



PROPOSED RULE MAKING

CR-102 (July 2022)
(Implements RCW 34.05.320)
 Do **NOT** use for expedited rule making

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DATE: May 10, 2023

TIME: 1:36 PM

WSR 23-11-029

Agency: Department of Labor and Industries (L&I)

- Original Notice**
 Supplemental Notice to WSR _____
 Continuance of WSR _____

- Preproposal Statement of Inquiry was filed as WSR 20-21-093 ; or**
 Expedited Rule Making--Proposed notice was filed as WSR _____; or
 Proposal is exempt under RCW 34.05.310(4) or 34.05.330(1); or
 Proposal is exempt under RCW _____.

Title of rule and other identifying information: (describe subject) Wildfire Smoke. Chapter 296-820 WAC and chapter 296-307 WAC, Part G-1

Hearing location(s):

Date:	Time:	Location: (be specific)	Comment:
July 18, 2023	10:00 a.m.	Hampton Inn by Hilton 2010 South Assembly Road Spokane, WA 99224	A pre-hearing overview will occur one hour prior to the start of each public hearing. The hearings will begin at the indicated times and will continue until all oral comments are received.
July 19, 2023	10:00 a.m.	Red Lion Hotel Columbia Center 1101 North Columbia Center Blvd. Kennewick, WA 99336	
July 20, 2023	10:00 a.m.	Spring Hill Suites by Marriott 4040 Northwest Avenue Bellingham, WA 98226	
July 25, 2023	10:00 a.m.	Clark College at Columbia Tech Center 18700 SE Mill Plain Blvd. Vancouver, WA 98683	
July 26, 2023	10:00 a.m.	Department of Labor & Industries 12806 Gateway Drive South Tukwila, WA 98168	
July 27, 2023	10:00 a.m.	Yakima Valley College 1405 West Nob Hill Blvd., Meeting Room 122 Yakima, WA 98902	
July 28, 2023	2:00 p.m.	Virtual and telephonic hearing To join electronically: https://lni-wa-gov.zoom.us/j/87690786178?pwd=WWNwTTFzeS9TK0NGVUVNMmJkUmVZZz09 Password (if prompted): Wildfire@1	
		To join by phone (audio only):	

253-205-0468 or 253-215-8782
Meeting ID: 876 9078 6178
Passcode: 4682009778

Date of intended adoption: August 18, 2023 (Note: This is **NOT** the **effective** date)

Submit written comments to:

Name: Cynthia Ireland
Address: Department of Labor & Industries
Division of Occupation Safety and Health
PO Box 44620
Olympia, WA 98504-4620
Email: Cynthia.Ireland@Lni.wa.gov
Fax: 360-902-5619
Other:
By (date) August 4, 2023 by 5:00 p.m.

Assistance for persons with disabilities:

Contact Cynthia Ireland
Phone: 360-791-5048
Fax: 360-902-5619
TTY:
Email: Cynthia.Ireland@Lni.wa.gov
Other:
By (date) 5:00 p.m. July 5, 2023

Purpose of the proposal and its anticipated effects, including any changes in existing rules: In September 2020, L&I received a petition for rulemaking requesting immediate rulemaking to address the hazards associated with wildfire smoke. Wildfire smoke presents hazards that employers and workers in affected regions must understand. Smoke from wildfires contains chemicals, gases and fine particles that can harm health. Proper protective equipment, exposure controls, and training are needed for employees working in wildfire regions.

L&I issued emergency rules in the summer of 2021 and 2022, and began the permanent rulemaking process. Prior to the issuance of the emergency rule in summer 2021, there were no regulations to address the hazard of wildfire smoke inhalation among outdoor workers in Washington State.

Create a new chapter, chapter 296-820 WAC, Wildfire Smoke, and duplicate these new requirements into chapter 296-307 WAC, Part G-1, Safety Standards for Agriculture.

WAC 296-820-805 and 296-307-09805 Purpose and scope. This section sets the scope of the rule, including exemptions.

WAC 296-820-810 and 296-307-09810 Definitions.

- Add applicable definitions relating to wildfire smoke. These include: adverse symptoms requiring medical attention, air quality index (AQI), Current PM_{2.5}, emergency response, high-efficiency particulate air (HEPA) filter, NIOSH, NowCast, PM_{2.5}, wildfire smoke, wildlands.
- Add a note relating to the recent proposed revisions to the AQI from the Environmental Protection Agency and a link to the specific Federal Register.

WAC 296-820-815 and 296-307-09815 Identification of harmful exposures.

Create this section to address methods that can be used by the employer to determine employee exposures to PM_{2.5}.

WAC 296-820-820 and 296-307-09820 Hazard communication.

Create this section requiring employers to establish and implement a system for communicating wildfire smoke hazards in a form readily understandable by all affected employees, including provisions designed to encourage employees to inform the employer of wildfire smoke hazards at the worksite without fear of reprisal.

WAC 296-820-825 and 296-307-09825 Information and training.

Create this section requiring employers to provide all workers with effective information and training regarding wildfire smoke before work that exposes the worker to a PM_{2.5} concentration of 20.5 µg/m³ (AQI 69) or more. In addition, this training must be provided annually. Additional information is located in Appendix A.

WAC 296-820-830 and 296-307-09830 Exposure symptom response.

Create this section requiring employers to:

- Monitor employees displaying symptoms of wildfire smoke exposure.
- Allow employees to seek medical treatment.
- Have effective provisions made in advance for prompt medical treatment of employees who display adverse symptoms of wildfire smoke exposure.
- Ensure workers experiencing adverse symptoms requiring medical attention be moved to a location that ensures sufficient clean air.

WAC 296-820-835 and 296-307-09835 Exposure controls.

Create this section requiring employers to implement exposure controls. This includes:

- Encouraging employers to implement exposure controls where the current PM_{2.5} is 20.5 µg/m³ (AQI 69) or more.
- Requiring employers to implement exposure controls where the current PM_{2.5} is 35.5 µg/m³ (AQI 101) or more.

WAC 296-820-840 and 296-307-09840 Respiratory protection.

Create this section requiring employers to provide respiratory protection. This includes:

- Encouraging employers to provide respirators at no cost to employees upon request where the current PM_{2.5} is 20.5 µg/m³ (AQI 69) to 35.4 µg/m³ (AQI 100).

- Requiring employers to provide N95 filtering-facepiece respirators at no cost to all exposed employees where the current PM_{2.5} is 35.5 µg/m³ (AQI 101) to 250.4 µg/m³ (AQI 300).
- Requiring employers to distribute N95 filtering-facepiece directly to each exposed employee where the current PM_{2.5} is 250.5 µg/m³ (AQI 301) to 500.3 µg/m³ (AQI 499).
- Requiring employers to have employees enrolled in a complete respiratory program in accordance with chapter 296-842, Respirators, where the current PM_{2.5} is 500.4 µg/m³ (AQI 500) to 554.9 µg/m³ (beyond the AQI).
- Requiring employers to have employees enrolled in a complete respiratory program in accordance with chapter 296-842, Respirators. The employer must provide and require to be worn a respirator equipped with P100 filters where the current PM_{2.5} is 555 µg/m³ (beyond the AQI) or more.
- Requiring respirators to be NIOSH-approved devices.
- Requiring respirators to be cleaned, stored, maintained, and replaced and are in good working order.

WAC 296-820-845 and 296-307-09845 Measuring PM_{2.5} levels at the worksite.

Create this section allowing employers to use a direct-reading particulate monitor to identify harmful exposures as an alternative to WAC 296-820-815 and 296-307-09815, Identification of Harmful Exposures.

- If used, the monitor must comply with this section and the monitor cannot underestimate employee exposures to wildfire smoke; or the employer has obtained information on a possible error of the monitor and has manufacturer or published literature to account for the possible error.
- The monitor must be designed and manufactured to measure the concentration of airborne particle sizes.
- The monitor must be calibrated, maintained, and used in accordance with the manufacturer's instructions.
- The person supervising, directing, or evaluating workplace monitoring must have the training or experience necessary to ensure the correct use of the monitor and can interpret the results.

WAC 296-820-850 and 296-307-09850 Appendix A: Protection from wildfire smoke information and training (mandatory)

Create this section to include:

- The health effects and adverse symptoms of wildfire smoke.
- The importance of informing the employer when the employee is experiencing adverse symptoms of wildfire smoke exposure.
- The right to obtain medical treatment without fear of reprisal.
- Add a table summarizing the key requirements of the proposed rule.
- How employees can obtain the current PM_{2.5}, and the employer's methods to communicate the current PM_{2.5}.
- The employer's response plan for wildfire smoke including methods to protect employees from wildfire smoke, and the exposure symptom response procedures.
- The importance, limitations, and benefits of using a properly fitted respirator when exposed to wildfire smoke.
- The risks and limitations of using an unfitted respirator, and the risks of wearing a respirator without a medical evaluation.
- How to properly put on, use, and maintain the respirators provided by the employer.

WAC 296-820-855 and 296-307-09855 Appendix B: Selecting direct-reading particulate monitors (mandatory).

Create this section to provide guidance when selecting a direct-reading particulate monitor and determining compliance with WAC 296-820-855 and 296-307-09855.

WAC 296-820-860 and 296-307-09860 Appendix C: Calculating the air quality index for PM_{2.5} (nonmandatory).

Create this section to provide a calculation relating to the AQI for PM_{2.5}.

Reasons supporting proposal: Wildfire smoke is composed of harmful chemicals and tiny particles suspended in the air that present a significant health hazard for workers exposed to it. These particles can irritate the lungs and cause serious or even fatal health effects, such as reduced lung function, bronchitis, worsening of asthma, and heart failure. Compared with the general public, workers have additional risk factors in that they may spend more time outdoors in the smoke, and have more physical exertion, which increases the amount of smoke that they breathe into their lungs. Individuals considered sensitive to wildfire smoke exposure, such as those with asthma and those who work outdoors, are part of the workforce.

A major component of wildfire smoke is particulate matter with an aerodynamic diameter less than 2.5 micrometers (PM_{2.5}); inhalation of PM_{2.5} can cause cardiovascular health effects and increases the risk of death. PM_{2.5} is elevated during wildfire smoke events, causing a risk to workers. Wildfire smoke can cause mild symptoms like coughing, stinging eyes, runny nose, and scratchy throat. Wildfire smoke can also cause serious and sometimes fatal health effects, including chest pain and heart failure, asthma attacks, trouble breathing and reduced lung function.

The U.S. Environmental Protection Agency's (EPA) Air Quality Index (AQI) is an informational tool for reporting air quality and is based, in part, on particulate matter (PM_{2.5}) measurements. Under the Clean Air Act, the EPA sets and reviews national air quality standards for several air pollutants, including PM_{2.5}. AQI is a level of 1 to 500 divided into six color-coded categories that correspond to different levels of health concerns (good, moderate, unhealthy for sensitive groups, unhealthy, very unhealthy, and hazardous). The EPA categorizes the AQI level of 101 as "unhealthy for sensitive groups" and corresponds to PM_{2.5} concentrations of 35.5 µg/m³.

California and Oregon are currently the only other states with rules for occupational exposure to wildfire smoke. California's rule requires employers take preventative measures at a PM_{2.5} of 55.5 µg/m³ (AQI 151), and Oregon requires preventative measures at a PM_{2.5} of 35.5 µg/m³ (AQI 101). California's rule requires employers to implement engineering and administrative controls and make respirators available for voluntary use at a PM_{2.5} of 55.5 µg/m³ (AQI 151). Mandatory respirator use is required when the PM_{2.5} is 500.4 µg/m³ (AQI 501) or greater with an assigned protection factor (APF) such that the PM_{2.5} levels inside the respirator are less than 55.5 µg/m³ which would require respirators that are more protective than N95s at 555 µg/m³ (beyond the AQI). When respirators are required, compliance with California's respiratory program rules, including fit testing and medical evaluations, are also required. Oregon's rule requires employers to implement engineering and administrative controls and make respirators available for voluntary use at a PM_{2.5} of 35.5 µg/m³ (AQI 101). Oregon's rule also requires N95 use at 200.9 µg/m³ (AQI 251) without fit-testing or medical evaluations, and when the PM_{2.5} is 500.4 µg/m³ (AQI 501) or greater, a full respiratory protection program is required, including fit testing and medical evaluations.

For the past several summers, L&I's Division of Occupational Safety and Health (DOSH) received inquiries about wildfire smoke hazards, especially for outdoor workers. DOSH has put out guidance and information on best practices but recognizes there has been a gap under previous rules to adequately protect workers from this hazard and to ensure employers and workers understand what is required. After the unprecedented wildfire smoke events in 2020, L&I reviewed the need for rules and received a petition requesting rulemaking. L&I determined that rulemaking was needed to address the hazard and initiated permanent rulemaking on October 20, 2020, WSR 20-21-093. L&I subsequently filed two separate emergency rulemakings, one for summer 2021 filed July 16, 2021, WSR 21-15-067 and the second on June 1, 2022, WSR 22-12-094. Between January 2021 and October 2022, L&I held 10 virtual stakeholder meetings and three in-person stakeholder meetings across the state.

Washington State L&I recognizes that employers and employees need regulations that are clear, actionable, and protective. Consistent with the mandate under the Washington Industrial Safety and Health Act (WISHA), L&I looked at the best available evidence and determined that there are feasible measures to address the health hazards wildfire smoke presents for workers. The proposed rules:

- Address the current ambiguity regarding allowable exposures to wildfire smoke by specifying threshold-based interventions for PM_{2.5} exposure.
- Provide protections for outdoor workers, who have the highest exposures.

To assist employers with implementation, L&I plans on providing user-friendly tools and templates including training slide decks and templates for the employer's wildfire smoke response plan.

Statutory authority for adoption: RCW 49.17.010, 49.17.040, 49.17.050, and 49.17.060.

Statute being implemented: Chapter 49.17 RCW

Is rule necessary because of a:

- | | | |
|-------------------------|------------------------------|--|
| Federal Law? | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
| Federal Court Decision? | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
| State Court Decision? | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |

If yes, CITATION:

Agency comments or recommendations, if any, as to statutory language, implementation, enforcement, and fiscal matters: No additional comments

Type of proponent: Private Public Governmental

Name of proponent: (person or organization) Department of Labor & Industries

Name of agency personnel responsible for:

	Name	Office Location	Phone
Drafting:	Kat Gregersen	Tumwater, WA	360-902-5530
Implementation:	Craig Blackwood	Tumwater, WA	360-902-5828
Enforcement:	Craig Blackwood	Tumwater, WA	360-902-5828

Is a school district fiscal impact statement required under [RCW 28A.305.135](#)? Yes No

If yes, insert statement here:

The public may obtain a copy of the school district fiscal impact statement by contacting:

Name:
Address:

Phone:
Fax:
TTY:
Email:
Other:

Is a cost-benefit analysis required under [RCW 34.05.328](#)?

Yes: A preliminary cost-benefit analysis may be obtained by contacting:

Name: Cynthia Ireland, Administrative Regulations Analyst

Address: Department of Labor & Industries
Division of Occupational Safety and Health
PO Box 44620
Olympia, WA 98504-4620

Phone: 360-791-5048

Fax: 360-902-5619

TTY:

Email: Cynthia.Ireland@Lni.wa.gov

Other:

No: Please explain:

Regulatory Fairness Act and Small Business Economic Impact Statement

Note: The [Governor's Office for Regulatory Innovation and Assistance \(ORIA\)](#) provides support in completing this part.

(1) Identification of exemptions:

This rule proposal, or portions of the proposal, **may be exempt** from requirements of the Regulatory Fairness Act (see [chapter 19.85 RCW](#)). For additional information on exemptions, consult the [exemption guide published by ORIA](#). Please check the box for any applicable exemption(s):

This rule proposal, or portions of the proposal, is exempt under [RCW 19.85.061](#) because this rule making is being adopted solely to conform and/or comply with federal statute or regulations. Please cite the specific federal statute or regulation this rule is being adopted to conform or comply with, and describe the consequences to the state if the rule is not adopted.

Citation and description:

This rule proposal, or portions of the proposal, is exempt because the agency has completed the pilot rule process defined by [RCW 34.05.313](#) before filing the notice of this proposed rule.

This rule proposal, or portions of the proposal, is exempt under the provisions of [RCW 15.65.570](#)(2) because it was adopted by a referendum.

This rule proposal, or portions of the proposal, is exempt under [RCW 19.85.025](#)(3). Check all that apply:

[RCW 34.05.310](#) (4)(b)

(Internal government operations)

[RCW 34.05.310](#) (4)(c)

(Incorporation by reference)

[RCW 34.05.310](#) (4)(d)

(Correct or clarify language)

[RCW 34.05.310](#) (4)(e)

(Dictated by statute)

[RCW 34.05.310](#) (4)(f)

(Set or adjust fees)

[RCW 34.05.310](#) (4)(g)

((i) Relating to agency hearings; or (ii) process requirements for applying to an agency for a license or permit)

This rule proposal, or portions of the proposal, is exempt under [RCW 19.85.025](#)(4) (does not affect small businesses).

This rule proposal, or portions of the proposal, is exempt under RCW _____.

Explanation of how the above exemption(s) applies to the proposed rule:

(2) Scope of exemptions: Check one.

The rule proposal is fully exempt (*skip section 3*). Exemptions identified above apply to all portions of the rule proposal.

The rule proposal is partially exempt (*complete section 3*). The exemptions identified above apply to portions of the rule proposal, but less than the entire rule proposal. Provide details here (consider using [this template from ORIA](#)):

The rule proposal is not exempt (*complete section 3*). No exemptions were identified above.

(3) Small business economic impact statement: Complete this section if any portion is not exempt.

If any portion of the proposed rule is **not exempt**, does it impose more-than-minor costs (as defined by RCW 19.85.020(2)) on businesses?

No Briefly summarize the agency's minor cost analysis and how the agency determined the proposed rule did not impose more-than-minor costs. L&I estimates the total cost of compliance with the proposed rule to be \$10.7 million to

\$14.6 million each year for all the affected businesses. Based on this cost range and the share of affected businesses in each industry estimated, the average per-business cost of the proposed rule is in a range of \$196 to \$3,740 depending on the specific industry to which a business belongs. Comparing this per-business cost to the minor cost threshold of 1 percent of annual payroll for each industry shows this unit cost is far below the minor cost threshold for all industries.


Industry	Per-business cost	Minor cost threshold
Agriculture, Forestry, Fishing and Hunting (11)	\$380 - \$521	\$5,914
Mining, Quarrying, and Oil and Gas Extract (21)	\$332 - \$454	\$12,915
Utilities (22)	\$494 - \$682	\$28,354
Construction (23)	\$232 - \$314	\$5,852
Manufacturing (31-33)	\$650 - \$901	\$29,247
Wholesale Trade (42)	\$276 - \$375	\$10,604
Retail Trade (44-45)	\$614 - \$851	\$22,588
Transportation and Warehousing (48-49)	\$518 - \$715	\$15,969
Information (51)	\$587 - \$812	\$77,467
Finance and Insurance (52)	\$369 - \$506	\$19,916
Real Estate and Rental and Leasing (53)	\$235 - \$318	\$5,647
Professional, Scientific, and Technical Services (54)	\$214 - \$289	\$9,457
Management of Companies and Enterprises (55)	\$1,307 - \$1,824	\$93,730
Administrative and Support and Waste Management (56)	\$318 - \$435	\$8,421
Educational Services (61)	\$1,595 - \$2,227	\$5,617
Health Care and Social Assistance (62)	\$226 - \$306	\$4,513
Arts, Entertainment, and Recreation (71)	\$428 - \$589	\$5,647
Accommodation and Food Services (72)	\$386 - \$530	\$4,733
Other services except public administration (81)	\$196 - \$264	\$2,542
State and Local Governments (99)	\$2,672 - \$3,740	\$203,393
Overall	\$325 - \$444	\$11,968

Yes Calculations show the rule proposal likely imposes more-than-minor cost to businesses and a small business economic impact statement is required. Insert the required small business economic impact statement here:

The public may obtain a copy of the small business economic impact statement or the detailed cost calculations by contacting:

Name: Cynthia Ireland, Administrative Regulations Analyst
 Address: Department of Labor & Industries
 Division of Occupational Safety and Health
 PO Box 44620
 Olympia, WA 98504-4620
 Phone: 360-791-5048
 Fax: 360-902-5619
 TTY:
 Email: Cynthia.Ireland@Lni.wa.gov
 Other:

Date: May 10, 2023
Name: Joel Sacks
Title: Director

Signature: 
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