in the housing are employed to tend or otherwise work with the animals.¶
N~~OTE~~ote: This does not apply to animals owned by the housing occupants.¶
(j) Provide electricity to all housing units and related facilities. Subdivision 4/S, Electricity applies to ALH.¶
(k) Extension cords or plug strips must have circuit breaker or fuse protection either as part of the set or part of the building wiring.¶
(l) Facilities built or remodeled before December 15, 1989, must have a ceiling or wall-type electric light fixture in working order and at least one wall-type electrical outlet in every living area. Facilities built or remodeled after that date must comply with the code in effect at the time of construction or remodeling.¶
(m) Provide a ceiling or wall-type electric light in toilet rooms, lavatories, shower or bathing rooms, laundry rooms, hallways, stairways, the common eating area or other hazardous dark areas.¶
(n) Light privies either directly or indirectly from an outside light source.¶
(o) Provide enough light in corridors and walkways to allow safe travel at night.¶
(p) Each housing site must have its street numbers displayed to be easily visible to responding emergency vehicles on public highways or roads.¶
(q) The lowest point of wooden floor structures must be at least 12 inches above ground.¶
(7) Water supply.¶
(a) All domestic water furnished at labor housing and related facilities must conform to the standards of the Public Health Division of the Oregon Department of Human Services.~~¶~~
~~(A)~~ The site water system must supply at least 15 psi at the outlet end of all water lines regardless of the number of outlets in use.¶
(b) Have a bacteriological analysis done on the water before occupancy and as often as needed to assure a potable water supply, except when the water comes from a community water system.¶
(c) Provide enough potable water in the labor housing area for drinking, hand washing, bathing and domestic use. An ample supply is at least 35 gallons of water per day per occupant.¶
(d) Arrange, construct and if necessary, periodically disinfect the water storage and distribution facilities to satisfactorily protect the water from contamination. Install all new plumbing in labor housing and related facilities to comply with the Oregon state building code.¶
(e) When potable water is not available in each dwelling unit, there must be a potable water source within 100 feet of each unit and there must be a working, clean drinking fountain for each 100 occupants or fraction thereof.¶
(f) Post as, "Unsafe for drinking," non-potable water that is accessible to occupants. The posting must be in the language of the camp occupants or with a universal symbol.¶
(g) Portable water containers with spigots and tight fitting lids are acceptable for providing and storing drinking water in the housing.¶
(A) These containers must be made of impervious non-toxic materials that protect the water from contamination.¶
(B) Wash and sanitize them at least every 7 days.¶

(h) Do not use containers such as barrels, pails or tanks that require dipping or pouring to get the water.¶
(i) Do not use cups, dippers or other utensils for common drinking purposes.¶
(j) Do not allow cross connection between a system furnishing water for drinking purposes and a non-potable supply.¶
(8) Bathing, hand washing, laundry, and toilet facilities - General.¶
(a) Provide an adequate supply of hot and cold water under pressure for all common use bathing, hand washing, and laundry facilities at all labor housing and related facilities.¶
(b) In installations with bathing, laundry facilities, or flush toilets, the floor and walls must be of readily cleanable finish and impervious to moisture.¶
(c) All common use bathing, hand washing, and laundry facilities must be clean, sanitary and operating properly.¶
(d) Buildings for common use bathing, hand washing, laundry, and toilet facilities must have heating capable of keeping the facility at 68 degrees or more during use.¶
(9) Bathing facilities.¶
(a) Provide drains in all showers to remove waste water. Slope floors so they drain. Do not use slippery materials for flooring.¶
~~NOTE: Paragraph (b) is effective April 1, 2009. Until then the old ratio of 1 to 15 applies.¶~~
(b) Provide at least one shower head with hot and cold water under pressure for every 10 occupants or fraction thereof.¶
~~(A)~~ Unisex shower rooms are acceptable in the same ratios. They must have working locks and provide privacy.¶
(c) Separate common use bathing facilities used for both sexes in the same building by a solid, non-absorbent wall extending from the floor to the ceiling.¶
(d) Mark separate sex bathing facilities, if provided, with "women" and "men" in English and in the native language of employees expected to occupy the housing or with easily understood pictures or symbols.¶
(10) Hand washing facilities.¶
~~NOTE: Paragraph (a) is effective April 1, 2009. Until then the old ratio of 1 to 15 applies.¶~~
(a) Provide at least one hand washing sink or basin with hot and cold water under pressure for every 6 occupants or fraction thereof. Each 24 linear inches of "trough" type sink with individual faucets counts as one basin. When each living unit does not have hand washing facilities, locate common use facilities either close to the toilet facilities or close to the sleeping places.¶
(b) In common use facilities, do not use a single common towel. If you provide paper towels, there must be a container for their disposal.¶
(11) Laundry facilities.¶
~~NOTE: Paragraph (a) is effective April 1, 2009. Until then the old rule applies which reads: 437-004-1120(11)¶~~
~~(a) When public laundry and drying facilities are not available within 5 miles, the housing must have readily accessible laundry and drying facilities.¶~~
~~(b) Laundry facilities in the housing area must have trays or tubs, plumbed with hot and cold water in the ratio of 1 for each 25 occupants.¶~~
~~(c) Mechanical washers are optional in the ratio of 1 to 50 occupants with one laundry tray per 100 occupants.¶~~
~~(d~~(a) Provide laundry trays, tubs, or machines with plumbed hot and cold water in the combined ratio of 1 for each 30 occupants or each part of 30.¶
(~~e~~b) Provide clothes lines or drying facilities to serve the needs of the occupants.¶
(~~f~~c) Laundry rooms must have drains to remove waste water.¶
(~~g~~d) Each common use laundry room must have a slop sink.¶
(12) Toilet facilities.¶
(a) Locate toilet facilities in labor housing and related facilities within 200 feet from the living area that they serve.¶
(b) Locate toilets, chemical toilets, or urinals in rooms built for that purpose.¶
(c) Maintain a usable, unobstructed path or walkway free of weeds, debris, holes or standing water from each living area to the common use toilet facilities.¶
(d) Provide at least one toilet for every 15 occupants or fraction thereof for each gender in the labor housing. Toilets must assure privacy:.¶
(A) If urinals are in the toilet facility and where three or more toilets are required for men, one urinal substitutes for one toilet (24 inches of trough-type urinal equals one urinal), to a maximum of one-third of the total required toilets.¶
(B) Existing urinals must be non-absorbent, non-corrosive materials that have a smooth and cleanable finish. Urinals installed after the effective date of this standard must meet Oregon state building code.¶
(C) If there are no common use toilet facilities, calculate the required ratio without regard to gender.¶
(e) Clean common use toilet facilities daily or more often when needed to maintain sanitation.¶
(f) Mark separate sex toilet facilities, when provided, with "women" and "men" in English and in the native

language of employees expected to occupy the housing or with easily understood pictures or symbols.¶
(g) Ventilate all labor housing toilet rooms according to the Oregon state building code.¶
(h) Separate common use toilet facilities used for both sexes in the same building by a solid, non-absorbent wall extending from the floor to the ceiling.¶
(i) Install privacy partitions between each individual toilet or toilet seat in multiple toilet facilities. The partitions may be less than the height of the room walls:¶
(A) The top of the partition must be not less than 6 feet from the floor and the bottom of the partition not more than 1-foot from the floor. The width of the partition must extend at least 1 1/2 feet beyond the front of the toilet seat.¶
(B) Provide a door or curtain so the toilet compartment is private.¶
(j) Provide common use toilet facilities with toilet paper and holders or dispensers. Also provide disposal containers with lids.¶
(k) Do not allow obstruction of the path or access to a toilet room. If access is through another room, that room must not be lockable.¶
(13) Portable toilets, chemical toilets and privies.¶
(a) The location and construction of privies must conform to Oregon Department of Environmental Quality standards.¶
(b) Privies must be at least 100 feet from any living area or any facility where food is prepared or served.¶
(c) Portable toilets and privies must have adequate lighting.¶
(d) When in use, service portable and chemical toilets at least weekly or often enough to keep them from becoming a health hazard. Clean portable toilets, chemical toilets and privies at least daily.¶
(14) Sewage disposal and plumbing.¶
(a) Connect the sewer lines from the labor housing and related facilities to a community sewer system, a septic tank with subsurface disposal of the effluent, pit type privies or other sanitary means conforming to Department of Environmental Quality standards.¶
(b) Install all plumbing in labor housing and related facilities to comply with Department of Environmental Quality standards and the Oregon state building code.¶
(15) Garbage and refuse disposal outside of buildings.¶
N~~OTE~~ote: Recyclable material is not garbage or refuse referred to in this section (15).¶
(a) Keep refuse and garbage containers clean and in good repair.¶
(b) Provide at least one 30-gallon or larger container per 15 occupants. Containers must be inside the housing site area and accessible to all occupants.¶
(c) Empty garbage bins and dumpsters at least weekly during use, but always before they become a health hazard or full enough to interfere with full closing of the lid.¶
(d) Empty common use cans and portable containers into a bin or dumpster, when full or twice weekly whichever is more frequent. Do not allow garbage on the ground.¶
(e) Keep all refuse and garbage containers covered and the garbage storage area clean to control flies and rodents.¶
(f) Do not burn any food, garbage or wet refuse.¶
(g) Dispose of garbage and refuse according to Department of Environmental Quality standards that govern the disposal of garbage, refuse and other solid wastes.¶
(16) Living areas.¶
(a) Keep all living areas, safe and in good repair structurally and stable on their foundations. They must provide shelter for the occupants against the elements and protect the occupants from ground and surface water as well as rodents and insects.¶
(b) The walls and roof must be tight and solid. Floors must be rigid and durable, with a smooth and cleanable finish in good repair.¶
(c) For living areas without a working permanent heating system or heaters, the ALH operator must supply portable heaters at no cost to the occupant. These heaters must be capable of keeping the temperature in the living area at a minimum of 68 degrees. Heaters must meet these requirements:¶
(A) Operate by electricity only.¶
(B) Have working safety devices installed by the manufacturer for the particular type heater.¶
(C) Be in good working order with no defects or alterations that make them unsafe.¶
(d) Permanently installed solid fuel or gas fired heaters must meet the following:¶
(A) Install and vent any stoves or other sources of heat that use combustible fuel to prevent fire hazards and dangerous concentration of gases:.¶
(i) Solid or liquid fuel heaters or stoves installed on or before December 15, 1989, must sit on a concrete slab, insulated metal sheet or other fire resistant material when used in a room with wood or other combustible flooring. Extend it at least 18 inches beyond the perimeter of the base of the stove.¶

(ii) Solid or liquid fuel heaters or stoves must meet the manufacturer's specifications and the Oregon state building code in effect at the time of installation.¶
(B) Install fire resistant material on any wall or ceiling within 18 inches of a solid or liquid fuel stove or a stove pipe. Provide a vented metal collar around the stovepipe, or vent passing through a wall, ceiling, floor or roof or combustible material.¶
(C) Heating systems with automatic controls must cut off the fuel supply on failure or interruption of the flame or ignition, or when they exceed a pre-determined safe temperature or pressure.¶
(D) All gas appliances and gas piping must comply with the Oregon state building code in effect at time of installation and the manufacturer's instructions.¶
(E) Do not locate stoves so they block escape from a sleeping place.¶
(e) Provide screens of at least 16 mesh on the doors and windows of the living area. All screen doors must be tight-fitting, in good repair, and self-closing.¶
(f) Provide beds, bunks or cots for each occupant and suitable storage facilities, such as wall cabinets or shelves, for each occupant or family unit.¶
(A) The camp operator must provide a mattress or pad for each bed or bunk.¶
(~~i~~B) If you provide foam pads, they must be thicker than 2 inches.¶
(~~ii~~C) Do not provide uncovered foam pads.¶
(~~iii~~D) Mattresses or pads must not sit on the floor.¶
(~~iv~~E) The sleeping surface must be at least 12 inches above the floor.¶
(g) Mattresses or pads furnished by the camp operator must be clean, in good repair, and free from insects and parasites.¶
(A) Fumigate mattresses or pads, used uncovered, or treat with an effective insecticide before each season's occupancy. If you provide covers, clean them before each season's occupancy.¶
(B) Store mattresses or pads in a clean, dry place.¶
(h) Space the beds, bunks or cots so that there is enough room to allow for rapid and safe exiting during an emergency.¶
N~~OTE~~ote: Do not count children 2 years old and younger when calculating square footage requirements in paragraphs (i), (j), (k), and (l).¶
(i) In living areas built after August 1, 1975, where workers cook, live, and sleep, provide at least 100 square feet per occupant.¶
(j) In living areas built before August 1, 1975, where workers cook, live and sleep, provide at least 60 square feet per occupant.¶
(k) Each sleeping room without double bunk beds must have at least 50 square feet of floor space per employee. Where there are double bunk beds, provide 40 square feet per occupant. Do not use triple bunks.¶
(l) Beginning on January 1, 2018 all agricultural labor housing, where workers cook, live and sleep in the same area, must provide 100 square feet per occupant.¶
(m) For units built after April 3, 1980 at least one-half the required floor space in each living area must have a minimum ceiling height of 7 feet. Floor space with a ceiling height less than 5 feet does not count toward the minimum required floor space.¶
(n) Beginning on January 1, 2018 only areas with a 7 foot ceiling height will count toward the required square footage of any living or sleeping area. Housing built or remodeled between January 26, 2009 and January 1, 2018 must have minimum 7 foot high ceilings for the space to count toward any required square footage.¶
(o) Provide separate private sleeping areas for unrelated persons of each sex and for each family unit.¶
~~NOTE: Paragraph (p) is effective April 1, 2009.¶~~
(p) Provide windows or skylights with a total area equal to at least 10 percent of the required floor area. At least one-half (nominal) the total required window or skylight area must be openable to the outside. Adequate mechanical ventilation may substitute for openable window space. Not more than one-half the required space can be met with skylights. Openable, screened windows in doors count toward this requirement.¶
(q) Before occupancy clean all living areas and eliminate any rodents, insects, and animal parasites.¶
(17) Fire protection.¶
(a) All fires must be in equipment designed for that use. Do not allow open fires within 25 feet of structures.¶
(b) Each season, at the time of initial occupancy, each living area must have a working approved smoke detector.¶
N~~OTE~~ote: The camp operator is not responsible for daily maintenance of the detector or the actions of occupants that defeat its function.¶
(c) Provide fire extinguishing equipment in a readily accessible place, not more than 50 feet from each housing unit. The equipment must provide protection equal to a 2A:10BC rated extinguisher.¶
N~~OTE~~ote: Hoses are acceptable substitutes for extinguishers only if the water supply is constant and reliable. Hoses must be immediately available for firefighting use.¶
(d) All living areas with more than one room, built before December 15, 1989, with one door, must have, in

addition to a door, a window in each sleeping room that can be an exit in case of fire:¶
(A) This window must have an openable space at least 24 inches by 24 inches, nominal.¶
(B) The lowest portion of the opening must be less than 48 inches above the floor.¶
(C) This window must open directly to the outdoors and be readily openable by the occupants from inside without breaking the glass.¶
(D) Label the escape window as an emergency exit.¶
(e) Living areas built on or after December 15, 1989, must meet the requirements for emergency exits in applicable rules of the Building Codes Division of the Oregon Department of Consumer and Business Services~~, including the following:¶~~
~~(E).~~ Required emergency exit windows in sleeping rooms must have a clear net opening of at least 5.7 square feet, minimum vertical opening of 22 inches and minimum horizontal opening of 20 inches.¶
N~~OTE~~ote: Construct and maintain all living areas in labor housing and related facilities to comply with other applicable local and state laws and regulations in effect at the time of construction or remodel.¶
(f) A second story must have at least two exits when its occupant load is 10 or more. Comply with the Oregon state building code.¶
(g) Occupants on floors above the second story and in basements must have access to at least two separate exits from the floor or basement as required by the Oregon state building code.¶
(18) Common use cooking and eating facilities and equipment.¶
(a) When provided, common use cooking or food preparation facilities or equipment must have the following:¶
(A) A gas or electric refrigerator, capable of keeping food at or below 41 degrees F.¶
(B) A minimum equivalent of two cooking burners for every 10 persons or part thereof, or 2 families, whichever requires the most burners.¶
~~(i)~~ If a gas or electric hotplate or wood stove is within 18 inches of a wall, that wall must be made of or finished with smooth cleanable, nonabsorbent, grease-resistant and fire-resistant material.¶
N~~OTE~~ote: Labeled and listed appliances are exempt from the 18-inch requirement when installed according to their listing.¶
(C) No liquid petroleum gas (LPG like propane) tanks in use inside any occupied building. Outside tanks must connect to appliances with lines approved for that purpose.¶
(D) Food storage shelves, food preparation areas, food contact surfaces and floors in food preparation and serving areas must be made of or finished with smooth, non-absorbent, cleanable material; and¶
(E) A table and chairs or equivalent seating and eating arrangements to accommodate the number of occupants living in the sleeping place.¶
(b) Refrigerators and stoves or hot plates must always be in working condition.¶
(c) Clean the facilities and equipment before each occupancy.¶
(d) Common use kitchen and dining areas must be separate from all sleeping quarters. There can be no direct opening between kitchen or dining areas and any living or sleeping area.¶
(e) If the operator becomes aware of or has reason to suspect that anybody preparing, cooking or serving food has a communicable disease as listed in paragraph (22), the operator must bar them from the cooking facility until the disease is no longer communicable.¶
(f) Buildings must have heating capable of keeping the facility at 68 degrees or more during use.¶
(g) Facilities must be in buildings or shelters. Doors, windows and openings, if any, must have screens of 16 mesh or smaller.¶
(19) Dining halls and equipment.¶
(a) When provided, dining halls or equipment must have the following:¶
(A) A gas or electric refrigerator, capable of keeping food at or below 41 degrees F.¶
(B) A minimum equivalent of two cooking burners for every 10 persons or part thereof, 2 families, whichever requires the most burners.¶
~~(i)~~ If a gas or electric hotplate or wood stove is within 18 inches of a wall, that wall must be made of or finished with smooth cleanable, nonabsorbent, grease-resistant and fire-resistant material.¶
N~~OTE~~ote: Labeled and listed appliances are exempt from the 18-inch requirement when installed according to their listing.¶
(C) No liquid petroleum gas (LPG like propane) tanks in use inside any occupied building. Outside tanks must connect to appliances with lines approved for that purpose.¶
(D) Food storage shelves, food preparation areas, food contact surfaces and floors in food preparation and serving areas must be made of or finished with smooth, non-absorbent, cleanable material; and¶
(E) A table and chairs or equivalent seating and eating arrangements to accommodate the number of occupants living in the sleeping place.¶
(b) Refrigerators and stoves or hot plates must always be in working condition.¶
(c) Clean the facilities and equipment before each occupancy.¶

(d) Common use kitchen and dining areas must be separate from all sleeping quarters. There can be no direct opening between kitchen or dining areas and any living or sleeping area.¶
(e) If the operator becomes aware of or has reason to suspect that anybody preparing, cooking or serving food has a communicable disease as listed in paragraph (22), the operator must bar them from the cooking facility until the disease is no longer communicable.¶
(f) Buildings must have heating capable of keeping the facility at 68 degrees or more during use.¶
(g) The facility must comply with the 2005 edition of the FDA Food Code.¶
N~~OTE~~ote: Follow Division 4, Agriculture when it differs from the FDA Food Code. The code is available at: https://www.~~cfsan.~~fda.gov/~~~dms/~~food/fda-food-code~~.html~~/food-code-2005 or contact the Oregon OSHA Resource Center at 800-922-2689 or in Salem 503-378-3272.¶
(h) Facilities must be in buildings or shelters. Doors, windows and openings, if any, must have screens of 16 mesh or smaller.¶
(20) Single unit cooking facilities.¶
(a) When provided, single unit cooking, eating and dining facilities or equipment must have the following:¶
(A) A gas or electric refrigerator, capable of keeping food at or below 41 degrees F.¶
(B) A minimum equivalent of two burners for cooking for every 10 persons or part thereof, or 2 families, whichever requires the most burners.¶
~~(i)~~ If a gas or electric hotplate or wood stove is within 18 inches of a wall, that wall must be made of or finished with smooth cleanable, nonabsorbent, grease-resistant and fire resistant material.¶
N~~OTE~~ote: Labeled and listed appliances are exempt from the 18-inch requirement when installed according to their listing.¶
(C) No liquid petroleum gas (LPG like propane) tanks in use inside. Outside tanks must connect to appliances with lines approved for that purpose.¶
(D) Food storage shelves, food preparation areas, food contact surfaces and floors in food preparation and serving areas made of or finished with smooth, non-absorbent, cleanable material.¶
(E) A table and chairs or equivalent seating and eating arrangements to accommodate the number of occupants living in the sleeping place.¶
(F) A refrigerator and stove or hot plate in working condition.¶
(b) Clean the facilities before each occupancy.¶
(21) First aid. OAR 437-004-1305, Medical and First Aid, applies to all labor housing and related facilities. This rule includes requirements for first aid supplies, an emergency medical plan and a plan of communication.¶
N~~OTE~~ote: Division 4/K requires all employees know about the first aid requirements and emergency medical plans. If employees' native language is other than English, this must be taken into account in meeting this requirement.¶
(22) Disease Reporting. The camp operator must comply with Oregon Health Authority's OAR 333-018-0000~~,~~; Who ~~Must~~Is Responsible for Report~~ing~~ and OAR 333-018-0015~~,~~; What ~~To~~Is to Be Report~~-A~~ed and When~~: 333-018-0000 Who Must Report.¶~~
~~(23).~~¶
Note: Each Health Care Provider knowing of or attending a case or suspected case of any of the diseases, infections, or conditions listed in OAR 333-018-0015 shall report such cases as specified. Where no Health Care Provider is in attendance, any individual knowing of such a case shall report in a similar manner.~~ 333-018-0015 What to Report and When.¶~~
~~(24) R~~¶
Note: Human reportable diseases, infections, microorganisms, and conditions, and the time frames within which they must be reported are as follows:¶
~~(a)~~ Immediately, day or night: Bacillus anthracis (anthrax); Clostridium botulinum (botulism); Corynebacterium diphtheriae (diphtheria); Severe Acute Respiratory Syndrome (SARS) and infection by SARS-coronavirus; Yersinia pestis (plague); intoxication caused by marine microorganisms or their byproducts (for example, paralytic shellfish poisoning, domoic acid intoxication, ciguatera, scombroid); any known or suspected common-source Outbreaks; any Uncommon Illness of Potential Public Health Significance.¶
~~(b)~~ Within 24 hours (including weekends and holidays): Haemophilus influenzae (any invasive disease; for laboratories, any isolation or identification from a normally sterile site); measles (rubeola); Neisseria meningitidis (any invasive disease; for laboratories, any isolation or identification from a normally sterile site); Pesticide Poisoning; poliomyelitis; rabies (human or animal); rubella; Vibrio (all species).¶
~~(c)~~ Within one Local Public Health Authority working day: Bordetella pertussis (pertussis); Borrelia (relapsing fever, Lyme disease); Brucella (brucellosis); Campylobacter (campylobacteriosis); Chlamydophila (Chlamydia) psittaci (psittacosis); Chlamydia trachomatis (chlamydiosis; lymphogranuloma venereum); Clostridium tetani (tetanus); Coxiella burnetii (Q fever); Creutzfeldt-Jakob disease and other transmissible spongiform encephalopathies; Cryptosporidium (cryptosporidiosis); Cyclospora cayetanensis (cyclosporosis); Escherichia coli

(Shiga-toxigenic, including E. coli O157 and other serogroups); Francisella tularensis (tularemia); Giardia (giardiasis); Haemophilus ducreyi (chancroid); hantavirus; hepatitis A; hepatitis B (acute or chronic infection); hepatitis C; hepatitis D (delta); HIV infection (does not apply to anonymous testing) and AIDS; Legionella (legionellosis); Leptospira (leptospirosis); Listeria monocytogenes (listeriosis); mumps; Mycobacterium tuberculosis and M. bovis (tuberculosis); Neisseria gonorrhoeae (gonococcal infections); pelvic inflammatory disease (acute, non-gonococcal); Plasmodium (malaria); Rickettsia (all species: Rocky Mountain spotted fever, typhus, others); Salmonella (salmonellosis, including typhoid); Shigella (shigellosis); Taenia solium (including cysticercosis and undifferentiated Taenia infections); Treponema pallidum (syphilis); Trichinella (trichinosis); Yersinia (other than pestis); any infection that is typically arthropod vector-borne (for example: Western equine encephalitis, Eastern equine encephalitis, St. Louis encephalitis, dengue, West Nile fever, yellow fever, California encephalitis, ehrlichiosis, babesiosis, Kyasanur Forest disease, Colorado tick fever, etc.); human bites by any other mammal; CD4 cell count < 200/_l (mm3) or CD4 proportion of total lymphocytes < 14%; hemolytic uremic syndrome.¶

~~(d)~~ Within 7 days: Suspected Lead Poisoning (for laboratories; this includes all blood lead tests performed on persons with suspected lead poisoning).¶

(2~~5~~3) Access to ORS and OAR. Those wishing access to any of the Oregon Revised Statutes (ORS) or Oregon Administrative Rules (OAR) referenced here, may contact the Oregon OSHA Resource Center in Salem or the nearest Oregon OSHA Field Office.¶

(2~~6~~4) Closure and alternative housing~~:~~.¶

(a) The operator of agricultural labor housing must provide replacement lodging without charge to the occupants if a government agency with the authority to enforce building, health or safety standards declares the housing or facilities to be uninhabitable and orders them vacated.¶

(b) The operator must provide replacement lodging for 7 consecutive days from the time the housing was closed or until the closing agency allows the original housing to reopen, whichever is shorter.¶

(c) Replacement lodging must meet or exceed the health and safety standards of Oregon OSHA. Oregon OSHA must approve the location of the replacement housing before employees are sent to it.¶

(d) Operators must arrange for replacement lodging not later than the end of the day the original housing closes or another date designated by the closing agency.¶

(e) Post the address of the replacement housing:¶

(A) Not later than the end of the day the original housing closes.¶

(B) In a place convenient to affected workers.¶

(C) In all languages spoken by the occupants.¶

(f) The posting in (e) above must state that the replacement housing is free to occupants of the closed housing.¶

(g) The operator must give Oregon OSHA a list of names of the occupants and the location of the replacement housing, for each.¶

(h) When the cause of the closure is beyond the control of the agricultural labor housing operator, sections (a), (b), (c), (d), (e) and (g) above do not apply. To determine whether the cause of closure was beyond the control of the operator, Oregon OSHA will consider these circumstances, including but not limited to:¶

(A) Whether the cause of the closure is a natural disaster;¶

(B) Whether the circumstances leading to the closure were known or should have been known to the operator;¶

(C) Whether operator diligence could have avoided the circumstances leading to the closure.¶

(i) Agricultural labor housing occupants entitled to temporary replacement housing under this rule must accept or reject that housing when the original housing closes. These rules do not obligate operators to reimburse displaced occupants for housing they obtain without the operator's knowledge or consent.~~¶~~

~~(A)~~ The operator is responsible for replacement lodging only for as many people as occupied the original closed housing. When an occupant rejects the replacement housing, the operator has no obligation to reimburse that occupant for other replacement housing.¶

(j) Oregon OSHA may issue a citation and assess a monetary penalty for violation of these rules as in ORS 654.071 and 654.086.¶

~~[ED. NOTE: Tables referenced are available from the agency.]¶~~

~~[Publications: Publications referenced are available from the agency.]~~(25) Heat Illness Prevention in Labor Housing. ¶

(a) Cooling Areas. If rooms where people sleep are not able to maintain an indoor temperature of 78 degrees Fahrenheit or less (using air conditioners, evaporative coolers, air purifiers with coolers, or other reliable means), employers must provide an area(s) for occupants to cool off whenever the heat index outside the housing units is at or above 80 degrees Fahrenheit. The cooling area(s) must be large enough to allow use by at least 50 percent of the occupants at the labor housing at any one time and must use either or any combination of the following two approaches: ¶

(A) Giving occupants continual access to one or more common rooms that are maintained at or a below a

temperature of 78 degrees Fahrenheit (using air conditioners, evaporative coolers, air purifiers with coolers, or other reliable means). This can be done by making use of existing common rooms, otherwise unused housing units, or other available indoor spaces that do not present additional risks to the occupants.¶
(B) Giving occupants continual access to outdoor rest areas (located away from work areas or activities that could create a hazard). The rest areas must: ¶
(i) Be shaded by any natural or artificial means, so that occupants can sit or stand in a normal posture fully in the shade; ¶
(ii) Provide water misters, cooling vests, cooling towels, or equally effective means of relief. If relying upon items that can only be used by one individual at a time, enough must be provided to satisfy the 50 percent requirement and they must not be shared without being washed; and ¶
(iii) Locate available chairs, benches, and other seating in a manner that encourages use.¶
Note: Although employers are permitted to use either or any combination of the approaches listed in (A) and (B), they are encouraged to provide at least some of the required space using the methods listed in (A).¶
(b) Minimizing Heat in Housing Units. If rooms where people sleep are not able to maintain an indoor temperature of 78 degrees Fahrenheit or less (using air conditioners, evaporative coolers, air purifiers with coolers, or other reliable means), employers must take the following steps¶
(A) Optimize the ability to keep housing cool by ensuring that windows can be protected from direct sunlight in a manner that minimizes radiant heat during all hours of the day, whether using natural or artificial shade, the provision of window coverings must deflect the sun and not simply absorb the heat, or other equally effective measures. Such measures must not interfere with the ability to open and close windows or create another hazard; and¶
(B) Make fans available at no cost for any housing occupants who wish to use them.¶
(c) Temperature Awareness. To ensure that housing occupants can remain aware of the effects of heat on the indoor environment, both immediately and on an ongoing basis, employers must provide a thermometer that displays the temperature in both Fahrenheit and Celsius in each individual housing unit. Employers are encouraged, but not required, to provide a device that also measures humidity.¶
(d) Employee and Occupant Information. In addition to ensuring that employees have received the training required by OAR 437-004-1131(9), the employer must display the "Heat Risks in Housing" poster provided by Oregon OSHA in one or more prominent locations that housing occupants would normally see and must add the necessary emergency contact information to the poster, allowing housing occupants to contact emergency services as necessary. ¶
(e) Access to Emergency Services. Employers must ensure that occupants always have access to a working telephone that can be used to contact emergency services. An electronic device, such as a cell phone, may be used for this purpose only if reception in the area is reliable.
Statutory/Other Authority: ORS 654.025(2), 656.726(~~3~~)4), 654.035, 658.750, 658.755, 658.780, 658.785, 658.790, 658.805
Statutes/Other Implemented: ORS 654.001 -through 654.295

ADOPT: 437-004-1131

NOTICE FILED DATE: 01/28/2022

RULE SUMMARY: OAR 437-004-1131 – New rule adoption to establish protections for working in high temperatures.

CHANGES TO RULE:

437-004-1131
Heat Illness Prevention
(1) Scope and application. This standard applies whenever an employee performs work activities, whether in indoor or outdoor environments, where the heat index (apparent temperature) equals or exceeds 80 degrees Fahrenheit.¶
Note: When another applicable standard addresses other hazards that may be present, employers must comply with the requirements of that standard and this standard. Where the requirements of one standard are more protective than another for the same hazard, employers must follow the requirements that provide the higher level of employee protection.¶
(a) The following workplaces and operations are exempt from the requirements of this standard.¶
(A) Incidental heat exposures where an employee is not required to perform work activities for more than 15 minutes in any sixty-minute period.¶
(B) Exposures to heat generated from the work process - such as occurs in bakeries - is not subject to this standard. In such cases, employers must follow the requirements of OAR 437-002-0144(2). ¶
(C) All emergency 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, utilities, and communications, when employees are engaged in those operations. ¶
(D) Buildings and structures that have a mechanical ventilation system that keeps the heat index below 80 degrees Fahrenheit. ¶
(b) The following workplaces and operations are partially exempt from certain requirements of this standard.¶
(A) Employers whose employees perform either "rest" or "light" workloads, as defined in Table 1.1 of Appendix A: Mandatory Information for Heat Illness Prevention, are exempt from the requirements of sections (3) through (10) only when the heat index is less than 90 degrees Fahrenheit.¶
(B) Associated support activities for wildland firefighters, such as fire camp services and fire management, are exempt only from the requirements of section (7). ¶
(C) Employees who work from home are subject only to the training requirements in sections (9) and (10). ¶
(2) Definitions.¶
(a) Acclimatization - 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 seven to fourteen days of regular work for at least two hours per day in the heat. This time frame applies to fit individuals with no underlying medical conditions.¶
(b) Drinking water - Potable water that is suitable to drink and that is cool (66 oF - 77 oF) or cold (35 oF - 65 oF). ¶
(c) 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.¶
(d) Shade - Blockage of direct sunlight is shade. One indicator that blockage is sufficient is when objects do not cast a shadow in the area of blocked sunlight. Shade is not sufficient 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 any natural or artificial means that does not expose employees to unsafe or unhealthy conditions, and that does not deter or discourage access or use.¶
(e) Temperature-controlled environment - an indoor setting where the temperature is maintained with a mechanical cooling system.¶
(3) Access to shade. Establish and maintain one or more shade areas that are immediately and readily available to exposed employees that are outdoors when the heat index in the work area equals or exceeds 80 degrees Fahrenheit. The shade areas must meet the following criteria:¶
(a) The shade area must either be open to the outside air (at least three open sides) or provide mechanical ventilation for cooling. ¶
(b) The amount of shade present must be at least enough to accommodate the number of employees on recovery or rest period, so that they can sit in a normal posture fully in the shade. Employees must remove any PPE that retains heat, such as chemical resistant suits, during recovery and rest periods.¶
(c) The shade must be located as close as practical to the areas where employees are working. ¶
(d) Shade present during meal periods must be large enough to accommodate the number of employees on the meal period that remain onsite.¶

(e) If trees or other vegetation are used to provide shade, such as in orchards or forests, the thickness and shape of the shaded area must provide sufficient shadow to protect employees.¶
Exception: When the employer can demonstrate that providing access to shade is not safe or it interferes with the ability of employers and employees to complete the necessary work in a particular situation, for example, during high winds or when an employee is walking through range land, employers must identify and implement alternative cooling measures that provide equivalent protection such as providing cooling vests (either with fans or ice packs), water-dampened cotton clothing, or similar effective measures. The Heat Illness Prevention Plan under section (8) must include the use, care, and maintenance of the alternative cooling methods, in writing.¶
(4) Drinking water. Ensure that a sufficient supply of drinking water is immediately and readily available to exposed employees at all times, at no cost, when the heat index in the work area equals or exceeds 80 degrees Fahrenheit.¶
(a) Supplied drinking water must be either cool or cold, see subsection (2)(b).¶
(b) Supply each employee with enough drinking water to enable them to consume up to 32 ounces per hour. Employers are not required to supply the entire quantity of drinking water needed for all employees on a full shift at the beginning of the shift. Employers may begin the shift with smaller quantities of drinking water when effective procedures are established to replenish the water consumed during the shift. ¶
(c) Employees must have ample opportunity to drink water required under this section.¶
Note: 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 required water supplies.¶
(5) High-heat practices. When engineering controls (such as fans or air conditioning) and administrative controls (such as scheduling work during the cooler part of the day or limiting an employee's exposure) do not reduce an employee's exposure to a heat index of less than 90 degrees Fahrenheit, implement and maintain high-heat practices and procedures by following subsections (5)(a) through (e) below. ¶
(a) Communication must occur in a language and vocabulary readily understood by all employees, by voice, electronic, or other equally-effective means, so that employees at the worksite can contact a supervisor at any time, when necessary. An electronic device, such as a cell phone, may be used for this purpose only if reception in the area is constant and reliable.¶
(b) Implement one or more of the following to promptly identify any employee suspected of experiencing heat-related illness:¶
(A) Regular communication with employees working alone, such as by radio, cellular phone, or other alternative means;¶
(B) Create a mandatory buddy system; or¶
(C) Implement other equally-effective means of observation or communication.¶
(c) Designate and equip one or more employees at each worksite as authorized to call for emergency medical services, and allow other employees to call for emergency services when designated employees are not immediately available; such a practice supplements existing requirement to ensure that emergency medical care is immediately available in all workplaces, as required by OAR 437-004-1305(4).¶
(d) When employees work in buildings and structures that do not have a mechanical ventilation system, employers must:¶
(A) Directly measure the temperature and humidity in these places at the same time and location when occupied by employees to determine the current indoor heat index; ¶
(B) Use the National Institute for Occupational Safety and Health's (NIOSH) Heat Safety Tool app to determine the heat index outside of the building or structure and assume that it is the same inside (See section 2 in Appendix A: Mandatory Information for Heat Illness Prevention); or¶
(C) If the structure is designed or otherwise known to be affected by outdoor humidity, for example, hoop houses and greenhouses in nursery operations, the employer must measure and use the actual humidity inside the structure. ¶
(e) Develop and implement a written heat illness prevention rest break schedule that protects employees exposed to a heat index equal to or greater than 90 degrees Fahrenheit. Employers must choose and implement only one of the three options; choose either (A), (B), or (C) as described below.¶
Note: The purpose of the heat illness prevention rest breaks is to allow the body to cool down and recover from working when the heat index equals or is greater than 90 degrees Fahrenheit.¶
Note: Option (A) allows an employer to implement a self-designed schedule by building on a minimum rest break schedule using four specified elements. Option (B) allows an employer to implement a schedule by using an example heat illness prevention plan designed by NIOSH. Option (C) allows an employer to implement a schedule by using a simplified schedule designed by Oregon OSHA and based on a high-heat scenario in the NIOSH plan.¶
(A) Employer-designed heat illness prevention rest break schedule: Implement a written employer-specific, heat illness prevention rest break schedule using the minimum rest break durations and intervals in Table 1. Employers

must protect employees from heat illness by integrating the elements in subsections (i) through (iv) into to their heat illness prevention rest break schedule, which may increase the duration or interval of the rest break beyond the minimum requirements to be protective.¶
(i) The effect of personal protective equipment (PPE) on the body's ability to retain heat;¶
(ii) The effect of the type of work clothing on the body's ability to retain heat;¶
(iii) Relative humidity, whether work activities are indoors or outdoors; and¶
(iv) The intensity of the work being performed.¶
Note: Employers should consider the effect of exposure to direct sunlight when developing employer-specific heat illness prevention rest break schedule.¶
[Table 1. Minimum employer-designed heat illness prevention rest break schedule, upon which subsections (i) through iv) must be applied:]¶
(B) NIOSH work/rest schedule: Implement a written heat illness prevention rest break schedule using the information found in section 3 of Appendix A: Mandatory Information for Heat Illness Prevention based on NIOSH recommendations.¶
Note: The NIOSH work/rest schedule uses unadjusted ambient temperatures (in degrees Fahrenheit), and employers must follow the instructions underneath Table 3.1 in Appendix A: Mandatory Information for Heat Illness Prevention. Employers must be aware that different work/rest schedules exist for those wearing chemical-resistant suits; see Table 3.2 in Appendix A: Mandatory Information for Heat Illness Prevention.¶
(C) Simplified heat illness prevention rest break schedule: Implement a written simplified heat illness prevention rest break schedule using Table 2.¶
[Table 2. Minimum simplified rest break schedule:]¶
Note: The Table 2 heat illness prevention rest break schedule is only required during the specified heat index.¶
(f) The heat illness prevention rest breaks under subsection (5)(e) are only required during the specified heat index, and 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. However, the heat illness prevention rest break must be calculated using only the time spent in the shade and when employees are not performing work other than "rest" or "light" work. The requirement for heat illness prevention rest breaks does not prohibit "rest" or "light" work-related activities conducted in a temperature-controlled environment, such as paperwork, at the discretion of the employee.¶
(g) Except when the heat illness prevention rest breaks coincide with the existing unpaid meal break, the heat illness prevention rest break is a work assignment. Heat illness prevention rest breaks are only required during the time of the shift that the heat index equals or exceeds 90 degrees Fahrenheit. ¶
(6) Emergency medical plan. The employer's Emergency Medical Plan must address employee exposure to excessive heat, in accordance with OAR 437-004-1305(4). These plans must address the types medical situations that employees could encounter, including those conditions relating to excessive heat exposure.¶
(7) Acclimatization plan. Develop and implement an acclimatization plan and procedures in writing. Employers must choose between two options, either (a) or (b) as described below, and implement the chosen plan.¶
(a) Employer-designed acclimatization plan option: Employers who develop their own acclimatization plan must integrate and implement the following factors into their program:¶
(A) Acclimated and unacclimated workers;¶
(B) The effects of clothing and personal protective equipment on adding to the heat burden of workers;¶
(C) The personal and environmental risk factors that put workers at a higher risk of heat-related illness;¶
(D) Re-acclimatizing workers as necessary, either due to changes in the weather or a worker spending more than seven days away from the job; and¶
(E) The use and maintenance of auxiliary cooling systems such as water-cooled garments, air-cooled garments, cooling vests, and wetted overgarments.¶
(b) NIOSH acclimatization plan option: Employers that choose not to develop their own acclimatization plan must follow the acclimatization plan developed by the Centers for Disease Control and Prevention and NIOSH; see section 4, Appendix A: Mandatory Information for Heat Illness Prevention.¶
Note: Based upon the variable weather patterns across the state, Oregon OSHA recognizes that there is no "one-size-fits-all" acclimatization plan. Employers should be aware that acclimatization to heat takes longer for unfit individuals compared to fit individuals. ¶
Note: Employers should consider the effect of exposure to direct sunlight when developing their acclimatization plan.¶
(8) Heat illness prevention plan. Develop, implement, and maintain an effective heat illness prevention plan in writing. The plan must be made available at the worksite to employees and to Oregon OSHA upon request. The plan must contain at least the following information:¶
(a) How employees will be trained on the hazards of heat exposure and the necessary steps to prevent heat-related illnesses;¶

(b) How to recognize the symptoms of dehydration, and how to respond to suspected heat-related illnesses in others; ¶
(c) How sufficient amounts of cool, potable water in work areas will be provided;¶
(d) How employees will be provided frequent opportunities and encouragement to stay hydrated by drinking water; ¶
(e) How employees will be provided sufficient space to rest in a shaded area or cool climate-controlled area, and where heat-affected employees may cool off and recover when signs and symptoms of heat-related illnesses are recognized;¶
(f) How the employer will implement the heat illness prevention rest break schedule when necessary to keep employees safe; and¶
(g) How the employer will implement heat acclimatization procedures for new employees or employees returning to work from extended absences of seven or more days.¶
(9) Supervisor and employee training. Provide heat illness prevention training to all employees, including new employees, supervisory and non-supervisory employees in a language and vocabulary readily understood, and in a manner that facilitates employee feedback. Such training must be provided annually before employees begin work that should reasonably be anticipated to expose them to the risk of heat illness, and include at least the following: ¶
(a) The environmental and personal risk factors (for example, chronic obstructive pulmonary disease, asthma, kidney disease, obesity, etc.) for heat illness that may limit an individual's tolerance to excessive heat, as well as the added burden of heat load on the body caused by exertion, clothing (See section 5 in Appendix A: Mandatory Information for Heat Illness Prevention), and personal protective equipment;¶
(b) The employer's procedures for complying with the requirements of this standard, including, but not limited to, the employer's responsibility to provide water, heat index information (including the risks to experiencing a heat-related illness), shade, preventative rest breaks, and access to first aid, as well as how employees can exercise their rights under this standard without fear of retaliation;¶
(c) The importance of frequent consumption of small quantities of water, up to 32 ounces per hour, when the work environment is hot and employees are likely to be sweating more than usual in the performance of their duties;¶
(d) The concept, importance, and methods of the acclimatization plan pursuant to the employer's procedures under section (8);¶
(e) The different types of heat illness, the common signs and symptoms of heat illness, and the appropriate first aid and emergency response to the different types of heat illness, including how heat illness may progress quickly from mild signs and symptoms to a serious and life-threatening condition;¶
(f) The importance for employees to immediately report to the employer, directly or through the employee's supervisor, signs and symptoms of heat illness in themselves or in others; and¶
(g) The effects of nonoccupational factors (drugs, alcohol, obesity, etc.) on tolerance to occupational heat stress.¶
(10) Training documentation. Verify compliance with section (9) by preparing and maintaining written or electronic training records that can be provided to Oregon OSHA upon request. Such records must contain the name or identification of each employee trained, the date(s) of the training, and the name of the person who conducted the training. The most recent annual training record for each affected employee must be maintained.
Statutory/Other Authority: ORS 654.025(2), 654.035, 656.726(4)
Statutes/Other Implemented: ORS 654.001 through 654.295

RULE ATTACHMENTS DO NOT SHOW CHANGES. PLEASE CONTACT AGENCY REGARDING CHANGES.

Tables in OAR 437-004-1131

Table reference in (5)(e)(A) in High-heat practices section (5)

Table 1. Minimum employer-designed heat illness prevention rest break schedule, upon which subsections (i) through iv) must be applied:

Heat index (° F)	Rest break durations and intervals
90 or greater	10 minutes every two hours
100 or greater	15 minutes every hour

Table reference in (5)(e)(C) in High-heat practices section (5)

Table 2. Minimum simplified rest break schedule:

Heat index (° F)	**Rest break durations and intervals**
90 or greater	10 minutes every two hours
95 or greater	20 minutes every hour
100 or greater	30 minutes every hour
105 or greater	40 minutes every hour

Note: The Table 2 heat illness prevention rest break schedule is only required during the specified heat index.

OAR 437-004-1131
Appendix A:
Mandatory Information for Heat Illness Prevention

To protect the health and safety of employees from heat-related illnesses, employers should consider using the resources in this appendix. Please note that some resources may use temperatures in Celsius instead of Fahrenheit. To convert to degrees Fahrenheit, use this formula: Fahrenheit (˚F) = (Celsius x 1.8) + 32

1. Most heat-related illnesses affect workers who do strenuous physical activity. When workers engage in intense work, their bodies create heat. This "metabolic" heat combines with environmental heat (from temperature, sunlight, humidity, etc.) so workers' core temperature can rise to dangerous levels. To prevent a hazardous combination of environmental and metabolic heat, employers should be aware of workers' activity level.

Workload can be classified as rest, light, moderate, heavy, or very heavy.

- Light: Sitting or standing with minimal arm and leg work.
- Moderate: Continuous modest intensity, such as light pushing/pulling or normal walking.
- Heavy: Intense upper body work such as carrying loads or sawing.
- Very heavy: Intense activity at an almost maximum pace.

Table 1.1 Metabolic Heat and Workload (Physical Activity Level)

Level of Workload / Physical Activity *	Examples	Metabolic Rate in Watts, “typical” recognizing that different ways of doing the same task may lead to dramatically different wattage
Rest	• Sitting • Thinking	115
Light	• Sitting with minimal hand and arm work • Sewing • Writing or drawing • Driving a car • Occasional or slow walking • Stooping, crouching, or kneeling • Standing watch	180
Moderate	• Pushing and pulling light carts • Hammering nails • Picking fruit or vegetables	300

	• Continuous normal walking • Driving or operating mobile equipment • Raking • Mopping or vacuuming floors • Scraping, painting, or plastering • Laundry/dry cleaning • Tapping and drilling • Machining • Molding • Packaging • Laboratory work • Cooking • General carpentry • Using hand tools • Light pushing/pulling or normal walking.	
Heavy	• Intense arm and trunk work • Carrying loads • Shoveling • Sawing or heavy carpentry • Roofing • Pushing and pulling heavy carts or wheelbarrows • Fast walking (> 4 mph) • Landscaping • Casting • Manual raising and lowering loads • Stacking lumber • Truck and automobile repair • Waxing and buffing by hand • Welding • Heavy item assembly • Grinding and cutting • Drilling rock or concrete • Mixing cement • Felling trees	415
Very heavy	• Any activity done at near maximum pace • Climbing stairs, ladder, or ramp • Using an axe • Intense shoveling or digging • Sledgehammer use • Stacking concrete • Brick or stone masonry	520

* Workers who are overweight or obese might produce more metabolic heat than other workers who perform the same tasks. The above table assumes a 70-kg (154-pound) worker.

Table 1.1 is copied from federal OSHA's guidance on Heat Hazard recognition, which can be accessed at: https://www.osha.gov/heat-exposure/hazards under the Metabolic Heat and Workload (Physical Activity Level) tab

2. The OSHA-NIOSH Heat Safety Tool app is a useful resource for planning outdoor work activities based on how hot it feels throughout the day. It features real-time heat index and hourly forecasts specific to your location, as well as occupational safety and health recommendations from OSHA and NIOSH. It can be accessed and downloaded at: https://www.osha.gov/heat/heat-app

3. NIOSH Work/rest schedules.

A. Table 3.1. Work/rest schedules for workers wearing normal work clothing*

Adjusted temperature (˚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 physically fit, well-rested, fully hydrated, under age 40, and have adequate water intake and that there is 30% RH [relative humidity] and natural ventilation with perceptible air movement.

†Note: Adjust the temperature reading as follows before going to the temperature column in the table: Full sun (no clouds): Add 13˚
Partly cloudy/overcast: Add 7˚
No shadows visible/work is in the shade or at night: no adjustment
Per relative humidity:
10%: Subtract 8˚
20%: Subtract 4˚
30%: No adjustment
40%: Add 3˚
50%: Add 6˚
60%: Add 9˚

‡High levels of heat stress; consider rescheduling activities.

Adapted from EPA [1993]
Table 3.1 above is copied from the following publication; see page 76 in NIOSH [2016*]. NIOSH criteria for a recommended standard: occupational exposure to heat and hot environments*. By Jacklitsch B, Williams WJ, Musolin K, Coca A, Kim J-H, Turner N. Cincinnati, OH: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health, DHHS (NIOSH) Publication 2016-106.

B. Table 3.2 Work/rest schedules for those wearing chemical resistant suits.

	Light work			Moderate work			Heavy work		
Air Temp (˚F)	Full sun	Partly cloudy	No sun†	Full sun	Partly cloudy	No sun†	Full sun	Partly cloudy	No sun†
75	Normal	Normal	Normal	Normal	Normal	Normal	35/25‡	Normal	Normal
80	30/30	Normal	Normal	20/40	Normal	Normal	10/50	40/20	Normal
85	15/45	40/20	Normal	10/50	25/35	Normal	Caution§	15/45	40/20
90	Caution§	15/45	40/20	Caution§	Caution§	25/35	Stop work	Caution§	15/45
95	Stop work	Stop work	15/45	Stop work	Stop work	Stop work	Stop work	Stop work	Stop work

*With the assumption that workers are heat-acclimatized, under the age of 40, physically fit, well-rested, fully hydrated, and wearing Tyvek coveralls, gloves, boots, and a respirator. Cooling vests may enable workers to work for longer periods. Adjustments must be made when additional protective gear is worn.

†No shadows are visible or work is in the shade or at night.

‡35 minutes work and 25 minutes rest each hour.

§High levels of heat stress; consider rescheduling activities.

Adapted from EPA [1993]

Table 3.2 above is copied from the following publication; see page 77 in NIOSH [2016*]. NIOSH criteria for a recommended standard: occupational exposure to heat and hot*

environments. By Jacklitsch B, Williams WJ, Musolin K, Coca A, Kim J-H, Turner N. Cincinnati, OH: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health, DHHS (NIOSH) Publication 2016-106.

4. Acclimatization.

Table 4.1 Acclimatization in workers

Topics	Additional information
Disadvantages of being unacclimatized	• Readily show signs of heat stress when exposed to hot environments. • Difficulty replacing all of the water lost in sweat. • Failure to replace the water lost will slow or prevent acclimatization.
Benefits of acclimatization	• Increased sweating efficiency (earlier onset of sweating, greater sweat production, and reduced electrolyte loss in sweat). • Stabilization of the circulation. • Work is performed with lower core temperature and heart rate. • Increased skin blood flow at a given core temperature.
Acclimatization plan	• Gradually increase exposure time in hot environmental conditions over a period of 7 to 14 days. • For new workers, the schedule should be no more than 20% of the usual duration of work in the hot environment on day 1 and a no more than 20% increase on each additional day. • For workers who have had previous experience with the job, the acclimatization regimen should be no more than 50% of the usual duration of work in the hot environment on day 1, 60% on day 2, 80% on day 3, and 100% on day 4. • The time required for non-physically fit individuals to develop acclimatization is about

	50% greater than for the physically fit.
Level of acclimatization	• Relative to the initial level of physical fitness and the total heat stress experienced by the individual.
Maintaining acclimatization	• Can be maintained for a few days of non-heat exposure. • Absence from work in the heat for a week or more results in a significant loss in the beneficial adaptations leading to an increased likelihood of acute dehydration, illness, or fatigue. • Can be regained in 2 to 3 days upon return to a hot job. • Appears to be better maintained by those who are physically fit. • Seasonal shifts in temperatures may result in difficulties. • Working in hot, humid environments provides adaptive benefits that also apply in hot, desert environments, and vice versa. • Air conditioning will not affect acclimatization.

Adapted from [Moseley 1994; Armstrong and Stoppani 2002; DOD 2003; Casa et al. 2009; ACGIH 2014; OSHA-NIOSH 2011].

Table 4.1 above is copied from the following publication; see page 34. NIOSH [2016*]. NIOSH criteria for a recommended standard: occupational exposure to heat and hot environments.* By Jacklitsch B, Williams WJ, Musolin K, Coca A, Kim J-H, Turner N. Cincinnati, OH: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health, DHHS (NIOSH) Publication 2016-106.

5. Clothing adjustment factors.

Table 5.1 Clothing adjustment factors exist for various types of clothing.

	Clothing adjustment factors (˚C-WBGT)	
Clothing	Previous	2006
Work clothing (baseline)	0	0
Cloth coveralls	3.5	0

Double-layer cloth clothing	5	3
Spunbound melt-blown synthetic (SMS) coveralls	-	0.5
Polyolefin coveralls	-	1
Limited-use vapor-barrier coveralls	-	11

Adapted from Bernard TE, Threshold Limit Values for Physical Agents Committee, ACGIH [2014].

Table 5.1 above is copied from the following publication; see page 19. NIOSH [2016*]. NIOSH criteria for a recommended standard: occupational exposure to heat and hot environments.* By Jacklitsch B, Williams WJ, Musolin K, Coca A, Kim J-H, Turner N. Cincinnati, OH: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health, DHHS (NIOSH) Publication 2016-106.

Oregon
Kate Brown, Governor

Department of Consumer and Business Services
Oregon Occupational Safety & Health Division (Oregon OSHA)
350 Winter Street NE, PO Box 14480, Salem, OR 97309-0405
Phone: 503-378-3272, Toll Free: 1-800-922-2689, Fax: 503-947-7461
osha.oregon.gov

May 10, 2022

Text of rules
Comments and agency decisions

Oregon OSHA's Adoption of Rules to Address Employee Exposure to Wildfire Smoke

Oregon OSHA adopted these rules to address worker exposure to unhealthy and hazardous levels of the primary air contaminant of concern in wildfire smoke, fine particulate matter (PM2.5). While significant exposures to wildfire smoke can be unhealthy for anyone, workers with pre-existing health conditions such as asthma, chronic obstructive pulmonary disease (COPD), or heart disease are at increased risk of serious or fatal health effects when exposed to high levels of PM2.5 in wildfire smoke. The Oregon Department of Environmental Quality released a report in July 2021: "*Wildfire Smoke Trends and the Air Quality Index"* documenting that Oregon's air quality in 2020 was the worst on record; additionally, the report states that, "large wildfires have been increasing across the western United States in the last decade and are expected to become more frequent, according to the National Interagency Fire Center." Therefore, these rules are needed to help protect workers from the hazards of PM2.5 stemming from wildfire events.

The adopted rules apply to all workers in Oregon covered under the Oregon Safe Employment Act (OSEAct). OAR 437-004-9791 applies to employers covered under Division 4 (Agriculture), while OAR 437-002-1081 applies to work activities covered under Division 2 (General Industry). Since worker exposure to unhealthy and hazardous air quality conditions from wildfire emissions is not limited to a specific industry, work activities covered under Division 3 (Construction) or Division 7 (Forest Activities) would also be required to comply with OAR 437-002-1081, per additional applicability requirements under OAR 437-003-0005 and OAR 437-007-0004, respectively.

On March 10, 2020, Governor Brown issued Executive Order 20-04 that directed certain state agencies to reduce greenhouse gas emissions and mitigate the impacts of climate change. EO 20-04 included a directive to the Oregon Health Authority (OHA) and Oregon OSHA to jointly develop a proposal for rules to protect employees from workplace exposures to excessive heat and wildfire smoke. In response to EO 20-04, Oregon OSHA, in collaboration with the OHA, a rulemaking advisory committee, and stakeholders, developed these rules to protect employees from the potentially detrimental health effects from exposure to unhealthy and hazardous levels of wildfire smoke. Without these rules, employees likely face worsening air quality from wildfire emissions without adequate protections in place.

Beginning in March 2021, Oregon OSHA convened nine virtual Rules Advisory Committee (RAC) meetings over an 8-month period, engaging over 100 stakeholders representing labor and business interests. Oregon OSHA presented multiple rule drafts and a fiscal impact survey for stakeholder comment. In addition, Oregon OSHA hosted four virtual listening sessions with Spanish translators, held in May and September 2021, to provide an opportunity for workers and other stakeholders to share their experience on the challenges of wildfire smoke in the workplace, in addition to hearing about how Oregon OSHA's temporary rule affected their workplaces.

Due to the immediate risk of worker exposure to wildfire smoke during the later portion of Oregon's 2021 wildfire season, on August 3, 2021, Oregon OSHA adopted OAR 437-002-1080 and 437-004-9790, Temporary Rules to Address Employee Exposures to Wildfire Smoke (Administrative Order 9-2021). Both rules were in effect from August 9, 2021 through February 4, 2022.

On January 28 2022, Oregon OSHA proposed permanent rules to address employee exposures to wildfire smoke. Oregon OSHA hosted four virtual listening sessions with Spanish translators, held in May and September 2021, to provide an opportunity for workers and other stakeholders to share their experience on the challenges of wildfire smoke in the workplace, in addition to hearing about how Oregon OSHA's temporary rules affected their workplaces. Oregon OSHA held three virtual hearings during the first week of March 2022 to hear oral testimony, one of which was conducted primarily in Spanish. Additionally, interested persons were also provided the ability to submit public comment by email, letter, fax and by voicemail message. The formal public comment period closed March 18, 2022.

During the public comment period of the proposed wildfire smoke rules, Oregon OSHA received approximately 286 comments. Oregon OSHA considered all comments received. Oregon OSHA, based on comments received, made minor adjustments, as follows. In section (2), which covers definitions, the definitions of "feasibility" and "greater hazard', to define employer responsibilities to implement communication and exposure control requirements, were removed. Several clarifications were made in the sections that address the exposure assessment (3), information and training (4), and training documentation (5), including a note that training documentation may be maintained in an electronic database and language was also added limiting the retention of the documentation to one year. In section (6), which addresses the Emergency Medical Plan, applicable standards outside of this rule were added for ease to the reader. A number of clarifications were made to exposure controls in section (7) in regards to the use of use of filtering facepiece respirators. The full summary of comments and agency decisions, available on Oregon OSHA's website, provides additional details on the agency's decision-making and modifications made prior to adoption.

As adopted, the rule offers exemptions for certain conditions, including enclosed buildings and structures in which the air is filtered by a mechanical ventilation system, as well as vehicles with a cabin air filter system. Wildland firefighting, emergency operations and intermittent exposures (as defined in the rules) are partially exempt.

The adopted rules require employers to perform an exposure assessment; provide information to employers and management staff, create and maintain training and documentation; provide for employer two-way communication with employees; and implement methods of exposure control.

Of note, related to exposure controls, the rules, as adopted, require employers to make NIOSH-approved respirators available for voluntary use when the AQI is at or above 101. Whenever employee exposure is at or above AQI 251, employers must ensure that employees wear NIOSH-approved respirators; to do this, the employer may implement the Wildfire Smoke Respiratory Protection Program described in Appendix A in lieu of conducting medical evaluations and fit testing required under 29 CFR1910.134 or OAR 437-004-1041: Respiratory Protection. Lastly, when the AQI equals or exceeds 501, employers must ensure that employees wear NIOSH-approved respirators and implement a complete Respiratory Protection Program, in compliance with 29 CFR 1910.134 or OAR 437-004-1041: Respiratory Protection.

This is Oregon OSHA Administrative Order 4-2022, adopted May 10, 2022 and effective July 1, 2022.

Oregon OSHA contact: Tom Bozicevic, Salem Central Office @ 503-378-3272, or email at Tom.BOZICEVIC@dcbs.oregon.gov.

Please visit our website osha.oregon.gov/rules to view our adopted rules, or select other rule activity from this page.

Note: In compliance with the Americans with Disabilities Act (ADA), this publication is available in alternative formats by calling 503-378-3272.

Secretary of State
Certificate and Order for Filing

PERMANENT ADMINISTRATIVE RULES

I certify that the attached copies* are true, full and correct copies of the PERMANENT Rule(s) adopted on May 10, 2022 by the
Date prior to or same as filing date

Department of Consumer & Business Services/Oregon Occupational Safety & Health Division 437
Agency and Division — Administrative Rules Chapter Number

Lisa Appel — 350 Winter Street NE, Salem OR 97301-3882 — 503-947-7449
Rules Coordinator — Address — Telephone

to become effective July 1, 2022 as Oregon OSHA Administrative Order 4-2022.
Date upon filing or later

Rulemaking Notice was published in the February 2022 *Oregon Bulletin*.**
Month and Year

RULE CAPTION

Rules to Address Employee Exposure to Wildfire Smoke
Not more than 15 words that reasonably identifies the subject matter of the agency's intended action.

RULEMAKING ACTION

ADOPT: OAR 437-002-1081, 437-004-9791

ORS 654.025(2), 654.035, 656.726(4)
Stat. Auth.

ORS 654.001 through 654.295
Stats. Implemented

RULEMAKING SUMMARY

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As adopted, the rule offers exemptions for certain conditions, including enclosed buildings and structures in which the air is filtered by a mechanical ventilation system, as well as vehicles with a cabin air filter system. Wildland firefighting, emergency operations and intermittent exposures (as defined in the rules) are partially exempt.

The adopted rules require employers to perform an exposure assessment; provide information to employers and management staff, create and maintain training and documentation; provide for employer two-way communication with employees; and implement methods of exposure control.

Of note, related to exposure controls, the rules, as adopted, require employers to make NIOSH-approved respirators available for voluntary use when the AQI is at or above 101. Whenever employee exposure is at or above AQI 251, employers must ensure that employees wear NIOSH-approved respirators; to do this, the employer may implement the Wildfire Smoke Respiratory Protection Program described in Appendix A in lieu of conducting medical evaluations and fit testing required under 29 CFR1910.134 or OAR 437-004-1041: Respiratory Protection. Lastly, when the AQI equals or exceeds 501, employers must ensure that employees

wear NIOSH-approved respirators and implement a complete Respiratory Protection Program, in compliance with 29 CFR 1910.134 or OAR 437-004-1041: Respiratory Protection.

INDIVIDUAL RULE SUMMARY (By rule number)

Provide a brief summary of the rule (if new adoption), or a brief summary of changes made to the rule (if amending)

OAR 437-002-1081– Rule to address worker exposure to unhealthy and hazardous levels of the main air pollutant in wildfire smoke: fine particulate matter (PM2.5).
OAR 437-004-9791 – Rule to address worker exposure to unhealthy and hazardous levels of the main air pollutant in wildfire smoke: fine particulate matter (PM2.5).

Please visit the rules and laws section of our website at osha.oregon.gov/rules and select *adopted rules* in the rule making column to view our adopted rules.

Authorized Signer

Renee Stapleton
Printed Name

5/10/2022
Date

*With this original, file one photocopy of certificate, one paper copy of rules listed in Rulemaking Actions, and electronic copy of rules.
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OSHA 4-2022
CHAPTER 437
DEPARTMENT OF CONSUMER AND BUSINESS SERVICES
OREGON OCCUPATIONAL SAFETY AND HEALTH DIVISION

FILING CAPTION: Rules to Address Employee Exposure to Wildfire Smoke

EFFECTIVE DATE: 07/01/2022

AGENCY APPROVED DATE: 05/10/2022

CONTACT: Lisa Appel
503-947-7449
Lisa.Appel@dcbs.oregon.gov

350 Winter Street NE
Salem,OR 97301

Filed By:
Lisa Appel
Rules Coordinator

RULES:
437-002-1081, 437-004-9791

ADOPT: 437-002-1081

RULE TITLE: Protection from Wildfire Smoke

NOTICE FILED DATE: 01/28/2022

RULE SUMMARY: OAR 437-002-1081 – Rule to address worker exposure to unhealthy and hazardous levels of the main air pollutant in wildfire smoke: fine particulate matter (PM2.5).

RULE TEXT:

Note: Oregon OSHA recognizes that occupational wildfire smoke exposures can occur in particularly dynamic situations. Employers must address such hazards based on the information available to them through the exercise of reasonable diligence.

(1) Scope and application. This standard applies to public and private sector employers whose employees are or will be exposed to wildfire smoke where the ambient air concentration for fine particulate matter (PM2.5) is at or above 35.5 µg/m3 (Air Quality Index value of 101 for PM2.5).
(a) The following workplaces and operations are exempt from this standard:
(A) Enclosed buildings and structures in which the air is filtered by a mechanical ventilation system and the employer ensures that windows, doors, bays, and other exterior openings are kept closed, except when it is necessary to briefly open doors to enter or exit;
(B) Enclosed vehicles in which the air is filtered by a properly maintained cabin air filter system, and when the windows, doors, and other exterior openings are kept closed, except when it is necessary to briefly open doors to enter or exit. Buses, light rails, and other enclosed vehicles used for public transit systems where doors are frequently opened to board and deboard passengers are not included under this exemption;
(C) When the employer predetermines that operations will be suspended to prevent employee exposure to wildfire smoke at an ambient air concentration for PM2.5 of 35.5 µg/m3 (AQI 101) or higher; and

(D) Employees working at home.
(b) The following workplaces and operations are only subject to subsections (4)(a) through (4)(g) "information and training," and subsection (7)(b) "voluntary use of filtering facepiece respirators" under this standard:
(A) Wildland firefighting and associated support activities such as fire camp services and fire management;
(B) Emergency operations that are directly involved in the protection of life or property, public safety power shutoffs, or restoration of essential services, such as evacuation, rescue, medical, structural firefighting, law enforcement, utilities, and communications; and
(C) Work activities involving only intermittent employee exposure of less than 15 minutes in an hour to an ambient air concentration for PM2.5 at or above 35.5 µg/m3 (AQI 101) for a total exposure of less than one hour in a single 24-hour period.
(2) Definitions.
(a) Air Quality Index – The Air Quality Index (AQI) was developed by the U.S. Environmental Protection Agency (EPA) as an indicator of overall air quality and is based on the five criteria pollutants regulated under the Clean Air Act: ground-level ozone, particulate matter, carbon monoxide, sulfur dioxide, and nitrogen dioxide.
(b) NIOSH – The National Institute for Occupational Safety and Health of the United States Centers for Disease Control and Prevention. NIOSH tests and approves respirators for use in the workplace.
(c) PM2.5 – Solid particles and liquid droplets suspended in air, known as fine particulate matter, with an aerodynamic diameter of 2.5 micrometers or smaller and measured in micrograms per cubic meter (µg/m3).
(d) Sensitive groups – Individuals with pre-existing health conditions and those who are sensitive to air pollution who are among those likely to experience health problems from exposure to wildfire smoke. Examples of sensitive groups include: people with lung disease such as asthma or chronic obstructive pulmonary disease (COPD), including bronchitis and emphysema, and those who smoke; people with respiratory infections, such as pneumonia, acute bronchitis, bronchiolitis, cold, flu, or those recovering from severe respiratory illness; people with existing heart or circulatory problems, such as irregular heart beat, congestive heart failure, coronary artery disease, angina, and those who have had a heart attack or stroke; children under 18 years old, and adults over age 65; pregnant women; people with diabetes; and people with other medical or health conditions which can be exacerbated by exposure to wildfire smoke as determined by a physician or other licensed healthcare provider.
(e) Wildfire smoke – Emissions from unplanned fires in wildlands, which may include adjacent developed and cultivated areas to which the fire spreads or from where it originates.
(f) Wildlands – Uncultivated and sparsely populated geographical areas covered primarily by grass, brush, trees, slash, or a combination thereof.
(3) Exposure assessment. Monitor employee exposure to wildfire smoke when employees are, or are likely to be, exposed to an ambient air concentration for PM2.5 at or above 35.5 µg/m3 (AQI 101). This monitoring must be performed at the start of each shift, and as needed, to comply with the applicable requirements of sections (6) and (7) of this standard, by using one or more of the following methods:
(a) Check the current average and forecasted AQI value for PM2.5 from the Oregon Department of Environmental Quality, U.S. EPA AirNow or Interagency Wildland Fire Air Quality Response Program websites, or equivalent source;
(b) Check notifications of air quality advisories due to wildfire smoke issued by the Oregon Department of Environmental Quality or local government health agencies;
(c) Directly measure workplace ambient air concentration for PM2.5 in accordance with the testing device manufacturer's user instructions; or
(d) If the employer determines and can demonstrate that none of the methods in subsections (3)(a) through (3)(c) of this standard are available for their work location, the employer can then use the 5-3-1 Visibility Index provided in Appendix B, Table 1 of this standard to estimate the current air concentration for PM2.5, and equivalent AQI value, during daylight hours.
(4) Information and training. Provide wildfire smoke training to all employees, including new employees, supervisory and non-supervisory employees, who may be exposed to an ambient air concentration for PM2.5 at or above 35.5

µg/m3 (AQI 101). The training must be provided annually before employees are exposed in a language and vocabulary readily understood, and in a manner that facilitates employee feedback. The training must include at least the following information:

(a) The symptoms of wildfire smoke exposure:

(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; and

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

(b) The potential acute and chronic health effects from wildfire smoke exposure, including increased health risks to "sensitive groups" as defined in subsection (2)(d) of this standard, and how chronic exposures can increase the risk of cardiovascular disease and can exacerbate an individual's asthma;

(c) Each employee's right to report health issues related to wildfire smoke exposure and obtain medical treatment for such workplace exposures without fear of retaliation;

(d) How employees can obtain the current average and forecasted ambient air concentration for PM2.5 and equivalent AQI value for their work location;

(e) The importance, limitations, and benefits of using a filtering facepiece respirator, that is provided by the employer at no cost to the employee to reduce exposure to wildfire smoke, and how to use and maintain their filtering facepiece respirator;

(f) The employer's methods to protect employees from wildfire smoke as required by section (7) of this standard, including how filtering facepiece respirators are required to be made readily accessible to employees for voluntary use when workplace ambient air concentration for PM2.5 is at or above 35.5 µg/m3 (AQI 101), and how employees can obtain such respirators before exposure and replace them when needed;

(g) Review of any job tasks performed by employees that the use of a filtering facepiece respirator would expose the wearer to a hazard associated with a substantially more serious injury or illness than the potential acute health effects of wildfire smoke exposure, and must not be used when performing such tasks;

(h) The procedures supervisors must follow when an employee reports or exhibits health symptoms that necessitate immediate medical attention such as, but not limited to, asthma attacks, difficulty breathing, and chest pain;

(i) How to operate and interpret exposure results based on any PM2.5 monitoring device used by the employer in compliance with this standard; and

(j) An explanation of the employer's two-way communication system for wildfire smoke exposure control information as required by section (6) of this standard.

(5) Training documentation. Verify supervisor and employee training required under section (4) of this standard by preparing a written or electronic record that includes at least the name or identification number of each employee trained, the date(s) of the training(s), and the name of the person(s) who conducted the training. The most recent annual training record for each employee must be maintained for one year.

(6) Employer two-way communication. Before employees are exposed to an ambient air concentration of PM2.5 at or above 35.5 µg/m3 (AQI 101), develop and implement a two-way system to communicate wildfire smoke information between supervisors and employees. At a minimum, this communication system must include:

(a) A means to notify exposed employees of any changes in the air quality at their work location that would necessitate an increase or decrease in the level of exposure controls required in section (7) of this standard; and

(b) A means to enable and encourage employees to inform their employer or supervisor of at least the following:

(A) Any changes in the air quality at their work location that could necessitate an increase or decrease in the level of exposure controls required by section (7) of this standard;

(B) Any availability issues of appropriate exposure control measures required by section (7) of this standard; and

(C) Any health symptoms that may be the result of wildfire smoke exposure and that could necessitate medical attention.

Note: The employer's emergency medical plan or medical services provisions to comply with Division 2, Subdivision K, OAR 437-002-0161(4); Division 3, Subdivision D, 29 CFR 1926.50; or Division 7, Subdivision C, OAR 437-007-0220; must address the types of medical situations that employees could encounter, including those conditions relating to wildfire smoke exposure.

(7) Exposure controls.
(a) Engineering and administrative controls. Implement engineering and administrative controls to reduce employee PM2.5 exposure to less than 35.5 µg/m3 (AQI 101), unless the employer can demonstrate that such controls are functionally impossible, or would prevent the completion of work.
(A) Appropriate engineering controls may include, but are not limited to, temporarily relocating outdoor workers to available indoor areas or vehicles where the air is adequately filtered, or using portable air purifiers equipped with HEPA filters (or similar high-efficiency air filters) that are sufficient in number and performance for the size of the enclosed area where used.
(B) Appropriate administrative controls may include, but are not limited to, temporarily relocating outdoor work operations to another outdoor location with better air quality when work permits, and changing employee work schedules to when better air quality is forecasted.
(b) Voluntary use of filtering facepiece respirators. Whenever employee exposure to PM2.5 is at or above 35.5 µg/m3 (AQI 101), even after the implementation of engineering and administrative controls, ensure that appropriate NIOSH-approved filtering facepiece respirators are provided to employees for voluntary use, strictly for protection against wildfire smoke, when such use would not expose the wearer to a hazard associated with a substantially more serious injury or illness than the potential acute health effects of wildfire smoke exposure. Ensure that such respirators are:
(A) Provided and replaced as needed at no cost to employees by either:
(i) Distributing filtering facepiece respirators directly to each exposed employee; or
(ii) Maintaining a sufficient supply of filtering facepiece respirators that is readily accessible and known to any exposed employee at each work location. This respirator supply must be in a location that does not restrict or hinder employee access to respirators or discourage the replacement of a respirator when needed.
(B) Stored and maintained so that they do not present a health hazard to the user.

Note: Voluntary use of filtering facepiece respirators under subsection (7)(b) in this standard is not subject to the requirements under the Respiratory Protection Standard – 29 CFR 1910.134.
Note: Employer supplies of NIOSH-approved filtering facepiece respirators for voluntary use should include an adequate size selection for exposed employees.

(c) Required use of filtering facepiece respirators in accordance with a Wildfire Smoke Respiratory Protection Program. Whenever employee exposure to PM2.5 is at or above 200.9 µg/m3 (AQI 251), even after the implementation of engineering and administrative controls, ensure that employees wear appropriate NIOSH-approved filtering facepiece respirators when such use would not expose the wearer to a hazard associated with a substantially more serious injury or illness than the potential acute health effects of wildfire smoke exposure. When such filtering facepiece respirators are provided and used strictly for protection against wildfire smoke, the employer may implement and follow the Wildfire Smoke Respiratory Protection Program as described in Appendix A of this standard in lieu of conducting medical evaluations and fit testing, which are otherwise required under the Respiratory Protection Standard – 29 CFR 1910.134.
(d) Required use of respirators in accordance with the Respiratory Protection Standard – 29 CFR 1910.134. Whenever employee exposure to PM2.5 is at or above 500.4 µg/m3 (AQI 501), even after the implementation of engineering and administrative controls, ensure that employees wear appropriate NIOSH-approved respirators that protects wearers from PM2.5 when such use would not expose the wearer to a hazard associated with a substantially more serious injury

or illness than the potential acute health effects of wildfire smoke exposure. For respirators used exclusively to protect employees from wildfire smoke concentrations of PM2.5 at or above 500.4 µg/m3 (AQI 501), develop and implement a complete Respiratory Protection Program in accordance with 29 CFR 1910.134 – Respiratory Protection.

Note: The requirements of subsections (7)(c) and (7)(d) do not apply to occupants of employer-provided housing while they are inside the housing.
Note: Elastomeric respirators are distinct from filtering facepiece respirators. If elastomeric respirators are used to reduce employee exposure to wildfire smoke at any PM2.5 concentration, employers must comply with all applicable requirements under of the Respiratory Protection Standard – 29 CFR 1910.134.

STATUTORY/OTHER AUTHORITY: ORS 654.025(2), 654.035, 656.726(4)

STATUTES/OTHER IMPLEMENTED: ORS 654.001 through 654.295

OAR 437-002-1081
Protection from Wildfire Smoke
Appendix A:
Mandatory Workplace Guidance for
THE USE OF FILTERING FACEPIECE RESPIRATORS TO ADDRESS WILDFIRE SMOKE

This appendix applies only to employers covered by this standard that require NIOSH-approved filtering facepiece respirators, including N95, P95, R95, N99, P99, N100 and P100, to be used by their employees strictly for wildfire smoke exposures when the work location ambient air concentrations of PM2.5 is at or above 200.9 µg/m^3 (AQI 251) and below 500.4 µg/m^3 (AQI 501).

Note: Employer supplies of NIOSH-approved filtering facepiece respirators for required use under this standard should include an adequate size selection for exposed employees.

Filtering facepiece respirators are disposable, negative-pressure, air purifying respirators where an integral part of the facepiece or the entire facepiece is made of air contaminant filtering material. This appendix does not apply to other types of respirators, including but not limited to elastomeric tight-fitting respirators, nor does it apply to situations where workers use filtering facepiece respirators for protection against air contaminants other than PM2.5 from wildfire smoke.

Employers whose workers are required to wear filtering facepiece respirators to protect against wildfire smoke exposures when workplace ambient air concentrations of PM2.5 is at or above 200.9 µg/m^3 (AQI 251) must either develop and implement a respiratory protection program in accordance with the Respiratory Protection Standard (29 CFR 1910.134), or a Wildfire Smoke Respiratory Protection Program in accordance with the following requirements when workplace ambient air concentration of PM2.5 is under 500.4 µg/m^3 (AQI 501):

(A) Employee training. Employers must ensure that employees wearing filtering facepiece respirators are trained in the proper use of the respirators, including putting them on and removing them, any limitations on their use, how to care for the respirator, and the ability to demonstrate a seal check as described in section (B) of this appendix.

(B) Filtering facepiece respirator user seal check. Each employee who uses a filtering facepiece respirator must perform a user seal check to ensure a sufficient face fit to maximize effectiveness each time the respirator is put on. Either the positive or negative pressure checks listed in this appendix, or the respirator manufacturer's recommended user seal check method must be used.

1. Instructions for positive pressure user seal check. Once you have properly donned the respirator, place your hands over the facepiece, covering as much surface area as possible. Exhale gently into the facepiece. The face fit is considered sufficient if a slight positive pressure is being built up inside the facepiece without feeling air passing between your face and the facepiece. If the particulate respirator has an exhalation valve, then performing a positive pressure check may not be possible. In such cases, a negative pressure check must be performed.
2. Instructions for negative pressure user seal check. Negative pressure seal checks are typically conducted on particulate respirators that have exhalation valves. Once you

have properly donned the respirator, cover the filter surface with your hands as much as possible and then inhale gently. The face fit is considered sufficient if the facepiece slightly collapses towards your face without feeling air passing between your face and the facepiece.

3. Correcting problems discovered during the seal check. In the case of either type of seal check (positive or negative), if air leaks around the nose, use both hands to readjust the nosepiece by placing your fingertips at the top of the metal nose clip. Slide your fingertips down both sides of the metal strip to more efficiently mold the nose area to the shape of your nose. Readjust the straps along the sides of your head until a proper seal is achieved.

(C) Filtering facepiece respirator storage and replacement. Store, maintain, and replace so that they do not present a health hazard to the user.

OAR 437-002-1081
Protection from Wildfire Smoke
Appendix B:
Information for Wildfire Smoke Protection

Table 1: Air Quality Index (AQI) Values and Equivalent Concentrations for PM2.5, and 5-3-1 Visibility Index Values

AQI Values	PM2.5 Concentration in µg/m³	Visibility Index Values (How far you can see)
0 – 50	0.0 – 12.0	over 15 miles
51 – 100	12.1 – 35.4	5 – 15 miles
101 – 150	35.5 – 55.4	3 – 5 miles
151 – 200	55.5 – 150.4	1 – 3 miles
201 – 300	150.5 – 250.4	1 mile
301 and higher	250.5 and higher	less than 1 mile

Note: The AQI, as used in this standard, is a recognized proxy to identify worker exposure to PM2.5 for which traditional occupational exposure limits have not been established. The EPA AQI risk category labels were specifically developed to advise the public of the community health risk levels associated with air quality conditions in a general population setting. The AQI calculation allows for a measurement that is easily accessible to both employers and employees.

Note: When estimating the current AQI value by using the 5-3-1 Visibility Index, determine the limit of your visual range by looking for distant targets or familiar landmarks such as mountains, mesas, hills, or buildings at known distances (miles). The visual range is that point at which these targets are no longer visible. Ideally, the viewing of any distance target should be made with the sun behind you. Looking into the sun or at an angle increases the ability of sunlight to reflect off of the smoke, and thus making the visibility estimate less reliable.

Table 2: Protection from Wildfire Smoke Standard Requirements by AQI Value

AQI Value	General Requirements
101 - 250	1. Assess and monitor air quality at each work location where employees are exposed; 2. Provide and document employees training; 3. Implement two-way communication system; 4. Implement engineering and administrative controls; and 5. Provide NIOSH-approved filtering facepiece respirators for voluntary use.
251 - 500	1. 1 through 4 for AQI 101 – 250 above; and 2. Provide NIOSH-approved filtering facepiece respirators for mandatory use by implementing a Wildfire Smoke Respiratory Protection Program in accordance with Appendix A.
501 and above	1. 1 through 4 for AQI 101 – 250 above; and 2. Provide NIOSH-approved respirators for mandatory use by implementing a Respiratory Protection Program in accordance with 29 CFR 1910.134.
See rules for complete requirements.	

ADOPT: 437-004-9791

RULE TITLE: Protection from Wildfire Smoke

NOTICE FILED DATE: 01/28/2022

RULE SUMMARY: OAR 437-004-9791 – Rule to address worker exposure to unhealthy and hazardous levels of the main air pollutant in wildfire smoke: fine particulate matter (PM2.5).

RULE TEXT:

Note: Oregon OSHA recognizes that occupational wildfire smoke exposures can occur in particularly dynamic situations. Employers must address such hazards based on the information available to them through the exercise of reasonable diligence.

(1) Scope and application. This standard applies to public and private sector employers whose employees are or will be exposed to wildfire smoke where the ambient air concentration for fine particulate matter (PM2.5) is at or above 35.5 µg/m3 (Air Quality Index value of 101 for PM2.5)
(a) The following workplaces and operations are exempt from this standard:
(A) Enclosed buildings and structures in which the air is filtered by a mechanical ventilation system and the employer ensures that windows, doors, bays, and other exterior openings are kept closed, except when it is necessary to briefly open doors to enter or exit;
(B) Enclosed vehicles in which the air is filtered by a properly maintained cabin air filter system, and when the windows, doors, and other exterior openings are kept closed, except when it is necessary to briefly open doors to enter or exit. Buses, light rails, and other enclosed vehicles used for public transit systems where doors are frequently opened to board and deboard passengers are not included under this exemption;
(C) When the employer predetermines that operations will be suspended to prevent employee exposure to wildfire smoke at an ambient air concentration for PM2.5 of 35.5 µg/m3 (AQI 101) or higher; and
(D) Employees working at home.
(b) The following workplaces and operations are only subject to subsections (4)(a) through (4)(g) “information and training,” and subsection (7)(b) “voluntary use of filtering facepiece respirators” under this standard:
(A) Wildland firefighting and associated support activities such as fire camp services and fire management;
(B) Emergency operations that are directly involved in the protection of life or property, public safety power shutoffs, or restoration of essential services, such as evacuation, rescue, medical, structural firefighting, law enforcement, utilities, and communications; and
(C) Work activities involving only intermittent employee exposure of less than 15 minutes in an hour to an ambient air concentration for PM2.5 at or above 35.5 µg/m3 (AQI 101) for a total exposure of less than one hour in a single 24-hour period.
(2) Definitions.
(a) Air Quality Index – The Air Quality Index (AQI) was developed by the U.S. Environmental Protection Agency (EPA) as an indicator of overall air quality and is based on the five criteria pollutants regulated under the Clean Air Act: ground-level ozone, particulate matter, carbon monoxide, sulfur dioxide, and nitrogen dioxide.
(b) NIOSH – The National Institute for Occupational Safety and Health of the United States Centers for Disease Control and Prevention. NIOSH tests and approves respirators for use in the workplace.
(c) PM2.5 – Solid particles and liquid droplets suspended in air, known as fine particulate matter, with an aerodynamic diameter of 2.5 micrometers or smaller and measured in micrograms per cubic meter (µg/m3).
(d) Sensitive groups – Individuals with pre-existing health conditions and those who are sensitive to air pollution who are among those likely to experience health problems from exposure to wildfire smoke. Examples of sensitive groups include: people with lung disease such as asthma or chronic obstructive pulmonary disease (COPD), including bronchitis and emphysema, and those who smoke; people with respiratory infections, such as pneumonia, acute bronchitis,

bronchiolitis, cold, flu, or those recovering from severe respiratory illness; people with existing heart or circulatory problems, such as irregular heart beat, congestive heart failure, coronary artery disease, angina, and those who have had a heart attack or stroke; children under 18 years old, and adults over age 65; pregnant women; people with diabetes; and people with other medical or health conditions which can be exacerbated by exposure to wildfire smoke as determined by a physician or other licensed healthcare provider.

(e) Wildfire smoke – Emissions from unplanned fires in wildlands, which may include adjacent developed and cultivated areas to which the fire spreads or from where it originates.

(f) Wildlands – Uncultivated and sparsely populated geographical areas covered primarily by grass, brush, trees, slash, or a combination thereof.

(3) Exposure assessment. Monitor employee exposure to wildfire smoke when employees are, or are likely to be, exposed to an ambient air concentration for PM2.5 at or above 35.5 µg/m3 (AQI 101). This monitoring must be performed at the start of each shift, and as needed, to comply with the applicable requirements of sections (6) and (7) of this standard, by using one or more of the following methods:

(a) Check the current average and forecasted AQI value for PM2.5 from the Oregon Department of Environmental Quality, U.S. EPA AirNow or Interagency Wildland Fire Air Quality Response Program websites, or equivalent source;

(b) Check notifications of air quality advisories due to wildfire smoke issued by the Oregon Department of Environmental Quality or local government health agencies;

(c) Directly measure workplace ambient air concentration for PM2.5 in accordance with the testing device manufacturer's user instructions; or

(d) If the employer determines and can demonstrate that none of the methods in subsections (3)(a) through (3)(c) of this standard are available for their work location, the employer can then use the 5-3-1 Visibility Index provided in Appendix B, Table 1 of this standard to estimate the current air concentration for PM2.5, and equivalent AQI value, during daylight hours.

(4) Information and training. Provide wildfire smoke training to all employees, including new employees, supervisory and non-supervisory employees, who may be exposed to an ambient air concentration for PM2.5 at or above 35.5 µg/m3 (AQI 101). The training must be provided annually before employees are exposed in a language and vocabulary readily understood, and in a manner that facilitates employee feedback. The training must include at least the following information:

(a) The symptoms of wildfire smoke exposure:

(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; and

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

(b) The potential acute and chronic health effects from wildfire smoke exposure, including increased health risks to "sensitive groups" as defined in subsection (2)(d) of this standard, and how chronic exposures can increase the risk of cardiovascular disease and can exacerbate an individual's asthma;

(c) Each employee's right to report health issues related to wildfire smoke exposure and obtain medical treatment for such workplace exposures without fear of retaliation;

(d) How employees can obtain the current average and forecasted ambient air concentration for PM2.5 and equivalent AQI value for their work location;

(e) The importance, limitations, and benefits of using a filtering facepiece respirator, that is provided by the employer at no cost to the employee to reduce exposure to wildfire smoke, and how to use and maintain their filtering facepiece respirator;

(f) The employer's methods to protect employees from wildfire smoke as required by section (7) of this standard, including how filtering facepiece respirators are required to be made readily accessible to employees for voluntary use when workplace ambient air concentration for PM2.5 is at or above 35.5 µg/m3 (AQI 101), and how employees can

obtain such respirators before exposure and replace them when needed;
(g) Review of any job tasks performed by employees that the use of a filtering facepiece respirator would expose the wearer to a hazard associated with a substantially more serious injury or illness than the potential acute health effects of wildfire smoke exposure, and must not be used when performing such tasks;
(h) The procedures supervisors must follow when an employee reports or exhibits health symptoms that necessitate immediate medical attention such as, but not limited to, asthma attacks, difficulty breathing, and chest pain;
(i) How to operate and interpret exposure results based on any PM2.5 monitoring device used by the employer in compliance with this standard; and
(j) An explanation of the employer's two-way communication system for wildfire smoke exposure control information as required by section (6) of this standard.
(5) Training documentation. Verify supervisor and employee training required under section (4) of this standard by preparing a written or electronic record that includes at least the name or identification number of each employee trained, the date(s) of the training(s), and the name of the person(s) who conducted the training. The most recent annual training record for each employee must be maintained for one year.
(6) Employer two-way communication. Before employees are exposed to an ambient air concentration of PM2.5 at or above 35.5 µg/m3 (AQI 101), develop and implement a two-way system to communicate wildfire smoke information between supervisors and employees. At a minimum, this communication system must include:
(a) A means to notify exposed employees of any changes in the air quality at their work location that would necessitate an increase or decrease in the level of exposure controls required in section (7) of this standard; and
(b) A means to enable and encourage employees to inform their employer or supervisor of at least the following:
(A) Any changes in the air quality at their work location that could necessitate an increase or decrease in the level of exposure controls required by section (7) of this standard;
(B) Any availability issues of appropriate exposure control measures required by section (7) of this standard; and
(C) Any health symptoms that may be the result of wildfire smoke exposure and that could necessitate medical attention.

Note: The employer's emergency medical plan provisions to comply with Division 4, Subdivision K, OAR 437-004-1305(4), must address the types medical situations that employees could encounter, including those conditions relating to wildfire smoke exposure.

(7) Exposure controls.
(a) Engineering and administrative controls. Implement engineering and administrative controls to reduce employee PM2.5 exposure to less than 35.5 µg/m3 (AQI 101), unless the employer can demonstrate that such controls are functionally impossible, or would prevent the completion of work.
(A) Appropriate engineering controls may include, but are not limited to, temporarily relocating outdoor workers to available indoor areas or vehicles where the air is adequately filtered, or using portable air purifiers equipped with HEPA filters (or similar high-efficiency air filters) that are sufficient in number and performance for the size of the enclosed area where used.
(B) Appropriate administrative controls may include, but are not limited to, temporarily relocating outdoor work operations to another outdoor location with better air quality when work permits, and changing employee work schedules to when better air quality is forecasted.
(b) Voluntary use of filtering facepiece respirators. Whenever employee exposure to PM2.5 is at or above 35.5 µg/m3 (AQI 101), even after the implementation of engineering and administrative controls, ensure that appropriate NIOSH-approved filtering facepiece respirators are provided to employees for voluntary use, strictly for protection against wildfire smoke, when such use would not expose the wearer to a hazard associated with a substantially more serious injury or illness than the potential acute health effects of wildfire smoke exposure. Ensure that such respirators are:
(A) Provided and replaced as needed at no cost to employees by either:

(i) Distributing filtering facepiece respirators directly to each exposed employee; or
(ii) Maintaining a sufficient supply of filtering facepiece respirators that is readily accessible and known to any exposed employee at each work location. This respirator supply must be in a location that does not restrict or hinder employee access to respirators or discourage the replacement of a respirator when needed.
(B) Stored and maintained so that they do not present a health hazard to the user.

Note: Voluntary use of filtering facepiece respirators under subsection (7)(b) in this standard is not subject to the requirements under the Respiratory Protection Standard – OAR 437-004-1041.
Note: Employer supplies of NIOSH-approved filtering facepiece respirators for voluntary use should include an adequate size selection for exposed employees.

(c) Required use of filtering facepiece respirators in accordance with a Wildfire Smoke Respiratory Protection Program. Whenever employee exposure to PM2.5 is at or above 200.9 µg/m3 (AQI 251), even after the implementation of engineering and administrative controls, ensure that employees wear appropriate NIOSH-approved filtering facepiece respirators when such use would not expose the wearer to a hazard associated with a substantially more serious injury or illness than the potential acute health effects of wildfire smoke exposure. When such filtering facepiece respirators are provided and used strictly for protection against wildfire smoke, the employer may implement and follow the Wildfire Smoke Respiratory Protection Program as described in Appendix A of this standard in lieu of conducting medical evaluations and fit testing, which are otherwise required under the Respiratory Protection Standard – OAR 437-004-1041.
(d) Required use of respirators in accordance with the Respiratory Protection Standard – OAR 437-004-1041. Whenever employee exposure to PM2.5 is at or above 500.4 µg/m3 (AQI 501), even after the implementation of engineering and administrative controls, ensure that employees wear appropriate NIOSH-approved respirators that protects wearers from PM2.5 when such use would not expose the wearer to a hazard associated with a substantially more serious injury or illness than the potential acute health effects of wildfire smoke exposure. For respirators used exclusively to protect employees from wildfire smoke concentrations of PM2.5 at or above 500.4 µg/m3 (AQI 501), develop and implement a complete Respiratory Protection Program in accordance with OAR 437-004-1041, Respiratory Protection.

Note: The requirements of subsections (7)(c) and (7)(d) do not apply to occupants of employer-provided housing while they are inside the housing.
Note: Elastomeric respirators are distinct from filtering facepiece respirators. If elastomeric respirators are used to reduce employee exposure to wildfire smoke at any PM2.5 concentration, employers must comply with all applicable requirements under of the Respiratory Protection Standard – OAR 437-004-1041.

STATUTORY/OTHER AUTHORITY: ORS 654.025(2), 654.035, 656.726(4)

STATUTES/OTHER IMPLEMENTED: ORS 654.001 through 654.295

OAR 437-004-9791
Protection from Wildfire Smoke
Appendix A:
Mandatory Workplace Guidance for
THE USE OF FILTERING FACEPIECE RESPIRATORS TO ADDRESS WILDFIRE SMOKE

This appendix applies only to employers covered by this standard that require NIOSH-approved filtering facepiece respirators, including N95, P95, R95, N99, P99, N100 and P100, to be used by their employees strictly for wildfire smoke exposures when the work location ambient air concentrations of PM2.5 is at or above 200.9 µg/m^3 (AQI 251) and below 500.4 µg/m^3 (AQI 501).

Note: Employer supplies of NIOSH-approved filtering facepiece respirators for required use under this standard should include an adequate size selection for exposed employees.

Filtering facepiece respirators are disposable, negative-pressure, air purifying respirators where an integral part of the facepiece or the entire facepiece is made of air contaminant filtering material. This appendix does not apply to other types of respirators, including but not limited to elastomeric tight-fitting respirators, nor does it apply to situations where workers use filtering facepiece respirators for protection against air contaminants other than PM2.5 from wildfire smoke.

Employers whose workers are required to wear filtering facepiece respirators to protect against wildfire smoke exposures when workplace ambient air concentrations of PM2.5 is at or above 200.9 µg/m^3 (AQI 251) must either develop and implement a respiratory protection program in accordance with the Respiratory Protection Standard (OAR 437-004-1041), or a Wildfire Smoke Respiratory Protection Program in accordance with the following requirements when workplace ambient air concentration of PM2.5 is under 500.4 µg/m^3 (AQI 501):

(A) Employee training. Employers must ensure that employees wearing filtering facepiece respirators are trained in the proper use of the respirators, including putting them on and removing them, any limitations on their use, how to care for the respirator, and the ability to demonstrate a seal check as described in section (B) of this appendix.

(B) Filtering facepiece respirator user seal check. Each employee who uses a filtering facepiece respirator must perform a user seal check to ensure a sufficient face fit to maximize effectiveness each time the respirator is put on. Either the positive or negative pressure checks listed in this appendix, or the respirator manufacturer's recommended user seal check method must be used.

1. Instructions for positive pressure user seal check. Once you have properly donned the respirator, place your hands over the facepiece, covering as much surface area as possible. Exhale gently into the facepiece. The face fit is considered sufficient if a slight positive pressure is being built up inside the facepiece without feeling air passing between your face and the facepiece. If the particulate respirator has an exhalation valve, then performing a positive pressure check may not be possible. In such cases, a negative pressure check must be performed.
2. Instructions for negative pressure user seal check. Negative pressure seal checks are typically conducted on particulate respirators that have exhalation valves. Once you

have properly donned the respirator, cover the filter surface with your hands as much as possible and then inhale gently. The face fit is considered sufficient if the facepiece slightly collapses towards your face without feeling air passing between your face and the facepiece.

3. Correcting problems discovered during the seal check. In the case of either type of seal check (positive or negative), if air leaks around the nose, use both hands to readjust the nosepiece by placing your fingertips at the top of the metal nose clip. Slide your fingertips down both sides of the metal strip to more efficiently mold the nose area to the shape of your nose. Readjust the straps along the sides of your head until a proper seal is achieved.

(C) Filtering facepiece respirator storage and replacement. Store, maintain, and replace so that they do not present a health hazard to the user.

OAR 437-004-9791
Protection from Wildfire Smoke
Appendix B:
Information for Wildfire Smoke Protection

Table 1: Air Quality Index (AQI) Values and Equivalent Concentrations for PM2.5, and 5-3-1 Visibility Index Values

AQI Values	PM2.5 Concentration in $\mu g/m^3$	Visibility Index Values (How far you can see)
0 – 50	0.0 – 12.0	over 15 miles
51 – 100	12.1 – 35.4	5 – 15 miles
101 – 150	35.5 – 55.4	3 – 5 miles
151 – 200	55.5 – 150.4	1 – 3 miles
201 – 300	150.5 – 250.4	1 mile
301 and higher	250.5 and higher	less than 1 mile

Note: The AQI, as used in this standard, is a recognized proxy to identify worker exposure to PM2.5 for which traditional occupational exposure limits have not been established. The EPA AQI risk category labels were specifically developed to advise the public of the community health risk levels associated with air quality conditions in a general population setting. The AQI calculation allows for a measurement that is easily accessible to both employers and employees.

Note: When estimating the current AQI value by using the 5-3-1 Visibility Index, determine the limit of your visual range by looking for distant targets or familiar landmarks such as mountains, mesas, hills, or buildings at known distances (miles). The visual range is that point at which these targets are no longer visible. Ideally, the viewing of any distance target should be made with the sun behind you. Looking into the sun or at an angle increases the ability of sunlight to reflect off of the smoke, and thus making the visibility estimate less reliable.

Table 2: Protection from Wildfire Smoke Standard Requirements by AQI Value

AQI Value	General Requirements
101 - 250	1. Assess and monitor air quality at each work location where employees are exposed; 2. Provide and document employees training; 3. Implement two-way communication system; 4. Implement engineering and administrative controls; and 5. Provide NIOSH-approved filtering facepiece respirators for voluntary use.
251 - 500	1. 1 through 4 for AQI 101 – 250 above; and 2. Provide NIOSH-approved filtering facepiece respirators for mandatory use by implementing a Wildfire Smoke Respiratory Protection Program in accordance with Appendix A.
501 and above	1. 1 through 4 for AQI 101 – 250 above; and 2. Provide NIOSH-approved respirators for mandatory use by implementing a Respiratory Protection Program in accordance with OAR 437-004-1041.
See rules for complete requirements.	