As a follow-up to the Outdoor Heat Exposure meeting held on August 4, 2022, and in an effort to promote transparency and share information with stakeholders, the Department of Labor & Industries (L&I) has drafted this document to provide a copy of the questions asked during the meeting, as well as responses to those questions. All questions and feedback received by stakeholders will be considered as L&I finalizes a draft of the permanent rule language.

Question #	Name	Question	Answer/Response
1	Oleg Sassa	Hello All	Hello Oleg, hope all is well!
2	Bob Battles	Will you be providing a copy of any PowerPoint	Yes. We will provide a copy in the Chat feature for all to download. This will also be available on our website: https://lni.wa.gov/safety-health/safety-rules/rulemaking-stakeholder-information/ambient-heat-exposure-rulemaking
3	Dana Stahl	Do you have a time frame on when you will be reviewing indoor heat exposures?	We do not at this time.
4	Lin Nelson	Is this session being recorded for future access?	TVW is live streaming this meeting and it may be available on their site after this meeting. L&I is not recording this meeting, however all materials either are, or will be, publicly available on our website.
5	Matthew Harris	Can the PPT be posted to be downloaded?	For information on this rulemaking, including materials, go to (Para obtener información sobre esta elaboración de normas, incluidos los materiales, visite:): https://lni.wa.gov/safety-health/safety-rules/rulemaking-stakeholder-information/ambient-heat-exposure-rulemaking. We have posted a copy for download in the Chat feature for the audience.

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6	Sarah Nagy	Why is 89 degrees the trigger temperature in the current rule?	The Department worked with Dr. Thomas Bernard, Ph.D., Chair of the American Conference of Governmental Industrial Hygienists (ACGIH) Physical Hazards Committee to develop a temperature trigger that would apply to Washington State. This was accomplished using the wet bulb globe temperature (WBGT) method. The outcome being looked for was to solve the equation for the dry bulb temperature. In reviewing the Washington State dew points for four cities (Vancouver, Seattle, Yakima, and Spokane) from the summer of 2007, Dr. Bernard calculated that a dew point of 50° F was the average within two standard deviations for Washington State and could be used as a constant for the wet bulb. Dr. Bernard took this information and using a publicly available Excel® workbook that he developed (personal.health.usf.edu/tbernard/thermal/index.html) estimated the WBGT by changing the dry bulb temperature until the action limit was found. This was done for the different clothing types to get the triggers.
7	Sarah Nagy	Also, why is relative humidity not taken into account with this threshold? NIOSH guidelines adjust temperatures upward with relative humidity, as high RH can raise the risk of heat stress even at lower temperatures.	Relative humidity was taken into account and what was shared in the previous answer was an excerpt from the Concise Explanatory Statement from the 2008 heat stress rulemaking file.
8	Mike Boise	A question that comes up a lot is during a high AQI time period will each company be required to keep daily or hourly AQI levels for any legnth of time??.	There is no requirement in the heat stress rule to track, document, or look at the Air Quality Index (AQI).
9	Steve Eversmeyer	To confirm, the proposed rule would be in effect every time it hits 80; water, rest, acclimitazation, etc.	Correct. The Department is eliminating the current May-September effective dates.

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10	Sue Tellesbo	Where could I find the data with heat related illness claims below the trigger heights. breakdown of temp.?	Please email Dave Bonauto with the SHARP program and he would be happy to provide that data to you.
11	Sarah Nagy	What constitutes a "prolonged absence"?	In the current draft we are considering a prolonged absence as being 7 calendar days.
12	Steve Eversmeyer	Your 7 to 14 ONLY applies to fit, under 40 employees with all others needing 14 to 28 days according to the NIOSH 2016 Heat Criteria document. How do you deal with the others?	You are absolutely correct. There are some assumptions and that is what led us to "close observation" because of those challenges.
13	Mike Boise	Thanks so much Ryan	Your welcome.
14	Sarah Nagy	What constitutes "other effective means of observation"?	Other effective means for employers could include a buddy system, phone, etc. There are multiple scenarios and we are trying to be flexible considering the many industries out there.
15	Ron Franklin	I think 80 degrees is too low, this is supposed to be targeted to ensure employee safety during unusual or heat wave conditions exist not normal everyday conditions	Thank you for your comment, Ron. We will take this under consideration.
16	Peter Lang	When was the last time we had 14 days over 80 F? Not sure the West side would ever be considered acclimatized.	The way we are addressing this, partially because of the east side and west side different climates is to closely observe for acclimatization.
17	Sarah Nagy	NIOSH has detailed guidelines regarding the safe amount of rest necessary at higher temperatures, relative to humidity. What is the basis for 10 min every 2 hours?	The Department's determination is based on ACGIH methods.
18	Jeremiah Miller	What protections do workers have for taking "as needed" preventative rest breaks?	The employer has an obligation to provide safe workplace standards. Workers could potentially have some protection through the

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			workplace discrimination standard. We're thinking on it, everyone deserves a safe and healthy work environment.
19	Kenna Kettrick	What protections are in place for workers that need more breaks than others? And/or protections against retaliation on workers who need to take more breaks than others?	Same as previously answered. The employer has an obligation to provide safe workplace standards. Workers could potentially have some protection through the workplace discrimination standard. We're thinking on it, everyone deserves a safe and healthy work environment.
20	Sarah Nagy	Are the guidelines being used linked in the online information?	Draft rules have links to tools on the page. Also our Education and Outreach program will develop publications and online tools.
21	ISRAEL GONZALEZ	How can I get a copy of this great presentation?	For information on this rulemaking, including materials, go to (Para obtener información sobre esta elaboración de normas, incluidos los materiales, visite:): https://lni.wa.gov/safety-health/safety-rules/rulemaking-stakeholder-information/ambient-heat-exposure-rulemaking. We have posted a copy for download in the Chat feature for the audience.
22	Sarah Greer	How is the employer to determine if "as needed" is actually needed and will they be able to question an employee stating they "need" a rest every half hour or hour?	That is a challenge. We are trying to find balance, looking into possible impacts in detail.
23	Lin Nelson	RE: the connections between heat and AQI, I saw that "there's no requirement in the heat stress rule to track, document or look at the AQI" Is WA looking at how CA, OR and NIOSH/OSHA are looking at connections between heat and AQI?	We are aware of some of this research from UW. We have not made any policy decisions with this information at this time.
24	Sarah Greer	ACGIH methods are a great tool if the employer can use them. If the employee can choose when they think they "need" a break that may be problematic (may not but may be).	Sarah, thank you for this comment. We will take it into consideration as we move forward.

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25	Sarah Nagy	Very good to hear that 10 min per 2 hours has been deemed insufficient in keeping with guidelines. Just want to ask in this context, as well, whether relative humidity will be taken into account with the temperature threshold.	When we looked at these thresholds we did consider humidity.
26	Kenna Kettrick	If the work/rest cycle IS made flexible, is there a minimum table that employers would need to follow, in order to ensure worker safety?	We need more information on that and would appreciate your thoughts.
27	James	What methodology was used to determine that "10" degrees higher than the past 5 day average high was the correct number? Does that correspond to like 1 standard deviation out of norm, 2 standard deviations?	When we were coming up with "heat wave" we primarily looked at temperature differentials.
28	James McWiggins	Are you referencing ACGIH as an example, or are you planning on incorporating it by reference?	We are looking at ACGIH and looking at the National Institute for Occupational Safety and Health (NIOSH). We used ACGIH today as an example.
29	Jeremiah Miller	If employers are permitted to establish their own work/rest cycle, will the new rule require measurement of temperatures, humidity, work type, clothing, etc. by the employer? If not, how will DOSH evaluate whether the employer's work/rest cycle was appropriate?	That is a challenge. The employer will need to show us how it is appropriate. We are looking at that, thank you.

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30	Dana Stahl	Do break/rest times have to be actual breaks, or could an employee rotate to a less physical job (such as a sitting/desk job) in a cool area for those times?	The key with the breaks is the opportunity to give the body a break – to cool their bodies. This could be an example.
31	Brett Konzek	Hi there - is there further information/clarification on the definition of "outdoor environment" in 296-62-0920. Specifically regarding: "Work environments such as inside vehicle cabs, sheds, and tents or other structures may be considered an outdoor environment if the environmental factors affecting temperature are not managed by engineering controls."	The current draft does not have those examples, but we can certainly look into that. Thank you.
32	Sarah Nagy	Just want to note that in the current rule, while employers must provide shade and provide cool-down periods, nothing links the two. It would be helpful to explicitly require that employers provide shade to be used during cool-down periods.	Thank you for your comment, we will take this under consideration as we move forward in this rulemaking project.
33	Kenna Kettrick	^^^ seconding Sarah Nagy's comment re: linking those two items.	Thank you for your comment, we will be taking this under consideration.
34	ROSE GUNDERSEN	For delivery drivers who are subject to the heat rule, would you have a different temp/break time table for them?	Our goal is to provide flexibility. We won't have a different table for different industries. The employer could come up with an appropriate table though.

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35	Gerald Ginter	One of the simplest ways to avoid working in the hottest part of the day is to adjust schedules start early. Will there be adjustments to noise ordinances, etc. that allow workers to start MUCH earlier to avoid working after 2pm the hottest part of the day? With the lost of production time / service times because of the extra brakes there is tremendous value in working in the early mornings. Will L&I help with getting the noise ordinances lifted on those hot days?	Noise ordinances are not within our authority, we have no capability of helping with that.
36	Gerald Ginter	oops - breaks :)	Thank you for your comment.
37	Lin Nelson	I also support Sarah Nagy's comment re: linking shade and cool-down. It seems like the connectivity between features of the rule and elements of risk is key.	Thank you for your comment, Lin. We will take this into consideration as we move forward.
38	Sarah Greer	Great question Gerald!	Thank you Sarah
39	Julie Taylor	Are you taking into account the employers of farm workers whose work most often includes piece rate paymentsomething that, when rest breaks are not incentivized but left voluntary means many farm workers choose no breaks for themselves so they can earn as much money as possible?	That is a challenge and we are looking into that.
40	Jerry Bonagofsky	In section 09545 (1) a. What is considered "newly assigned"?	Newly assigned is referring to employees who do not have 7-14 days experience with that heat.
41	Bruce Beckett	The PowerPoint is not posted on the link. Please post.	It will be posted either today or tomorrow at the latest.

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42	Bruce Beckett	thank you	Thank you.
43	Rose Green- Flores	Great question Julie!	Thank you Rose.
44	Bob Battles	Can you please post the PowerPoint now since you have given less than a week to provide comments and we need to go to our stakeholder groups to get feedback.	Yes, we are working to get it out and posted as soon as possible.
45	Anonymous Attendee	I understand the risks and the preventative measures will help but all these breaks will impede the employer drastically. How do you plan on limiting this issue? Once employers are informed of the new rules I can guarantee there will be many who decide not to follow the new rule simply from the fact that it stops production. How will this be enforced? It seems like the existing rules work just fine if they were enforced properly, there's no need to just keep updating the rules because people don't follow them.	We hear you. Enforcement will always be a challenge. Please remember that the Department was asked to do this through a petition.
46	Kenna Kettrick	^^seconding Julie's question! Having a mandatory minimum cool-down break helps protect the health of workers who get paid by the piece	There are a lot of things to take into consideration, challenges in industries with piece rate, wage/hour workers, etc.
47	Peter Paradiso	What assurance do we have that this will reduce Heat Illness?	We know that obviously reducing exposure should reduce HRI. The only assurance is to go back and look at the data. By lowering to 80 degrees the data shows us that will reduce claims of heat related illness (HRI).

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48	Peter Paradiso	What happens if a company does all these steps and still has and employees suffer heat illness?	We know that HRI can still happen even if the company is in compliance. We would look at what happened and if there were no violations we certainly would not take it further.
49	Peter Paradiso	I think there needs to be more enforcement and education versus changing the rules, what do you think?	We are always trying to find more effective means of enforcement. We recently built an "Ag Unit" within DOSH for agriculture education and enforcement.
50	Sarah Nagy	Thanks!	Thank you.
51	Anonymous Attendee	Similar to the wildfire smoke rules, has there been any consideration to matching what Fed OSHA, OR OSHA and / or CAL OSHA is and has put into place? If not, why not?	Yes, we are looking at California and Oregon as well as the Occupational Safety and Health Administration (OSHA). June Spector is connected with OSHA and keeping us informed of decisions and data they are looking at. We are always trying to have consistency where we can.
52	Abigail Potter	Could L&I provide the economic impact of this rule making?	We must complete the Cost Benefit Analysis in this rulemaking process. That is a public document that will be available once a CR 102 is filed, prior to the public comment period.
53	Sarah Nagy	My question then would be who determines whether one of these other methods is "effective" - is LNI planning to sign off on these methods somehow? Would workers be required to report if they felt it was not "effective" in keeping with the rule?	Early on we began having discussions around work/rest cycles and what could be effective. One of the challenges with employers devising their own work/rest cycles is determining whether or not it would be effective.
54	Cindy Haverkamp	Please re-share method to share written comment and link to PowerPoint in chat.	Hi Cindy, we are working to get the PowerPoint posted to our website, but it has been uploaded to the Zoom Chat in the meantime. You can provide written comment to Carmyn Shute at Carmyn.Shute@Lni.wa.gov.

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55	Stephine Sedlak	Has there been any consideration for allowing workplaces to use direct reading WBGT temperatures instead of only using ambient temperatures?	We did consider wet bulb globe temperature (WBGT). The current rule uses ambient temperature and we need to consider simplicity for all employers across the state. There is nothing to prohibit an employer from using WBGT.
56	Steve Eversmeyer	Apologies but I lost sound so missed your answer to my question about acclimatization and meeting the requirements for those not fit and under 40. Will that be provided in writing as well or since it's done live we need to remember the answers?	Following today's meeting the Q and As will be documented and posted on our rulemaking page. At the end of the presentation will be contact info for the technical specialists if you would like to contact one of them directly. Thank you.
57	Stephine Sedlak	The definition of "heat wave" does not seem to be consistent with other sources that define a "heat wave" as being multiple days of abnormally high temperatures. The draft language says "any day". I also think the definition is going to be difficult to practically apply and monitor. I would recommend considering using National Weather Service Heat advisories or excessive heat warnings. These are accessible and easy to monitor designations that are completed by a reliable and existing organization.	We had to take into consideration environmental factors. For worksites that can use the National Weather Service (NWS) that is a good thought. Thank you for your comment.
58	Anonymous Attendee	thank you	Thank you.

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59	Anonymous Attendee	If the effect of outdoor heat on a structure's temperature isn't addressed in the rule or scope, how would education or outreach make a difference in the requirements? What about buildings where oil changes are the primary business, no HVAC and completely open drive through areas.	In the scope of the rule we do mention that environmental controls can be used. We look at those on a case-by-case basis.
60	Bryan Hurst	80 degrees is a nice spring day in eastern Washington. Any way to have different trigger temperatures for different parts of the state?	I appreciate the comment. It's challenging to have two different triggers for different parts of the state.
61	Samantha Louderback	Thanks for the presentation today. On one of the slides, the Department used the stat of 40% of heat related claims between 2006 and 2017 happened when the temperature was 89 degrees or higher. Can the Department share how many total claims 40% represents?	The data we used is from medical literature. 55% of the claims were above, about 300 claims below the 89 degree threshold.
62	Anonymous Attendee	What do temperatures increasing have to do with lowering the trigger temperature? I can see more strict rules at higher temperatures but higher temps have nothing to do with lowering the trigger. What is the basis for the lower trigger temps? If its studies with heat related injuries at 80F how did the study ensure the employer caused the injury? And how did the study eliminate personal factors	These studies were designed to study the relationship between risk factors and temperature. Case crossover design. Globally and generally in Washington heat is rising, we experienced the heat dome last year. 80 degrees is consistent with other states.

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		outside of the employers control that may have caused the injury?	
63	Anonymous Attendee	Most service industries are struggling with staffing; especially in the delivery industry. Adding routes and drivers just isn't an option. I fear that restricting outdoor work more than the 10 min every 2 hours in high heat will have a profound effect on many industries; delivery disruptions disruptions to services like garbage construction projects not finishing on time etc. Has L & I considered the secondary consequences of these updated rules?	We ae paying close attention so we can address the impacts. Thank you for your comment.
64	Tony Klutz	In addition to "Environment, Workload and Clothing" another factor could be specific medical conditions to the individual employee, i.e. age, medications, general health, etc. Are these issues for "Sensitive Populations" being considered?	Yes, personal risk factors are being considered. For example, under preventative rest periods and there is also a requirement to train employees on those risk factors in the draft language. The current draft rule language clarifies personal risk factors.

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65	Anonymous Attendee	Has proximity of bathrooms been considered in the rules when temperatures reach and exceed the threshold? Distance to bathrooms can affect employee behavior and be a barrier to adequate hydration.	Yes, proximity to bathrooms is being considered under shade requirements.
66	Anonymous Attendee	When we discuss temperatures are we meaning actual measured temperatures using a thermometer or due we mean a "heat index" temperature?	We are referring to dry air temperature, not heat index.
67	Anonymous Attendee	Is there a way for workers to continue to voluntary work without breaks if they consider themselves acclimatized to working at the trigger temperatures?	Under the current draft for the permanent rule we do not have an acclimatization schedule or a specified work/rest cycle.
68	Anonymous Attendee	If the temperature is over 80 degrees for more than the acclimatization period does the action level still apply?	Could you please contact us for clarification of your question?
69	Anonymous Attendee	Personal factors seem like a huge part of this. In the wildfire smoke rule I like how sensitive groups are considered. This rule should consider that as well and have maybe a higher more practical trigger temperature for all employers and have additional rules or triggers for sensitive groups. If data for sensitive groups is driving the triggers for all employers, that wouldn't seem like a practical approach.	Thank you for this comment. We will consider this as we move forward.
70	Scott Tomren	With the reduction to 80 degrees on the trigger temperature, is there going to be a	Indoor heat rules will be addressed at a later phase in the rulemaking process. We are focusing on outdoor heat exposure first.

Question #	Name	Question	Answer/Response
		move to provide protections on indoor temperatures also?	
71	Oleg Sassa	Maybe instead of "10 minutes breaks" you can use "10 minutes cool down periods"	Thank you Oleg. We will consider this.
72	James Ross	Do we need to keep documentation of the break periods?	There is no requirement to document break periods in the current draft.
73	James Ross	I am trying to understand the reduction to 80 degrees	Please refer to slide 12 from the August 4th stakeholder meeting, and the slides from the March 17th stakeholder meeting.
74	Aaron Lamson	thank you	It's our pleasure.