

October 29, 2021

Governor Kate Brown  
900 Court Street NE, Suite 254  
Salem, Oregon 97301

Governor Jay Inslee  
PO Box 40002  
Olympia, WA

Governor Gavin Newsom  
1303 10th Street, Suite 1173  
Sacramento, CA 95814

Dear Governor Brown, Governor Inslee, and Governor Newsom,

We are writing on behalf of migrant and seasonal agricultural workers and H-2A temporary guest workers, farmworker advocates, and allies to express our desire to create a Western States Pact to adopt consistent heat and wildfire smoke protection standards. Over recent years, farmworkers have been facing the effects of climate change as they labor through wildfires, heatwaves, and other hazardous conditions. We recognize and appreciate the efforts made by each state to address the exposure to wildfire smoke and excessive heat that workers face. At the same time, we are concerned that the content of the rules vastly differ from each other which leads to confusion for farmworkers who work in multiple states. We also appreciate the precedent that has been established through the Pacific Coast Collaborative (PCC) and the COVID-19 Western States Pact to cooperate on addressing issues such as climate change that affect the states of California, Oregon, and Washington. The Western States Pact approach will not only minimize confusion amongst workers, but it will also serve as a catalyst for national heat and smoke standards since we know these issues extend beyond the West Coast states. The recent news from the Biden administration on federal action to address extreme heat is promising and we believe that this approach will add more urgency to the matter.<sup>1</sup> The pact will improve the health outcomes of farmworkers by preventing death, heat-illness, and respiratory issues. We ask that each governor agree to adopt a Western States Pact for consistent heat and smoke standards with strong enforcement prior to the 2022 summer harvest season.

*“If it were a law that said, 'At this temperature, or, at this air level, air quality, you cannot work', if it were law, maybe it would be a little different.” (Translated from Spanish quote).*

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<sup>1</sup> FACT SHEET: Biden Administration Mobilizes to Protect Workers and Communities from Extreme Heat SEPTEMBER 20, 2021 <https://www.whitehouse.gov/briefing-room/statements-releases/2021/09/20/fact-sheet-biden-administration-mobilizes-to-protect-workers-and-communities-from-extreme-heat/>

## The Issues with Excessive Heat and Wildfire Smoke

Farmworkers are particularly vulnerable to the dangers of heat stress due to the environmental conditions and physical exertion involved in agricultural work. An analysis of Bureau of Labor Statistics data by George Washington University researchers for the 2000 - 2010 period showed that agricultural workers die from heat-related causes at 35 times the rate of workers in all other industries, averaging 6.8 deaths per year.<sup>2</sup> Death totals are actually likely to be higher, given that deaths where heat is a contributing factor but not a primary cause of death are not always recognized as heat-related. Data on non-fatal heat-related occupational illnesses are even more incomplete and unreliable due to the number of confounding factors complicating diagnoses; however, they number in the thousands every year across all industrial sectors.<sup>3</sup>

The effects of heat stress range from heat exhaustion and heat rash to heat stroke and death. Heat stress may also lead to disabling and potentially fatal kidney problems. Heat-related kidney injury has been the subject of multiple studies in recent years due to an epidemic of fatal cases of chronic kidney disease (CKD) first discovered among farmworkers in Central America, where heat stress has been identified as a contributing factor.<sup>4</sup> Although CKD in U.S. farmworkers has not been well studied to date, short-term studies of acute kidney injury (AKI) among groups of farmworkers in California and Florida found that between 12.3 and 33 percent of the farmworkers tested suffered from AKI.<sup>5,6</sup> AKI is a precursor to CKD.<sup>7</sup>

Outdoor workers exposed to high ambient temperatures may also experience mental impairment, which may increase the risk of accidents in the workplace.<sup>8</sup> A 2016 study found that occupational accident rates increased by 8.2% on days when the maximum temperature was between 90 and 100°F, and by 30% on days with maximum temperatures over 100°F, compared to days with a maximum between 60 and 70°F.<sup>9</sup> Furthermore, a Cal/OSHA investigation found

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<sup>2</sup> Gubernot DM, Anderson GB, Hunting KL. Characterizing occupational heat-related mortality in the United States, 2000-2010: an analysis using the Census of Fatal Occupational Injuries database. *Am J Ind Med*. 2015 Feb;58(2):203-11. doi: 10.1002/ajim.22381. PMID: 25603942; PMCID: PMC4657558.

<sup>3</sup> Gubernot DM, Anderson GB, Hunting KL. The epidemiology of occupational heat exposure in the United States: a review of the literature and assessment of research needs in a changing climate. *Int J Biometeorol*. 2014 Oct;58(8):1779-88. doi: 10.1007/s00484-013-0752-x. Epub 2013 Dec 11. PMID: 24326903; PMCID: PMC4145032.

<sup>4</sup> Glaser J, Lemery J, Rajagopalan B, et al. Climate Change and the Emergent Epidemic of CKD from Heat Stress in Rural Communities: The Case for Heat Stress Nephropathy. *Clin J Am Soc Nephrol*. 2016 Aug 8;11(8):1472-83. doi: 10.2215/CJN.13841215. Epub 2016 May 5. PMID: 27151892; PMCID: PMC4974898.

<sup>5</sup> Moyce S, Mitchell D, Armitage T, Tancredi D, Joseph J, Schenker M. Heat strain, volume depletion and kidney function in California agricultural workers. *Occup Environ Med*. 2017 Jun;74(6):402-409. doi: 10.1136/oemed-2016-103848. Epub 2017 Jan 16. Erratum in: *Occup Environ Med*. 2018 Feb;75(2):162.

<sup>6</sup> Mix J, Elon L, Vi Thien Mac V, Flocks J, Economos E, Tovar-Aguilar AJ, Stover Hertzberg V, McCauley, LA. Hydration Status, Kidney Function, and Kidney Injury in Florida Agricultural Workers. *J Occup Environ Med*. 2018 May;60(5):e253-e260. doi: 10.1097/JOM.0000000000001261.

<sup>7</sup> Zuk A, Bonventre JV. Recent advances in acute kidney injury and its consequences and impact on chronic kidney disease. *Curr Opin Nephrol Hypertens*. 2019 Jul;28(4):397-405. doi: 10.1097/MNH.0000000000000504. PMID: 30925515; PMCID: PMC7020661.

<sup>8</sup> Qian S, Li M, Li G, Liu K, Li B, Jiang Q, Li L, Yang Z, Sun G. Environmental heat stress enhances mental fatigue during sustained attention task performing: evidence from an ASL perfusion study. *Behav Brain Res*. 2015 Mar 1;280:6-15. doi: 10.1016/j.bbr.2014.11.036. Epub 2014 Nov 28. PMID: 25435315.

<sup>9</sup> Page L, Sheppard S. 2016. *Heat Stress: The Impact of Ambient Temperature on Occupational Injuries in the US*, Department of Economics Working Papers 2016-16, Department of Economics, Williams College. <https://web.williams.edu/Economics/wp/PageSheppardHeatStress.pdf>.

that some workers experience heat illness even at 80°F.<sup>10</sup> Despite the widespread nature of the risk, many farmworkers lack sufficient training and knowledge on how to prevent and respond to heat stress and heat-related illness.<sup>11</sup>

Wildfire smoke has also emerged as a growing threat to the health of agricultural workers, as climate change contributes to longer and more pronounced droughts. The acreage burned in the states of California, Oregon and Washington increased five-fold between 2016 and 2020, from 1.21 to 6.08 million acres.<sup>12</sup> These wildfires release large amounts of fine particulate matter (PM<sub>2.5</sub>) into the air. Exposure to high concentrations of fine particles is associated with health problems such as heart attacks, irregular heartbeat, aggravated asthma, decreased lung function, and increased respiratory symptoms.<sup>13</sup> There is also scientific evidence indicating that exposure to particulate matter and smoke from biomass burning are associated with increased susceptibility to respiratory viruses. Based on the evidence, there is reason to believe that exposure to wildfire smoke may worsen the impacts of COVID-19, potentially increasing the number of cases and deaths by approximately 10 percent.<sup>14</sup> Although the health threat of wildfire smoke exposure is growing, there are important gaps in knowledge regarding protective measures among agricultural workers and employers.<sup>15</sup>

*“I have 5 years working in the field, and ... yes, everything has changed a lot; both heat and smoke have been increasing.”  
(Translated from Spanish quote).*

## States’ Responses to Excessive Heat and Wildfire Smoke

As climate change increases the frequency of extreme weather events, the state has a responsibility to create standards to protect workers from workplace exposures to these events. For instance, states on the West Coast have seen an increase in wildfires, heatwaves, and droughts. In many cases, farmworkers continue to labor through these hazardous conditions and are exposed to injury and illness from excessive heat and wildfire smoke. Fortunately, California, Oregon, and Washington state governments have all taken an important step towards protecting workers when exposed to heat and smoke.

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<sup>10</sup> California Department of Industrial Relations, Division of Occupational Safety and Health. *Cal/OSHA investigations of Heat-Related Illness 2006*. <https://www.dir.ca.gov/dosh/heatillnessinvestigations-2006.pdf>.

<sup>11</sup> Langer CE, Mitchell DC, Armitage TL, Moyce SC, Tancredi DJ, Castro J, Vega-Arroyo AJ, Bennett DH, Schenker MB. Are Cal/OSHA Regulations Protecting Farmworkers in California From Heat-Related Illness? *J Occup Environ Med*. 2021 Jun 1;63(6):532-539. doi: 10.1097/JOM.0000000000002189. PMID: 33741829.

<sup>12</sup> National Interagency Fire Center. *National Report of Wildland Fires and Acres Burned by State*. <https://www.nifc.gov/fire-information/statistics>.

<sup>13</sup> U.S. Environmental Protection Agency (EPA). *Health and Environmental Effects of Particulate Matter (PM)*. <https://www.epa.gov/pm-pollution/health-and-environmental-effects-particulate-matter-pm>

<sup>14</sup> Henderson SB. The COVID-19 Pandemic and Wildfire Smoke: Potentially Concomitant Disasters. *Am J Public Health*. 2020 Aug;110(8):1140-1142. doi: 10.2105/AJPH.2020.305744. Epub 2020 Jun 18. PMID: 32552018; PMCID: PMC7349436.

<sup>15</sup> Riden HE, Giacinto R, Wadsworth G, Rainwater J, Andrews T, Pinkerton KE. Wildfire Smoke Exposure: Awareness and Safety Responses in the Agricultural Workplace. *J Agromedicine*. 2020 Jul;25(3):330-338. doi: 10.1080/1059924X.2020.1725699. Epub 2020 Feb 11. PMID: 32043423.

California was the first state in the country to adopt both an excessive heat and wildfire smoke standard. The state's heat standard was adopted in 2005 after the death of Maria Isabel Vazquez Jimenez, a 17-year old pregnant farmworker who died from heat exposure while working in the grape fields. However, the protections were not strong enough and subsequently improved in 2015 after a lawsuit from United Farm Workers, the largest farmworker's union in the United States.

In Oregon, OSHA started a permanent rulemaking process for workplace exposure to wildfire smoke and excessive heat in March of 2021 as a result of an Executive Order (20-04) signed by Governor Brown in March of 2020. The agency convened a Rulemaking Advisory Committee in March of 2021 to engage with stakeholders on the content of these two standards. However, the heat-related workplace death of farmworker Sebastian Francisco Perez prompted the state to enact emergency rules prior to finalizing the permanent rulemaking process. On July 8, 2021, Oregon OSHA adopted an emergency rule for excessive heat followed by an emergency standard for wildfire smoke on August 1, 2021. The state agency resumed the permanent rulemaking efforts which are set to conclude in the fall of 2021.

Similarly, Washington adopted emergency rules for heat and smoke in the summer of 2021 in the wake of the recent record-breaking heat waves and wildfires that have affected the state. Recognizing the urgency of addressing health threats to workers, the Department of Labor and Industries indicated that a permanent rulemaking process—which would have required a notice and comment period—would have prevented the agency from acting in a timely way. Therefore, it issued emergency rules on heat and smoke effective July 13 and 16, respectively.<sup>16,17</sup> The agency has indicated its intention to engage in a permanent rulemaking on both heat and wildfire smoke protection.

Although the three states have heat and smoke standards in place to protect workers, they all vastly differ in content which leads to confusion for farmworkers who travel from state to state. For instance, California and Oregon's heat standard is activated once the temperature reaches 80 degrees while Washington has a higher temperature threshold of 89 degrees. The differences continue with regards to wildfire smoke, where California and Washington are both required to provide N95 respirators for voluntary use at 151 AQI while Oregon provides these respirators at 101 AQI. The full breadth of these differences can be found in Appendix A: Heat Standard Comparison Chart and Appendix B: Smoke Standard Comparison Chart.

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<sup>16</sup> Department of Labor and Industries. Emergency Rules. *WSR 21-15-017*. <http://lawfilesexternal.wa.gov/law/wsrpdf/2021/15/21-15-017.pdf>.

<sup>17</sup> Department of Labor and Industries. Emergency Rules. *WSR 21-15-017*. *WSR 21-15-067*. <http://lawfilesexternal.wa.gov/law/wsrpdf/2021/15/21-15-067.pdf>

*“There is no limit to when people should stop, but even if there is smoke or something is burning, you have to go to work. There is no way to stop, because no one says, ‘Oh, after it happens to a certain extent, everyone goes home.’ That does not happen.” (Translated from Spanish quote).*

## **Western States Pact**

Inconsistent standards on heat and wildfire smoke across state lines increase the difficulties faced by farmworkers who travel from state to state following the crops in accessing the information they need to protect themselves and ensure that employers are complying with regulatory requirements. Language and literacy barriers make acquiring such information challenging for many farmworkers, since 65 percent of farmworkers cannot read English well and the average level of education of U.S. farmworkers is ninth grade.<sup>18</sup> The adoption of consistent standards would greatly improve these workers’ ability to gain the information they need to be protected in the workplace.

Given the urgency of ensuring that farmworkers are better protected against the growing health threat of heat stress and wildfire smoke, states should not wait for the federal OSHA to act before adopting a set of consistent permanent standards. OSHA has not announced any plan to take regulatory action to address wildfire smoke exposure. The agency is planning to issue an Advanced Notice of Proposed Rulemaking in October to begin the process of developing a heat stress standard.<sup>19</sup> However, the development of a federal standard will be a lengthy process with no guarantee of success. In fact, a number of previous regulatory attempts by federal OSHA concerning outdoor and indoor air quality have failed in the face of industry opposition and litigation, such as the 1989 rule on Permissible Exposure Levels for hazardous airborne chemicals, and a 1994 proposed rule on indoor air quality.<sup>20</sup> Furthermore, OSHA has taken some preliminary steps in the past to develop a heat stress standard without ever issuing a rule, such as when it created a Standards Advisory Committee on Heat Stress in 1973. The National Institute on Occupational Safety and Health (NIOSH) has published recommended criteria for an OSHA heat stress standard in 1972, 1986 and 2016, but OSHA has not issued a standard as a result of these recommendations. Meanwhile, legislative attempts in Congress to require OSHA to issue a heat stress standard have not succeeded so far. The *Asuncion Valdivia Heat Illness and Fatality*

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<sup>18</sup> U.S. Department of Labor (DOL). *Findings from the National Agricultural Workers Survey (NAWS) 2017–2018: A Demographic and Employment Profile of United States Farmworkers*. Research Report No. 14. Prepared for DOL by JBS International. <https://www.dol.gov/sites/dolgov/files/ETA/news/pdfs/NAWS%20Research%20Report%2014.pdf>.

<sup>19</sup> The White House. *FACT SHEET: Biden Administration Mobilizes to Protect Workers and Communities from Extreme Heat*. September 20, 2021. <https://www.whitehouse.gov/briefing-room/statements-releases/2021/09/20/fact-sheet-biden-administration-mobilizes-to-protect-workers-and-communities-from-extreme-heat/>  
<https://www.reginfo.gov/public/do/eAgendaViewRule?pubId=202104&RIN=1218-AD39>.

<sup>20</sup> Layton, K. Proposed Federal OSHA Standards for Wildfire Smoke. *Seattle Journal of Technology, Environmental & Innovation Law* 2020;10(1):106-134. <https://digitalcommons.law.seattleu.edu/siteil/vol10/iss1/5>.

*Prevention Act* (S.1068) introduced in March 2021 would mandate that OSHA promulgate a standard requiring that employers provide water and paid shaded rest breaks to workers—among other requirements—but this piece of legislation was also introduced in the previous Congress and has yet to pass.

In view of the uncertainty concerning the adoption of heat stress or smoke protection standards at the federal level, the most expeditious and effective way to protect migratory farmworkers in the face of mounting threats posed by climate change and increasingly frequent heat waves and wildfires is for the states of California, Oregon and Washington to adopt consistent standards for heat stress and smoke protections.

*“There is no protocol you have to follow if that [symptoms] happens to you. If you fall or get hurt, you can call the supervisor, but if it is from the smoke, then not right now, as far as I know.” (Translated from Spanish quote).*

## **Protections Needed**

Farmworkers are primarily immigrant, BIPOC, low-wage, and non-union workers who will continue to be disproportionately harmed by our warming world. They have many health conditions and lack access to appropriate and affordable healthcare meaning that they are vulnerable populations who will be disproportionately impacted by heat and smoke. Based on the current standards within each respective state, there is room for improvement to ensure farmworkers are protected from excessive heat and wildfire smoke exposure. Ultimately, the rules should eliminate workplace deaths and minimize the number of illnesses and injuries. This coalition of farmworker advocates recommends the following to be included in a Western States Pact excessive heat and wildfire smoke standards.

### **Excessive Heat**

As mentioned earlier, the thresholds to provide water, shade, and breaks vary across the three states with Washington having the highest threshold, Oregon the lowest, and California in between the two. We suggest that the heat standard should be activated once temperatures reach 80 degrees, high heat at 90 degrees, and extreme heat at 95 degrees. We recommend that the following factors are taken into consideration for these temperature thresholds: humidity, direct sunlight, work intensity, and easy worker access to the temperature. Once the initial temperature threshold is reached, workers should have access to clean, fresh water, access to shaded areas, and other cooling methods, and be trained on heat illness symptoms and how to protect themselves.

At the high heat and extreme heat thresholds, workers should be required to take additional paid breaks with access to water and shade in order to prevent overheating. The work/rest schedule as specified by NIOSH should be incorporated to direct how to moderate work pace and traditional output quotas in the event of excessive heat given that workers will be forced to meet the demands in conditions that do not allow it.<sup>21</sup> Additional mitigation measures such as misting, cooling rooms, and cooling vests must be available. Shade alone without additional measures for cooling is not sufficient during excessive heat. Employers should observe workers to ensure that no one is exhibiting symptoms of heat stress or illness. If employers are unable to observe workers, a buddy system should be implemented to ensure no one is working alone. Acclimatization should be considered to allow workers to adapt to the high temperatures. Employers must have an emergency medical plan implemented in case any worker demonstrates signs and symptoms of heat-illness.

### Wildfire Smoke

The protections from exposure to wildfire smoke are also activated at different thresholds with Washington having the lowest AQI trigger and Oregon and California sharing the highest AQI trigger. For the Western States Pact, we recommend a combination of the smoke standards to achieve the most protection for farmworkers. Training on the health impacts of wildfire smoke, how to identify symptoms from wildfire smoke, and how to best protect oneself should be offered to employees who work near levels of 69 AQI. Once the AQI reaches 101 then an N95 respirator (or if not available, a NIOSH approved respirator ) must be provided by employers at no-cost to the worker for voluntary use.<sup>22</sup> Required use of the respirator must be ensured once the AQI reaches 151 which is an unhealthy level for the general public. A full respirator protection program that includes fit-testing and a medical evaluation must be required when the AQI reaches 300 (hazardous).

In addition to training and respirator usage, employers must provide and have readily available protective eyewear at no-cost to the worker to help with eye irritation. The wildfire smoke, respirators, and protective eyewear all create strenuous work conditions and additional paid breaks must also be offered to alleviate workers.

### Enforcement

Finally, we want to highlight that the standards are only as strong as the enforcement of them. Many farmworkers do not report workplace violations for numerous reasons, including retaliation concerns and weak accountability for employers. We strongly recommend that

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<sup>21</sup> Heat Stress: Work/Rest Schedules - Using work/rest schedules can decrease the risk of heat illness  
<https://www.cdc.gov/niosh/mining/UserFiles/works/pdfs/2017-127.pdf>

<sup>22</sup> WILDFIRE SMOKE FACTSHEET: Protect Your Lungs from Wildfire Smoke or Ash  
[https://www.epa.gov/sites/default/files/2018-11/documents/respiratory\\_protection-no-niosh-5081.pdf](https://www.epa.gov/sites/default/files/2018-11/documents/respiratory_protection-no-niosh-5081.pdf)

workplace inspections must be conducted without giving prior notice to the employer. A community-driven data reporting system must be established so workers have the ability to self-report hazardous work conditions anonymously. Farmworkers face many obstacles in reporting workplace violations and such a system would allow for a more accessible way to submit complaints with photos, tips, and more.

Farmworkers exposed to heat & wildfire smoke must be able to:

- Monitor the Air Quality Index (AQI) for PM2.5 and the temperature during their shifts to ensure they are receiving required respiratory and eye protection, and cool-down breaks. Cool-down breaks should be compensated.
- Report suspected violations of heat and wildfire smoke protections through an app, among other means, while being afforded protection from employer retaliation. The data should be used for unannounced inspections of worksites.
- Receive training on the health effects of heat stress and wildfire smoke exposure, how to determine AQI and temperature, protective measures, the proper use of NIOSH-approved respirators, how to report suspected violations of heat and smoke standards, and workers' rights under these rules. Supervisors must also receive training on these topics. Training and information must be provided in languages and formats accessible to trainees, including indigenous workers and workers with limited literacy.
- Access emergency information on unsafe temperature and air quality conditions in various formats and in languages commonly spoken by workers. States must make funds available to ensure language accessibility including, but not limited to, providing grants to county governments for the translation of emergency information.

Through the Western States Pact, we ask that each governor direct their respective state agency--Oregon OSHA, Washington DOSH, and Cal/OSHA--to adopt consistent heat and smoke standards with strong enforcement ahead of the 2022 summer harvest season.

*“Every year after that [2017], all of this [heat and smoke] has gotten worse, so I do not see any change since that time, and honestly, I do not think the weather is going to get better either, so, I think others are getting more affected, too, not just me, breathing in smoke all day as I work.” (Translated from Spanish quote).*

Sincerely,



## **California**

Alliance Medical Center  
California Institute for Rural Studies  
California Primary Care Association  
Center for Environmental Health  
Center on Race, Poverty & the Environment  
Marin Community Clinics  
Marked By COVID  
North Bay Jobs with Justice  
Parable of the Sower Intentional Community  
Cooperative  
Petaluma Health Center  
Physicians for Social  
Responsibility/Sacramento  
Real Food Media  
Vision y Compromiso  
Watsonville Law Center  
Worksafe

## **Oregon**

BlueGreen Alliance Oregon  
Climate Solutions Oregon  
Fair World Project  
Farm Worker Ministry Northwest  
Health Care Without Harm  
Micronesian Islander Community  
Northwest Center for Alternatives to  
Pesticides  
Oregon Academy of Family Physicians  
Oregon AFL-CIO  
Oregon AFSCME Council 75  
Oregon Center for Public Policy  
Oregon Climate and Agriculture Network  
Oregon Environmental Council  
Oregon Food Bank  
Oregon Just Transition Alliance  
Oregon League of Conservation Voters  
Oregon Nurses Association  
Oregon Physicians for Social Responsibility  
Oregon Public Health Association  
PCUN  
Renew Oregon

Rural Organizing Project  
Safe Jobs Oregon COSH  
Self & SoulWork  
Virginia Garcia Memorial Health Center  
Voz Workers' Rights Education Project

## **Washington**

BASTA Coalition of Washington  
BlueGreen Alliance Washington  
Chelan-Douglas Health District  
Chicano  
Climate Solutions Washington  
Community Health Network of Washington  
Community Health Plan of Washington  
Community to Community Development  
Duwamish River Cleanup Coalition  
Familias Unidas Por La Justicia  
Family Health Centers  
Front and Centered  
IBEW 46  
Immigrant & Latinx Solidarity Group  
Latinos en Okanogan  
Latinos Promoting Good Health  
Mason County Climate Justice  
NCW Equity Alliance  
Parque Padrinos  
Puget Sound Sage  
Shalom TCIC  
Strengthening Sanctuary Alliance  
SW Washington LULAC Council 47013  
Tri-Cities Immigrant Coalition  
Washington Immigrant Solidarity Group  
Washington Physicians for Social  
Responsibility  
Western Environmental Law Center

## **Regional**

Earthjustice, Northwest Office  
Northwest Regional Primary Care Association  
The Next Door, Inc.  
Western Environmental Law Center

## **National**

Center for Biological Diversity  
Center for Environmental Health  
Farmworker Justice  
FHI 360  
Food & Water Watch  
Friends of the Earth  
Health Outreach Partners  
Migrant Clinicians Network  
National COSH  
NCFH  
Science and Environmental Health Network  
United Farm Workers  
United Farm Workers Foundation

## **Other States**

Venceremos (AR)  
Farmworker Association of Florida

Fair Housing Organization (ID)  
Idaho Immigrant Resource Alliance  
Idaho Organization of Resource Councils  
Immigrant Justice Idaho  
Latinx Farmworkers of Southern Idaho  
Northbound Commons (ID)  
PODER of Idaho  
Visión 2C Resource Council (ID)  
Chicago Jobs with Justice (IL)  
Eagle View Community Health System (IL)  
Warehouse Workers for Justice (IL)  
Alliance of Nurses for Healthy Environments (MD)  
La Semilla Food Center (NM)  
Alianza Agricola (NY)  
Food Chain Workers Alliance (NY)  
Worker Justice Center of NY  
Workers Center of Central New York  
Cincinnati Interfaith Worker Center (OH)

## **Individuals**

Adriana C Linares (WA)  
Alison Reta (OR)  
Alondra (OR)  
Amanda Millstein (CA)  
Amber Bruner (OR)  
Amber Tafoya (WA)  
Ana Infante Rosales (OR)  
Andrea Oliva (WA)  
Ann Dorsey (CA)  
Anna Brase Shevchenko  
(OR)  
Antoinette Angulo (WA)  
Belen Cisneros (OR)  
Bob Zeigler (WA)  
Bruce Gray (WA)  
Catherine Caron (WA)  
Cecilia Beaverton (OR)  
Cecilia Anguiano (WA)  
Claire Richards (WA)  
Clara Qin (CA)  
Clare Morrison (WA)  
Colleen Reinert (FL)

Cristel Jensen (CA)  
Cristian Ramos (CA)  
Crystal (WA)  
Cynthia Garcia (WA)  
David Delgado (OR)  
Dianne Dickerson (WA)  
Edgar Dominguez (OR)  
Edgar Lopez Baez (WA)  
Elise Phelps (OR)  
Elizur Bello (OR)  
Emily (OR)  
Emma Newton (OR)  
Erik Castillo WA  
Erik Schnabel (CA)  
Griselda Romero (WA)  
Hannah Hall (OR)  
Harmony Wortham (OR)  
Ignolia Duyck (OR)  
Imelda Mariscal (WA)  
James D Smith (WA)  
Janeane Harwell (WA)  
Jeanne Coffin-Schmitt (NY)

Jennifer Garay (OR)  
Jennifer Martinez-Medina  
(OR)  
Jerry Martinez (WA)  
Jessica Sanchez (CO)  
Jill Yoman (OR)  
Jose Marquez (WA)  
Jose Velasquez (CA)  
Juan Franco (OR)  
Juliana Castanon (OR)  
Julie Postma (WA)  
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Karla Maldonado (OR)  
Katherine O'Malley (TX)  
Kathryn Bedell (CO)  
Kathy Baros Friedt (WA)  
Katie Bolin (CA)  
Katrina Otuonye (WA)  
Kelly Volkmann (OR)  
Kelsie Hanson (WA)

Kendra Powell (OR)  
Kevin Humberto Guerrero  
Vidrio (WA)  
Kristina Beggen (OR)  
Laura Contreras (OR)  
Leda Garside (OR)  
Lilly Alarcon-Strong (OR)  
Liza O Lugo (WA)  
Lizbeth Rivera (WA)  
Lora Rathbone (WA)  
Lucy Marquez (OR)  
Lynn Stephen (OR)  
Mabel Bodell, MD (WA)  
Maria Davis (OR)  
Maria Rodriguez (OR)  
Maribel Montes de Oca  
(WA)  
Mary Jo Ybarra-Vega, MS  
(WA)  
Maureen Hill (WA)  
Meagan McFarland, FNP  
(OR)

Mechelle Perea-Ryan (CA)  
Meg Gomez (WA)  
Melinda Strnad (OR)  
Melissa (WA)  
Michael Heumann (OR)  
Mikaela Freundlich (WA)  
Mike Holzer (CA)  
Molly Parker (WA)  
Nat Cortes (WA)  
Natalia Tocino (CA)  
Neshani Jani (CA)  
Obdulia Munoz (OR)  
Pamela Nell (CA)  
Pastor Nancy Ruth  
Gradwohl (WA)  
Priscilla Tovar (WA)  
Ramon Everson (WA)  
Rayne Schwantes (OR)  
Richard Rabin (MA)  
Ron Mize (OR)  
Rosa Rivera (OR)  
Rosemary Ward (MS)

Ryan Andrew Peck (OR)  
Sadie Agurkis (WA)  
Samantha Prato (OR)  
Sandra Martin (OR)  
Seth Doyle (WA)  
Shannon Randall (CA)  
Staci Keithahn Patterson  
(CA)  
Steffani Powell (WA)  
Stephanie McAndrew (OR)  
Teresa Bendito (WA)  
Teresa Smith (WA)  
Tereza Zepeda (WA)  
Thomas (OR)  
Trisha Hoagland (WA)  
Vicente (WA)  
Virginia Fuata (HI)  
Wendi Sargent (WA)  
Yaraizi Garcia (OR)

## Appendix A: Heat Standard Comparison Chart - California, Oregon, Washington

	CA	OR	WA
<b>Action levels</b>			
---Baseline	80 °F	80 °F	89 °F (lower thresholds apply if employees are required to wear double-layer or non-breathing clothing, PPE, etc.)
---High heat procedures	95 °F	90 °F	100 °F
Temperature measurement type	Ambient air	Heat index	Ambient air
<b>Temperature thresholds</b>			
Shade			
---Make available upon request/as needed	<80 °F	80 °F	89 °F
---Present at all times and enough to accommodate all workers	80 °F	80 °F	100 °F
Rest breaks	95 °F (ten minutes every two hours)	90 °F (ten minutes every two hours)	100 °F (ten minutes every two hours)
Water	Always		Always (specific quantities required at ≥89 °F)
Acclimatization	80 °F	90 °F	--
Ensuring effective communication	95 °F	90 °F	--
Employee observation/monitoring	95 °F	90 °F	--
<b>Other requirements</b>			
Cool-down rest breaks paid?	No	Yes	Yes
Employee/supervisor training	Yes	Yes	Yes
Language of training	English and the language understood by the majority of workers	Language trainee understands	Language trainee understands
Heat illness prevention and/or response plan	Required	Yes	Yes
<i>Reference</i>	<i>T8 CCR §3395</i>	<i>OAR 437-002-0155 (temporary)</i>	<i>WAC-296-095 (temporary)</i>

**Appendix B: Smoke Standard Comparison Chart - California, Oregon, Washington**  
*Differences in AQI for PM2.5 thresholds for levels of control across the Western States.*

	<b>CA</b>	<b>OR</b>	<b>WA</b>
Action Levels			
Employee/supervisor training	151	101	69
Communicating smoke hazard	151	101	151
Encouraged to provide N95 respirator			69
Provide N95 respirator for <i>voluntary</i> use	151	101	151
Provide N95 respirator for <i>mandatory</i> use	500	201	
Implement respiratory protection program that includes fittesting and a medical evaluation	500	500	
<i>Reference</i>	<i>T8 CCR §5141</i>	<i>(temporary)</i>	<i>WAC 296-62-085 (temporary)</i>

### Appendix C: AQI Basics for Ozone and Particle Pollution

Daily AQI Color	Levels of Concern	Values of Index	Description of Air Quality
Green	Good	0 to 50	Air quality is satisfactory, and air pollution poses little or no risk.
Yellow	Moderate	51 to 100	Air quality is acceptable. However, there may be a risk for some people, particularly those who are unusually sensitive to air pollution.
Orange	Unhealthy for Sensitive Groups	101 to 150	Members of sensitive groups may experience health effects. The general public is less likely to be affected.
Red	Unhealthy	151 to 200	Some members of the general public may experience health effects; members of sensitive groups may experience more serious health effects.
Purple	Very Unhealthy	201 to 300	Health alert: The risk of health effects is increased for everyone.
Maroon	Hazardous	301 and higher	Health warning of emergency conditions: everyone is more likely to be affected.