

## **Smoke and Excessive Heat Rulemaking**

**May 27, 2021**

**1pm**

### Agenda

1 PM -1:30 PM - AQI and air quality advisories and Q&A - Tom Roick, Peter Brewer from DEQ

1:30 PM 2:30 PM - draft wildfire smoke rule and Q&A

2:30 PM - 2:40 PM - Break

2:40 PM - 4:00 PM - draft excessive heat rule and Q&A

4:00 PM – Adjourn

Ted Bunch with Oregon OSHA started the meeting at 1:05pm.

**AQI and air quality advisories:** Tom Roick (DEQ) walked through the process that employer/employee might go through to get AQI using these websites:

- Doing an online search for Oregon AQI can be difficult to know that data is accurate/timely from other countries/companies for example. Best to validate that users are on a government-sponsored website such as DEQ. <https://oraqi.deq.state.or.us/home/map> Tom Roick walked through the query options on this site (AQI, ozone, concentrations, etc.). Stations in “gray” are offline and they are working on restoring it. Be aware of time delays in data refreshing (time zone and top of the hour refreshes).
- Go to EPA AirNow’s website to see information for the whole country (since each state may have their own vendor). [Epa.gov/airnow/](https://epa.gov/airnow/)
- Fire and smoke map (EPA AirNow) <https://fire.airnow.gov/> This covers some areas that DEQ does not have monitoring stations. EPA is going through a process of providing a correction factor for wildfire smoke.
- Questions?
  - Q. Attendee: Of the 64 monitors, could you explain where you determine where those monitors are set up?
  - Tom Roick: some are located because we are required to provide data in those areas, per EPA. We try to provide more coverage based on areas of large populations. With wildfires, we are keeping wildfire smoke in mind as we expand so we can set up in areas that we may not have had coverage before.
  - Q. Attendee: Which value would we use...EPA, purple air, or DEQ's?
  - Tom Roick: our DEQ stations are the best places to look to for data to make decisions. Caution for PurpleAir is that we cannot validate how accurate the data is, though it has valuable data on smoke distribution and AQI across the state.
  - Q. Attendee: Can you tell us how many days this year Oregon has had an AQI over 101 at any location?
  - Tom Roick: We can get that information available to Ted Bunch and Tom Bozicevic to distribute. Ted has some select city data.
  - Q. Attendee: When a monitoring station goes grey, how long does it typically stay down? When can people expect for that monitoring station to be up and running again?
  - Tom Roick: it depends on the nature of the technical problem. Sometimes just a remote reboot (few hours) but sometimes staff may have to go from Hillsboro office to the station (a few days up to a week). During wildfire season, getting those up and running is important.
  - Q. Attendee: Rule says if you can't use EPA's or Oregon's website, employer has to measure the particulate matter concentration 2.5PM in the area that the workers are working, especially appropriate for forestry workers who may be a distance from the sensors in place. Is there a question about the accuracy of PurpleAir sensor readings that employers gain from their own devices? If there is no question on the accuracy, why does rule state to rely on 5-3-1 measure?
  - Tom Roick: previous meeting discussed accuracy and how to gain accuracy of purchased devices. We know our devices correlate well to the Federal Standard. The instrument needs to be correlated to the Federal Standard to apply correction. Low-cost sensors seem to read on the higher side if this correction factor is not in place. 5-3-1 is an option if employers do not have this sensor with correction factor or access to station data.

### **AQI and air quality advisories: Peter Brewer (DEQ)**

- Discussed process of issuing air quality advisories. We look at existing weather and fires and predict how and when they would contribute smoke to populated areas. Conference call with up to 225 people across the state. Before making a call, we look for those times that will be over the air quality standard for a day or longer. Coordinate with National Weather Service, among others that target the general population.
- Talked about how people can sign up to receive advisories: Put in your email or phone number (you can get texts!). You should then be led to a menu where you can choose what bulletins to get from DEQ  
<https://public.govdelivery.com/accounts/ORDEQ/subscriber/new>
- Questions?
  - Q. Attendee: How frequently should an employer check the online sites through a workday/shift?
  - Peter Brewer: as often as you can check it is good, but maybe every hour or couple of hours (maybe four times in an 8-9 hour shift). It may be less frequent if you are working in the area and can see the conditions. Data will only be updated every hour or may be averaged out for every couple of hours.  
<https://public.govdelivery.com/accounts/ORDEQ/subscriber/new>

### **Ted Bunch (OSHA)**

- Slide: PM2.5 Daily AQI Values in 2020, Eugene, OR
- Available to the public at EPA's website: <https://www.epa.gov/outdoor-air-quality-data>

### **Protection from Wildfire Smoke Draft document**

- Removed reference to 12.1 under (1) Scope and application
- Removed one of the exceptions to the rule
- Removed Note that was under (d)
- Expanded definition slightly in terms of Sensitive group
- (4) Identification of harmful exposures: one removed and two combined
- Added definition of sensitive group
- (6) Employer two-way communication, 151 changed to 101
- Removed Note 2 from Page 3 of 4, below (7)(b)
- (c) Control of Respiratory Protective Equipment and in NOTE 1 below, AQI lowered from 151 to 101
- (8) Recordkeeping, sentence added to the end, "be maintained until the official end of fire season for the county the worksite is located."
- Table first cell updated to remove 12.1
- Questions?
  - Q. Attendee: I may have missed this but what is the expectation for employers regarding employees within this sensitive group from protections to ensure work continuation or pay? ... Essentially, other than training what are employers to do with this recognition?
  - A. Tom Bozicevic: In the previous draft, we identified sensitive groups but it would be difficult to write separate rules for sensitive groups. The definition is for the purpose of training. In the training, there would be information on who is considered a sensitive worker. Based on that training, workers could determine that for themselves. Currently the AQI for implementing those control methods is 35.5 ug/m<sup>3</sup> to consider the sensitive group workers. We have not talked about any pay structure for workers if the air quality is so bad that the employer chooses not to have them work that day. We welcome feedback.
  - Q. Attendee: So, is the mandatory respiratory protection standard triggered at an AQI of 101?
  - A. Tom Bozicevic: That considers sensitive group workers. Feedback welcome on that.
  - Q. Attendee: When would employers ever be required to implement a full Respiratory Protection Program under this rule?
  - A. Tom Bozicevic: We are determining this. There would be employees already doing certain tasks that would require a full respiratory protection program. Those employers would roll this for wildfire smoke into that program. We are still trying to figure it out for those employers that it would be strictly for wildfire smoke.
  - Q. Attendee: 1) numbers going down from 151 to 101. Why make it mandatory with that change? Why did that change occur? 2) Also, we have to train on being in a sensitive group. Employees may question why they have to wear respirators if not in a sensitive group. [In response to Tom's comment

- below] I propose changing the mandate. Greater hazard could be created. Time period is not addressed in the rule. Would like to propose we go off a 24-hour weighted average.
- Tom Bozicevic: 1) We need to start somewhere and that considers sensitive group workers. We didn't want to start at the highest point and work our way down. 2) if a person is classified as a sensitive group worker, they may not be medically fit to wear a filtering facepiece. Language may include that the respirator could help protect them from wildfire smoke but expose them to a hazard of wearing the respirator. This is information we will need to further look at.
  - Q. Attendee: Please clarify "change work schedule" in admin controls: This should include, at a minimum, working earlier or later shifts (depending on the exposure risk), working different days (when exposures will be reduced), and working shorter shifts (this one tricky as we don't want workers forced to work shorter shifts if means losing income they desperately need - so maybe we have to add that workers are given that option as it seems some chose even when losing wages and some were denied that option and/or including language about maintaining wages/benefits during these shortened work schedules).
  - Tom Bozicevic: Yes, changing work schedules if employers have the means to do that is the intent of that language.
  - Q. Attendee: Does Oregon OSHA have the authority to write into rules that employers must provide wages in lieu of work due to wildfire smoke (no-fault event)?
  - A. Renee Stapleton: I think the comment earlier was more to let people know that if there is something that they feel needs to be considered, then to let us know. We are not at that stage at this point to have that evaluated.
  - Q. Attendee: How is the term "if available" defined in NOTE 1 under Section 7?
  - Ted Bunch: Medical evaluations and fit testing might not always be available. Tom Bozicevic: written with previous rulemaking in mind in case we run up against challenges in access to supplies.
  - Q. Attendee: Process question - would OSHA/ OHA please send discussion questions in advance as opposed to just drafts?
  - Tom Bozicevic: Attendees can send questions after receiving the drafts, but otherwise we don't know what questions will be raised.
  - Q. Attendee: Not all workers have ability to use sick leave with hazards of smoke (temporary or seasonal workers). Provided pay is a good thing to consider. Concerned with quality control in training that will be provided, especially with potential language barriers of audience.
  - Q. Carol Trenga: Related to health impact/sensitive populations, there really is no threshold for health impacts from particulate matter in general. No level to which it is not harmful. Some people may not know that they are in a sensitive group but would still benefit from protection. In almost every case, it is false that wearing a respirator would be more detrimental than being exposed to certain levels of wildfire smoke. People might go in and out of that group depending on their health status.
  - Q. Attendee: How are we supposed to participate and provide thoughtful feedback when we are bouncing all over the rule. Can we start at the beginning and talk about it section by section? I'm having a hard time keeping up when we go all over the place from question to question.
  - Tom Bozicevic: We can take that approach into consideration for the next meeting.
  - Q. Attendee: Do I understand that 101 requires full gear for everyone?  
Tom Bozicevic: That would be where we started out and we want feedback on that. The only exception we have with that is with the limited time durations when AQ is 101-151, when respiratory protection would not be required: see (b)(C)(i-iii) of draft rule for 1 hour to 1.5 hours based on 8 to 12+ hour shifts. Can be cumulative.
  - Q. Attendee: Can OR-OSHA walk through challenges of fit testing for employees who wear facial hair and how this rule will take that into consideration?
  - A. Tom Bozicevic: That has always been an issue. Employers would have to work with their employees regarding that.
  - Q. Attendee: Why not utilize the CA approach with the AQI triggers? Concern is the drop from 151 to 101.
  - A. Tom Bozicevic: CA rule has triggers for AQI, I believe it is for above 500 would require respiratory protection, below would be voluntary. CA may have to go back to rulemaking to address that. If we were to draft separate rules for triggering when respiratory protection would be required in regards to sensitive groups is problematic. Starting lower makes sense at this time but feedback on recommended threshold levels is welcome.

- Q. Attendee: Concerns with 500 forestry workers spread throughout an area [in regards to AQI readings] and concerns with the validity of a reading that is a 24-hour average.
- Q. Attendee: Is medical fit testing considered "available" if an employee is wearing facial hair?
- A. Tom Bozicevic: In regards to facial hair, that is an important part of respiratory protection plan but is really something separate from this rulemaking. Employers would have to work through that with employees to make sure it is effective. Answer in chat: Fit testing can not be adequately be done when the employee has facial hair, as it does not allow for a tight fit. It is not considered a matter of availability.
- Q. Attendee: Can you please explain the interplay between Note 1 and 2 under section 7?
- A. Tom Bozicevic: read those sections and expanded on the wording. Note 1: employees are wearing respirators due to wildfire smoke who typically don't use respirators, is at 35.5 or above vs Note 2: For voluntary use at low levels, less than 35.5 ug/m<sup>3</sup>. Noted typo in Note 2 of 151.
- Q. Attendee: Challenges with employees with facial hair and fit testing. AQI could move up mid-shift. Can there be carve-outs for these situations (people come to work with facial hair and the AQI increases mid-shift)? Would the agency consider a practicability standard here? [in chat] I don't think the agency understands the issue related to facial hair... if respirators are mandatory, employees will need to be without facial hair at all times in the event of a wildfire smoke event of 101 or greater. Employees don't want that and employers don't want to be put in the position of "navigating this" with employees - it's going to lead to conflict. There is currently no proposed religious exemption or otherwise and it's a policy issue that employees DO care about.
- A. Tom Bozicevic: Discussion needed on short-term use of respirators in regards to facial hair.
- Q. Attendee: Not a question that needs answering, only a comment to staff: with wildfire smoke it changes throughout the day, might be heavy in morning if inversion, as day warms smoke might lessen until heat of the day when fire increases and smoke gets heavier. So, monitoring throughout the day seems appropriate. Forest service has hierarchy, ranger stations can contact supervisors who then contact crew leaders. Even with 500 workers updating them throughout the day isn't a barrier to monitoring.
- Q. Attendee: Shouldn't air concentration range be 101 to 150 instead of 151? 151 is the next category of risk.
- A. Ted Bunch: Yes, in the Table for Protection from Wildfire Smoke, first cell, second column should be 150 not 151.
- Q. Attendee: Forestry workers should not be working alone, usually work in crews, spread out but in same general area. Also, are required to do site inspections for hazards before working, and monitoring while working. Should not be an issue to add AQ as a potential hazard. Why does section 7 of draft rule start with engineering controls and skip over the first two levels, elimination or substitution? Could reschedule the work or send crew to other areas. Add "where feasible" to eliminate the hazard to the rule.
- Tom Bozicevic: We are using the hierarchy of controls. Oregon OSHA does not say when employees can or should not go into work.
- Attendee: 1) In WPS there is a lot of awareness building. Are there some corollaries there? 2) For sensitive work groups, want to make sure employers aren't accidentally violating employees' privacy. 3) Growers do not get paid for the product not being picked, so pay without work would be a challenge. [in chat] Have you considered training standards like the Workers Protection Standard (for pesticide application). There seems to be a lot of cross-over for smoke and heat here.
- Tom Bozicevic: We appreciate bringing up the discussion of WPS.

- BREAK

- In closing Smoke discussion

- Q. Attendee [with pending question] will email Tom Bozicevic their question as their audio was not working.
- Q. Attendee: Healthy workers are needed to allow employers to bring in crops. I understand that the employers do not get paid during times that workers don't work. Needs to be a discussion at some level. I would like to remind people of the General Duty Clause.

In chat:

- Q. Attendee: Suggest removing under note 1 for respiratory protection ...if available after medical evaluations and fit testing. Suggest removing establishing a respiratory protection program is not required. If a medical evaluation and fit testing is needed then other elements of 1910.134 should apply.
- Q. Attendee: Do I understand correctly that CA doesn't require mandatory respirator use until AQI 500? But Oregon plans to go to mandatory use (with associated fit testing, medical evaluation, etc.) at 101?
- A. This is still a preliminary draft, and as Tom as explained it is an opportunity to discuss the correct action level. Please feel free to provide a redline of the draft that reflects your thoughts on the changes you think would be appropriate. Yes, CA is at 500 and that is extremely high.

### **Excessive Heat (Gary Robertson) Updates to Draft rule**

- Added Mandatory Appendix A about clothing. Added (2) Clothing adjustment factors. Ted Bunch: there are many clothing adjustment factors out there in other peer-reviewed literature.
- Added (3) This standard applies to the control...
- Added to Heat wave definition, added link
- Added definition of Monitor
- Removed definition of Dry Bulb. Added definition of Wet bulb globe temperature
- Additions to (5) Provision of water (maximum amount of water in one hour per NIOSH). NOTE is a recommendation with the understanding that employers cannot monitor every employee in this regard.
- Addition to (6) Access to shade, physical distancing in relation to COVID rules while still in place
- Addition to (10) Acclimatization Plan
- Questions?
  - Q. Attendee: [chat] If I'm understanding the heat rule correctly, this would not allow aggies to work in their greenhouses from basically mid-April through the end of September. Looking at the historical data from last year, we got above that threshold most days in that period, most days by 10am-11am. As far as outdoor work, this would shut many down by 1-2pm most days. [Audio] When temp jumps up, nurseries will have crew come in early to end early. Should this be in the rule that doesn't really understand ag industries? Would like opportunity to give feedback on rewrite of rule.
  - A. Renee Stapleton: We would like a redline version from industries and individuals on what is or isn't workable in the draft language.
  - Q. Attendee: Is there a reason why section 2 is skipped? In version 2 that section discussed what industries are subject to all provisions.
  - A. Ted Bunch: In prior version we had a section on industries that were subject to the provisions.
  - A. Renee Stapleton: It was removed because it unnecessary information because all the other rules that surround all of our divisions will reference that it is covered, is already provided elsewhere.
  - Q. Attendee: I'd assume a heat wave likely wouldn't occur in December or November. Does the agency plan to limit this definition to certain months in a year?
  - A. Gary Robertson: No, this would be a rule that would apply year-round. I think that is why we listed certain temperatures.
  - Q. Attendee: Is that 48 oz/hour?
  - A. Ted Bunch: Yes, that is the maximum recommendation, per NIOSH.
  - Q. Attendee: Any thoughts about employees using urine color to determine if more or less water should be consumed?
  - Gary Robertson: I don't know that has ever been discussed. We will make note of that moving forward [as a tool for employees, not employers].
  - Q. Attendee: Any consideration for sections of the state that don't typically get and stay hot to permit acclimatization? I5 metro area is a prime example of hot for a few, then cooler, than hot again but usually not for 7 to 10 straight days. the one size fits all doesn't appear to reflect the various weather patterns throughout the state. S. & E. Oregon would lend itself to getting acclimatized. Albany and north, and the coast not so much but all will see temps over 80.
  - Gary Robertson: We have thought about that. I don't have a direct answer, but feedback is welcome.
  - Q. Attendee: On acclimatization, should 10b read for unacclimated workers and why 20% instead of 50% in light of the prevention measures such as assessment, training and monitoring?
  - Gary Robertson: This is a starting point. Feedback welcome.

- Crystal Weston: Yes, acclimatization plan is from NIOSH.
- Q. Attendee: Tell me the death and incident rates in Oregon based on heat. Loggers/Forestry services workers are glad when it reaches 80 degrees because they work for months in rain and cold. They are not in agreement on this regulation and it has real problems.
- A. Tom Bozicevic: There have been some incidents in past years where people in the logging industry have experienced heat illness. Not a common occurrence based on what is reported but it does occur.
- Q. Attendee: WGBT use is recognized as not being readily accessible as being understandable. How can people be expected to be aware of this and use it? When it is available online, oftentimes it is a calculated WGBT not a measured WGBT.
- Q. Attendee: look at availability and access to water for workers, is it immediate? It needs to be fairly close by for workers to be able to drink certain amounts per hour. Does the language around shade consider ample space for workers during breaks? Some workers may not be able to have water on their belt, for example.
- A. Gary Robertson: Pointed to shade language in draft rule. Pointed to the employer's duty to meet rule language.
- A. Ted Bunch: There is nothing currently in this rule about proximity to water. Do you have suggestions for language?
- Q. Attendee: Wording "immediately available" could be better than x number of feet.
- Q. Attendee: We would not support our checking our employees' urine cover. Limiting or monitoring the maximum level of water an employee can drink should be removed. We would be opposed to regulation that would limit work hours and prevent our employees from earning wages. In regards to water, "immediately available" may not be possible, but maybe "readily available." Make sure this aligns with existing regulation (like Div 4).
- A. Gary Robertson: Checking urine would not be an employer-required event but perhaps something an employee could monitor for themselves. Per the limiting of water per hour, that is something we will have to look at language cleanup. We will look back at Div 4 for language alignment.
- Q. Attendee: WGBT is not readily available. This rule is getting very complex for a typical employer to understand, to know what is triggered when. Area of education could be to encourage to drink water and take rest breaks as needed.
- Q. Attendee: It is not entirely clear in this draft where these various provisions are triggered. Not clear if triggers are based on temperatures, heat wave, tables in draft, etc. Acclimatization requirements are confusing based on what steps are needed based on cooler times of the year when those temperatures are not met.
- A. Gary Robertson: Word document for redline feedback will be sent out.
- Q. Attendee: social distancing is not needed outside now. Looking at reasonable accommodations is as far as this rule should go.
- Q. Attendee: I see many situations where employers do not readily supply ample water. We will supply a redline version. There is nothing that says that you can't be more protective of workers. Workers will not drink water when placed next to toilets and sinks. Also, water/toilets might be a quarter of a mile away.
- Q. Attendee: We found many instances of likely cases of heat stress that were not officially reported. This suggests that the rate of heat-related illness among forest workers is much higher than official statistics would imply. We have heard of heat stress complaints from workers. Training is needed on the symptoms, dangers, preventions of heat-related illness so employers can identify employees in trouble.
- Q. Attendee: Do any other states use an acclimatization plan?
- A. Gary Robertson: I don't think WA and CA as two examples have a plan.
- Q. Attendee: How many deaths are we discussing related to heat? We keep hearing about it but what does the data say?
- A. Gary Robertson and Tom B: I do not have that data readily available. We can try to get that information to share for the next meeting.
- A. Crystal with OHA: some of that information could be available from my previous PowerPoint presentation on heat illness.

Tom Bozicevic adjourned meeting at 4:05pm