

LABOR RIGHTS IN THE ANTHROPOCENE: THE EFFECTS OF CLIMATE CHANGE ON UNDOCUMENTED FARM WORKERS

When I wrote this piece, in August and September of 2022, eight wildfires raged in Washington State.¹ Most were concentrated along the eastern side of the Cascades.² None were contained, and two had combined into a larger inferno.³ The smoke reached Seattle, where I researched and drafted what you now read in an air-conditioned and filtered law library. Undocumented farm workers, the subjects of this article, lived and worked with exposure to smoke and heat, while under fear of deportation if they reported their employers' unlawful labor practices to the state.

I. INTRODUCTION

Washington State has addressed long-standing environmental injustices by setting statewide goals and creating statutory mechanisms for protections. Because of this history, the state has a strong foundation to predict how intensifying climate change will impact vulnerable workers and to take proactive steps in order to mitigate the harms imposed by wildfires, increased pest populations, and rising temperatures. But Washington State must do more to regulate working conditions for agricultural workers by enforcing policies that will protect them from the accelerating impacts of climate change.

A. Environmental Justice and its Health Implications in Washington State

The gravest impacts of environmental issues in the United States have long been pushed onto communities and neighborhoods where Black, Indigenous, and people of color live under

¹NORTHWEST INTERAGENCY COORDINATION CENTER, <https://gacc.nifc.gov/nwcc/> [<https://perma.cc/HPW5-AX99>] (last visited Nov. 5, 2023), [<https://perma.cc/HPW5-AX99>]. Note: I edited this according to 18.1 online-only sources, but this could be wrong!!

² *Id.*

³ *Id.*

government policy and economic structures designed to place them at a disadvantage.⁴ In response to these racist policies, and at the impetus of the Civil Rights and Chicano movements, Washington State has enacted several initiatives to right the historical injustices it helped perpetrate.⁵ The concept of environmental justice undergirds many of these efforts.⁶ Washington law currently defines environmental justice as:

“the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, rules, and policies. Environmental justice includes addressing disproportionate environmental and health impacts in all laws, rules, and policies with environmental impacts by prioritizing vulnerable populations and overburdened communities, the equitable distribution of resources and benefits, and eliminating harm.”⁷

Community activism in Washington led the state legislature to authorize studies, reports, councils, and task forces on environmental and racial justice that worked to address the concerns stated in this definition starting in 1994.⁸ This culminated in three laws passing between 2019 and 2021: the Clean Energy Transformation Act, requiring the state to move away from carbon power by 2045; the Climate Commitment Act, creating a climate investment account which funds agricultural projects if they meet certain labor standards; and the Healthy Environment for All Act, requiring state agencies to consider environmental justice principles when drafting policy.⁹ Although this legislation is helpful, it is not enough to protect the safety and health of farm workers as the effects of climate change intensify.¹⁰

⁴ Washington State Office of the Attorney General, *About Environmental Justice*, www.atg.wa.gov/about-environmental-justice [<https://perma.cc/9RLP-SARG>].

⁵ *Id.*

⁶ *Id.*

⁷ WASH. REV. CODE § 70A.02.010.

⁸ Washington State Office of the Attorney General, *supra* note 4.

⁹ *Id.*; WASH. REV. CODE § 19.405; WASH. REV. CODE § 70A.65; WASH. REV. CODE § 70A.02.

¹⁰ WASH. REV. CODE § 19.405; WASH. REV. CODE § 70A.65; WASH. REV. CODE § 70A.02.

B. Wildfires Pose Unique Health Risks to Outdoor Workers

Eastern Washington receives an average of ten inches of rainfall a year—less than a quarter of the rain Seattle is famous for, and this dry climate leads to a proliferation of wildfires which are devastating to human health.¹¹ Wildfires cause a myriad of serious health conditions that disproportionately impact outdoor workers.¹² Wildfires expose farm workers to high levels of smoke, which damages respiratory tracts and causes downstream health problems.¹³ In a 2020 study from the University of Washington, scientists found that death caused by lung-related health problems increased by nine percent, and death caused by chronic obstructive pulmonary disease¹⁴ mortalities increased by fourteen percent within a day of exposure to wildfire smoke.¹⁵ These effects are heightened in adults between the ages of forty-five and sixty-four, with an increase in mortality of thirty-five percent.¹⁶ Undocumented farm workers, who are less likely to access affordable healthcare¹⁷, may experience higher levels of serious health impacts, including death, shortness of breath, chest discomfort, heart palpitations, or burning sensations in mucous membranes.¹⁸

¹¹ *Washington's diverse climate and geography*, Choose Washington Washington State Department of Commerce, [choosewashingtonstate.com/research-resources/about-washington/climate-geography/](https://perma.cc/98KU-D62U) [https://perma.cc/98KU-D62U]; Brian P.D. Hannon, *Wildfire smoke's economic damage lingers after the flames*, OPB (Feb. 6, 2021), www.opb.org/article/2021/02/06/washington-wildfire-aftermath-smoke-damage/ [https://perma.cc/ZE55-KL2V].

¹² Hannon, *supra* note 11.

¹³ Doubleday, Annie, et al., *Mortality associated with wildfire smoke exposure in Washington state, 2006-2017: a case-crossover study.*, ENVIRONMENTAL HEALTH: A GLOBAL ACCESS SCIENCE SOURCE vol. 19,1 4. 13 Jan. 2020, doi:10.1186/s12940-020-0559-2.

¹⁴ According to the CDC, chronic obstructive pulmonary disease is a group of diseases that decrease lung function, including emphysema and bronchitis.

¹⁵ *Id.*

¹⁶ *Id.*

¹⁷ Under the Personal Responsibility and Work Opportunity Act and the Emergency Medical Treatment and Labor Act, undocumented immigrants generally can only access subsidized or free emergency care and are barred from enrolling in Medicaid or Medicare or receiving other federal health care assistance.

¹⁸ Env't Prot. Agency, *Health Effects Attributed to Wildfire Smoke* (Aug. 13, 2019), www.epa.gov/wildfire-smoke-course/health-effects-attributed-wildfire-smoke [https://perma.cc/PZQ4-2BLD].

The legislature has mandated that the Department of Ecology “protect and conserve our clean air.”¹⁹ To accomplish this goal, the Department regulates pollution caused by engines, manufacturing plants, refineries, and incinerators used in industrial settings.²⁰ Unfortunately, the Department of Ecology is statutorily barred from changing the emission rates of industrial pollutants allowed in response to ambient atmospheric conditions, which would minimize exposure to atmospheric pollution.²¹ Although the Department cannot eliminate wildfires, which cause extensive air pollution, or adjust other human-caused emissions to compensate for increased pollution at this time, labor protections for workers exposed to wildfire smoke, as discussed in a later section, can mitigate its effects. In the face of rising global temperatures and larger wildfires, the legislature should revisit the provision regarding emissions.

C. Rising Temperatures’ Effects in Agricultural Settings

Rising global temperatures create a number of agricultural challenges.²² For example, laborers face increased risks of heat-related illnesses due to more intense work conditions.²³ Similarly, laborers also face increased risk of pesticide-related illnesses because of the heightened need for pesticides in some farms due to increasing insect populations.²⁴ Although Washington State has adopted some regulations regarding these areas, they do not address the full scope of health and labor issues posed by climate change.²⁵

1. Rising Temperatures Create Risks of Heatstroke and Overwork

¹⁹ WASH. REV. CODE § 43.21A.010.

²⁰ WASH. ADMIN. CODE § 173-400-035; WASH. ADMIN. CODE § 173-400-151(c).

²¹ WASH. ADMIN. CODE § 173-400-205.

²² NAT’L FARM WORKER MINISTRY, *Health & Safety*, <https://nfwm.org/farm-workers/farm-worker-issues/health-safety/> [<https://web.archive.org/web/20231126030424/https://nfwm.org/farm-workers/farm-worker-issues/health-safety/>], (last visited Sep 21, 2022).

²³ *Id.*

²⁴ *Id.*

²⁵ *Compare id.* and Washington State’s Emergency Outdoor Heat Exposure Rules Now in Effect, Perkins Coie (2022), <https://www.perkinscoie.com/en/news-insights/washington-states-emergency-outdoor-heat-exposure-rules-now-in-effect.html> [<https://perma.cc/8DVA-6XLW>], (last visited Sep 22, 2022).

Agricultural workers who are outside in rising temperatures face “an emergency” due to the negative health effects they suffer.²⁶ Public health officials consider days with temperatures over around 83 degrees unsafe and likely to cause health problems.²⁷ Currently, workers labor for about twenty-one unsafe days each growing season; this number will almost double by 2050, and will triple by 2100.²⁸ Especially significant, heat exhaustion can be triggered in temperatures above 84 degrees, and this condition can induce heat rash, cramps, mental and physical stress and fatigue, heat stroke, and even death.²⁹ High heat can also cause kidney problems, muscle deterioration, and even death through chronic dehydration and lack of electrolytes.³⁰ Certain fruits and vegetables, such as celery³¹, are toxic for workers to touch when exposed to the sun, so workers must cover their extremities when working with those crops; wearing extra layers to protect against sun exposure helps skin health and can reduce body temperature as well.³² Subtle signals of physical stress often go unnoticed due to the lack of standardized and comprehensive training on the importance of heat acclimatization and the causes and signs of heat-related illnesses.³³ This lack of training then compounds the heat-related health issues for agricultural workers.³⁴

²⁶ Lela Nargi, *Climate Change Has Direct Negative Impacts on Farmworker Health*, THE COUNTER (Mar. 30, 2021, 10:48am), <https://thecounter.org/climate-change-direct-negative-impacts-farmworker-health/> [<https://perma.cc/3FLH-H45B>], (last visited Sep 21, 2022) (quoting interview with Dr. Howard Frumpkin, MD, MPH).

²⁷ Sam Bloch, *Florida farm workers endure 116 dangerously hot working days each growing season. Laws to protect them failed to pass three years in a row.*, THE COUNTER (Jul. 07, 2020, 12:20pm), <https://thecounter.org/florida-laws-fail-to-protect-farm-workers-unsafe-working-days-due-to-heat/> [<https://perma.cc/YP7H-WELR>], (last visited Sep 21, 2022) (quoting interview with Dr. Michele Tigchelaar, CDC).

²⁸ *Id.*

²⁹ *Id.*; CTR. FOR DISEASE CONTROL AND PREVENTION, *Heat Related Illnesses*, <https://www.cdc.gov/niosh/topics/heatstress/heatrelillness.html> [<https://perma.cc/XW98-WBB2>], (last visited Sep 21, 2022).

³⁰ CTR. FOR DISEASE CONTROL AND PREVENTION, *supra* note 29.

³¹ Celery and other crops, including citrus fruits and figs, contain compounds which make the skin more sensitive to UV light, thereby increasing the frequency and severity of sunburns.

³² Nargi, *supra* note 26.

³³ *Turning Down the Heat for Agriculture Workers*, Northwest Ctr. for Occupational Health and Safety, (Apr. 24, 2020), <https://deohs.washington.edu/nwcohs/blog/turning-down-heat-agriculture-workers> [<https://perma.cc/44R5-3UD6>].

³⁴ *Id.*

2. Increased Insect Populations Cause Pesticide Overexposure and Insect-related Diseases

Climate scientists project an increase in pests and disease vector insect species³⁵ as global temperatures increase due to climate change.³⁶ Orchard habitats are especially habitable for these insects, such as mosquitos, which carry diseases like West Nile Virus and dengue, causing deadly, flu-like illnesses.³⁷ As global temperatures increase, crop-eating pest species that prefer higher temperatures will migrate north toward Washington farms.³⁸ Although pesticides may decrease incidence of mosquitos and crop-eating pests, they present unique health implications for the workers applying these pesticides and harvesting pesticide-treated crops.³⁹ Farm workers are put at a high risk of acute toxicity and long-term effects from chemical buildup when preparing and applying pesticides, and can be exposed to spills, spray contact, or chemical drift.⁴⁰ Workers harvesting pesticide-treated crops may also suffer health issues from exposure through dermal contact or inhalation.⁴¹ Pesticides can disrupt the endocrine system; cause skin irritation, allergies, or nausea; and, at worst, lead to comas or death.⁴² If all farm workers—not just those applying chemicals—do not receive training and protective equipment, their risk of developing pesticide-related health issues increase dramatically.⁴³

3. Current Labor Regulations Affecting Farm Workers

³⁵ Disease vector insect species are insects which can carry and spread diseases that affect humans and livestock, including mosquitos spreading malaria, dengue, and West Nile Virus, or ticks which spread lyme disease and other rarer diseases.

³⁶ Cheikh Mbow & Cynthia Rosenzweig, Chapter 5: Food Security — Special Report on Climate Change and Land Ipcch.ch (2022), <https://www.ipcc.ch/srccl/chapter/chapter-5/> [https://perma.cc/H4FT-9MLM].

³⁷ David W. Crowder, et al., *West Nile Virus Prevalence across Landscapes Is Mediated by Local Effects of Agriculture on Vector and Host Communities*, PLOS ONE, vol. 8, no. 1, Jan. 30, 2013, p. e55006, *Gale Academic OneFile*, link.gale.com/apps/doc/A477937573/AONE?u=seat38459&sid=bookmark-AONE&xid=dd58f56b.

³⁸ Cheich Mbow, *supra* note 36.

³⁹ Christos Damalas & Spyridon Koutroubas, *Farmers' Exposure to Pesticides: Toxicity Types and Ways of Prevention*, 4 *Toxics* 1 (2016), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5606636/> [https://perma.cc/RL4X-YJLJ].

⁴⁰ *Id.*

⁴¹ *Id.*

⁴² *Id.*

⁴³ Nathan Donley et al., *Pesticides and environmental injustice in the USA: root causes, current regulatory reinforcement and a path forward*, 22 *BMC PUB. HEALTH* article number 708 (Apr. 19, 2022).

Washington recently made permanent limited regulations protecting farm workers from inordinate heat when working outdoors.⁴⁴ After an “unprecedented heat wave” that caused more than seventy-eight deaths in Washington in 2021, and following pressure from unions and farm worker advocates, the state’s OSHA division enacted the temporary emergency rule that led to the new regulations.⁴⁵ The regulations require employers to provide worker protections in temperatures over 89 degrees.⁴⁶ Still, this regulation does not protect workers in temperatures the scientific community has found to be unsafe for outdoor laborers, temperatures over about 83 degrees.⁴⁷ Before the emergency rules took effect, employers had to train employees on symptoms of heat exposure, create a heat exposure plan, and provide water to employees.⁴⁸ Now, in addition to those protections, employers must provide adequate shade and mandatory paid breaks every two hours, give employees a quart of cooled water for each hour they work, and inform employees of their new rights in a language they know well.⁴⁹

The Departments of Agriculture and Labor have promulgated regulations regarding pesticide safety. Although employers must ensure all workers receive required protections and emergency assistance in case someone directly handling the pesticides is exposed, the rules do not apply as strictly to employers managing people working with pesticide-treated crops.⁵⁰ All workers applying pesticides must receive adequate training and handling guidance and must be able to see “pesticide application and hazard information.”⁵¹ Pesticides must be used as recommended on their

⁴⁴ WASH. ADMIN. CODE § 296-62-095-296-62-09560.

⁴⁵ Washington State’s Emergency Outdoor Heat Exposure Rules Now in Effect, Perkins Coie (2022), <https://www.perkinscoie.com/en/news-insights/washington-states-emergency-outdoor-heat-exposure-rules-now-in-effect.html> [https://perma.cc/8DVA-6XLW], (last visited Sep 22, 2022).

⁴⁶ *Id.*

⁴⁷ *Id.*

⁴⁸ *Id.*

⁴⁹ WASH. ADMIN. CODE § 296-62-09510.

⁵⁰ WASH. ADMIN. CODE § 16-233-021.

⁵¹ WASH. ADMIN. CODE § 16- 233-026.

label.⁵² However, these regulations are meaningless if workers handling pesticides are not trained sufficiently, the label instructions are not in a familiar language, or the training is not conducted in a familiar language; they also must require education in a familiar language and protective gear for people working with treated crops.⁵³

B. Guest and Migrant Workers Face Unique Barriers in the Workplace

This section will explore the history of immigrant workers in Washington State, provide an overview of immigration processes supporting migrant work, and outline labor regulations important to outdoor workers' health and safety.

1. History of Guest and Migrant Workers in Washington State

In Washington, climate change exposes residents in the agricultural areas of the state to environmental hazards. These hazards jeopardize the lives and livelihoods of farm workers, many of whom are Latinx.⁵⁴ The Bracero program that was in effect between 1942 and 1964 provided a pathway for Mexican guest workers to labor on farms, including those in Central Washington.⁵⁵ Workers, who were required to be male Mexican citizens, signed short-term work contracts to receive temporary legal status, labor protections, and legal protections from some aspects of de jure racial segregation while working on American farms. After the federal government terminated this program, many workers remained in Washington and continue to face significant dangers such as immigration deportation proceedings from ICE, CPB, and local law enforcement officers, in addition to environmental and labor hazards associated with farm work.⁵⁶

⁵² WASH. ADMIN. CODE § 16- 233-041(1).

⁵³ Donley, *supra* note 43.

⁵⁴ See Oscar Rosales Castaeda, *The Fusion of El Movimiento and Farm Worker Organizing in the 1960s*, THE SEATTLE C.R. & LAB. HISTORY PROJECT, https://depts.washington.edu/cvllr/farmwk_ch6.htm [<https://perma.cc/9YYJ-UYRH>], (last visited Sep. 13, 2023).

⁵⁵ *Id.*; *About*, BRACERO HISTORY ARCHIVE, <https://braceroarchive.org/about> [<https://perma.cc/7JCJ-ATYA>], (last visited Sep. 13, 2023).

⁵⁶ Castaeda, *supra* note 54.

Washington workers involved in the Chicano Movement, also called *el Movimiento*, used activist strategies championed by the United Farm Workers (UFW) union.⁵⁷ This union continues to advocate for its constituents and uses its power to advocate for improved working conditions and higher wages.⁵⁸ Their efforts include widespread mutual aid projects, community leadership and engagement, and organization of boycotts and strikes.⁵⁹ Undocumented workers and activists face ridicule, disrespect, and insensitivity when interacting with the administrative state, necessitating community care networks outside of the state framework.⁶⁰ Despite state antagonism, the unions and these activists play an essential role in Washington communities and economies.⁶¹

2. Immigration Policies and Federal Laws Target Undocumented People Reporting Labor Violations

The United States' immigration, detention, and deportation policies which form the overall immigration and foreign workers permit system criminalize, overlook, and exclude undocumented workers.⁶² This subordinating legal status limits their access to enhanced environmental and labor protections by promoting a culture of fear and retaliation when they do try to exercise rights often taken for granted.⁶³ The Immigration Reform and Control Act of 1986 prohibits employers from knowingly hiring undocumented workers, requires that employers collect information on national origin, and sanctions employers who hire unauthorized workers.⁶⁴ When employers hire undocumented workers, they often threaten to call immigration enforcement to prevent workers

⁵⁷ *Id.*

⁵⁸ *See Key Campaigns*, UNITED FARM WORKERS, <https://ufw.org/organizing/kke-campaigns/> [<https://perma.cc/NW7L-S67R>], (last visited Sep. 13, 2023).

⁵⁹ Castaeda, *supra* note 54.

⁶⁰ *Id.*

⁶¹ Jocelyn Sherman, *Washington farm workers call for critical support*, UNITED FARM WORKERS (Mar. 24, 2020), <https://ufw.org/wacovid1932420/> [<https://perma.cc/G2UT-5WEP>].

⁶² *See id.*

⁶³ *See id.*

⁶⁴ Josselyn Andrea Garcia Quijano, *Workplace Discrimination and Undocumented First- Generation Latinx Immigrants*, THE UNIVERSITY OF CHICAGO CROWN FAMILY SCHOOL OF SOCIAL WORK, POLICY, AND PRACTICE, <https://crownschool.uchicago.edu/student-life/advocates-forum/workplace-discrimination-and-undocumented-first-generation-latinx> [<https://perma.cc/4EGU-4QTX>] (last visited Sep. 13, 2023).

from reporting abusive practices.⁶⁵ But both federal and state laws attempt to prevent such workplace discrimination based on national origin; the National Labor Relations Board, the Department of Labor, and the Occupational Safety and Health Administration all enforce regulations regardless of the complainant's citizenship.⁶⁶ Washington also protects workers regardless of their citizenship status.⁶⁷

While protective statutes are important, employers still find ways to use the legal system against undocumented workers despite the departments' focus on wrongdoers.⁶⁸ Immigration authorities may⁶⁹ investigate any reports received, regardless of whether the reporting entity is legally allowed to notify authorities.⁷⁰ For example, if an undocumented worker disputes a labor violation in court, the employer may submit a report to Immigration and Customs Enforcement (ICE) in retaliation; ICE can then investigate the worker, possibly subjecting them to detention and deportation, despite the Department of Labor treating the claim solely as an employment issue.⁷¹ The Washington Governor's Office has dealt with this in a limited fashion by issuing an executive order requiring all executive offices and agencies to serve every Washingtonian "regardless of citizenship or legal status."⁷² This order also clarifies that agencies cannot use their perceived authority to collect information on any person's immigration status unless expressly required by law, and departments cannot share any information they collect with immigration

⁶⁵ *Id.*

⁶⁶ Quijano, *supra* note 64.

⁶⁷ WASH. REV. CODE § 49.60.

⁶⁸ Quijano, *supra* note 64.

⁶⁹ President Biden's DHS has issued internal guidance protecting whistleblowers from deportation. However, this protection is not enshrined in statute, so could easily be changed by a future administration.

⁷⁰ Quijano, *supra* note 64.

⁷¹ *See* Quijano, *supra* note 64.

⁷² Office of Governor Jay Inslee, Exec. Order No. 17-01, *Reaffirming Washington's Commitment to Tolerance, Diversity, and Inclusiveness* (2017).

enforcement.⁷³ Still, these inadequate measures are not a perfect shield against retaliation based on immigration status.

C. Statutes and Regulations Promulgated by the Department of Labor Provide Limited Protections to Undocumented Agricultural Workers

Washington administrative agencies promulgate a variety of regulations protecting the health and safety of Washington workers.⁷⁴ Some regulations broadly target all workers, while others are specifically meant for agricultural workers.⁷⁵ The regulations currently in place require workplaces to give breaks to workers, and they suggest that the workplaces provide on-site healthcare access.⁷⁶ While these regulations should benefit all Washington workers, threats of immigration enforcement often bar undocumented workers from accessing the protections they urgently need.

1. General Labor Standards

The Department of Labor (DOL) promulgates regulations designed to promote access to a safe workplace, on-site healthcare, and adequate breaks.⁷⁷ All workplaces must maintain safe conditions.⁷⁸ If an organized group operates a camp for over two weeks, the DOL advises it to provide on-site medical care in the form of an infirmary with a doctor or registered nurse.⁷⁹ Regulations also require all places of employment to keep a method of transportation—one which is reasonably comfortable for moving someone experiencing an emergency—available in case of workplace incidents.⁸⁰ In terms of breaks, employees must receive thirty minutes of meal time

⁷³ *Id.*

⁷⁴ *See Rulemaking Process*, WASHINGTON STATE DEP'T OF LABOR AND INDUSTRIES, [<https://lni.wa.gov/rulemaking-activity/rulemaking-process-terms>] [<https://web.archive.org/web/20231126041055/https://lni.wa.gov/rulemaking-activity/rulemaking-process-terms>], (last visited Sep. 10, 2023).

⁷⁵ *Compare* WASH. ADMIN. CODE Chapter 286-307 (2023) *and* WASH. ADMIN. CODE Chapter 16-233 (2023).

⁷⁶ WASH. ADMIN. CODE Chapter 286-307 (2023).

⁷⁷ WASH. ADMIN. CODE § 296-126-222(3)–(5) (2023); WASH. ADMIN. CODE § 296-131-020 (2023).

⁷⁸ WASH. ADMIN. CODE § 296-126-222(1)–(2) (2023).

⁷⁹ *Id.* § 296-126-222(3).

⁸⁰ *See* WASH. ADMIN. CODE § 296-126-222(4) (2023).

during the middle of their shift, starting no later than five hours after the beginning of their shift.⁸¹ For every four hours of work, employees must receive ten minutes of paid break time.⁸²

The state also regulates breathing hazards in the workplace. Regulations concerning airborne contaminants include smoke exposure and inhalation fall within the state agencies' scope of authority.⁸³ Employers must assess the atmospheric conditions for their workers—most often based on air quality index data and standards—and provide them with commensurate protection and work breaks if the smoke is too intense.⁸⁴ When it is not feasible for employers to install exposure controls, such as in open-air workplaces, the employer must provide respirators and personal protective equipment to impacted workers.⁸⁵

2. Labor Standards Aimed at Agricultural and Outdoor Workers

The Department of Labor has promulgated emergency regulations requiring employers to provide employees with increased temperature protections between May 1 and September 30 annually.⁸⁶ This regulation requires that employers provide extra protections when the temperature is above eighty-nine degrees, a threshold five degrees above the safe working temperature as determined by public health officials.⁸⁷ Outdoor workplaces must maintain shade sufficient for all employees taking breaks and require employees to take ten-minute breaks every two hours to avoid heat exhaustion.⁸⁸ Additionally, employers must give workers at least a quart of “suitably cool” drinking water for every hour worked and allow time to drink this water.⁸⁹ Employers also must supervise employees, especially new hires, for heat-related illnesses and encourage them to take a

⁸¹ See WASH. ADMIN. CODE § 296-126-092(1) (2023).

⁸² See *id.* § 092(4).

⁸³ See WASH. ADMIN. CODE § 296-841-100(c)(2) (2023).

⁸⁴ WASH. ADMIN. CODE § 296-841-20005(1)(a)–(b) (2023).

⁸⁵ See WASH. ADMIN. CODE § 296-841-20015(3) (2023).

⁸⁶ See Emergency Rule, WASH. REG. 22-12-095 (effective Jun. 15, 2022).

⁸⁷ See *id.*

⁸⁸ See, e.g., WASH. ADMIN. CODE § 296-62-09530(e) (2023); WASH. REG. 22-12-095 (2022).

⁸⁹ See WASH. ADMIN. CODE § 296-62-09540(1)(a)–(b) (2023).

preventative rest if they exhibit signs of heat-related illnesses.⁹⁰ Enforcement is difficult in the agricultural context because workers paid by piece, or weight, of produce picked are economically disincentivized from taking breaks; they therefore may not be able to access shade and water and become more vulnerable to heat-related illnesses.⁹¹

The Department of Labor also requires that employees working in hot temperatures outdoors be trained in a language they understand; first, employees must be informed of their labor rights provided by the emergency regulations.⁹² Second, they must be told about the process of acclimatization to work in high temperatures and the importance of cooldown periods as well as access to water mandated in the emergency regulations.⁹³ Third, they must be given information on environmental and personal factors that increase the risk of heat-related illness, alongside the importance of reducing use of heat-retaining clothing and materials when working outdoors.⁹⁴ Finally, supervisors must encourage workers to report signs or symptoms of heat-related illness if a worker senses it in themselves or observes it in their coworkers.⁹⁵ Supervisors themselves should receive training sufficient for them to teach employees these topics, and if an emergency occurs, must provide sick employees with access to emergency health care.⁹⁶

II. ARGUMENT

Environmental hazards worsen every year.⁹⁷ Scientists predict the average temperature of the State of Washington will rise by about 5.8 degrees by 2050, which will cause heavy human

⁹⁰ See WASH. ADMIN. CODE § 296-62-09555(2)–(3) (2023).

⁹¹ See *Issues Affecting Farm Workers: Health & Safety*, NATIONAL FARM WORKER MINISTRY, <https://nfwfm.org/farm-workers/farm-worker-issues/health-safety/> [<https://perma.cc/5WV7-ZWJ9>], (last visited Apr. 14, 2023).

⁹² See WASH. ADMIN. CODE § 296-62-09560(1) (2023).

⁹³ See *id.* § 09560(2).

⁹⁴ See *id.* § 09560(2)(a)–(b).

⁹⁵ See *id.* § 09560(2)(j).

⁹⁶ See WASH. ADMIN. CODE § 296-62-09560(3) (2023).

⁹⁷ See *The Effects of Global Climate Change*, NASA GLOBAL CLIMATE CHANGE: VITAL SIGNS OF THE PLANET, <https://climate.nasa.gov/effects/> [<https://perma.cc/RU3V-3Q84>], (last visited Sep. 10, 2023).

and ecological losses if the legislature does not act quickly.⁹⁸ This drastic change will alter agricultural outputs and worsen the already dangerous working conditions for farm workers. To mitigate these effects, the Washington State Legislature must deploy swift measures to create a foundation of environmental and labor solutions that incorporates flexibility and can suitably respond to changing conditions.⁹⁹ The legislature is best positioned to respond with strong and immediate protections for workers in the face of these threats, and it must act now to protect both farm workers and Washington State's agricultural industry.

The Washington Legislature and administrative agencies should work together to strengthen and create regulations to protect workers in ways that would provide material and immediate support in heat and pesticide exposure, smoke inhalation, immigration enforcement threats, and fair workplace standards. The state should prioritize more comprehensive heat and pesticide protections for laborers, wraparound programs to support farmers as growing seasons change, and stiff enforcement mechanisms that prevent employers from using immigration enforcement as a threat. The legislature has the unique position of being able to direct state agencies with expertise in these areas and has the power to fund important projects. Also, legislators already have lobbying and policymaking relationships with worker advocacy groups and unions. The legislature can allow change by enacting statutes granting administrative authority for regulations supporting environmental justice, climate resilience, and workers' rights.

⁹⁸ Rebekah Frankson & K.E. Kunkel, *State Climate Summaries 2022 Washington*, State Summaries, NATIONAL CENTERS FOR ENVIRONMENTAL INFORMATION, <https://statesummaries.ncics.org/chapter/wa/> [<https://perma.cc/SG2W-HAYC>], (last visited Jan. 13, 2023).

⁹⁹ See ENV'T PROT. AGENCY, *Climate Change Indicators: Length of Growing System*, <https://www.epa.gov/climate-indicators/climate-change-indicators-length-growing-season> [<https://perma.cc/5S2J-8MKZ>], (last visited Oct. 31, 2022); Climate Change Indicators Division, *Climate Change Indicators: Heat-Related Deaths*, ENV'T PROT. AGENCY, [<https://www.epa.gov/climate-indicators/climate-change-indicators-heat-related-deaths>] [<https://perma.cc/6SE6-2BGP>], (last visited Oct. 3, 2023).

New regulations require community input and enforcement mechanisms to make sure they have the desired effect on communities they aim to impact. The state legislature must create administrative agency taskforces to generate and research ideas for environmental and labor regulations that will ease the burdens of climate change on farm workers, farm owners, and the state's land and water. These taskforces could research proposed solutions that have been piloted in farms in other states, or they could conduct surveys of farm workers and owners to better target new regulations and policies for the legislature to pass. Suggestions for the implementation of these regulations will be discussed throughout the remainder of this paper. Labor regulations such as heat safety requirements, medical and housing support, and improved education on and protection from pesticides would make workers safer. To help the industry stay resilient and maintain steady jobs for workers, environmental and agricultural regulations should include increased incentives for organic and sustainable farming, subsidies for natural and sustainable pest control, and grants for farms to grow new crops as the growing season changes due to altered climate patterns.¹⁰⁰

These labor regulations should be crafted carefully to protect undocumented and documented workers alike. If programs are not constructed with community member input and approval, they are unlikely to meet the most pressing needs of the industry in a culturally competent way. For instance, any law enforcement involvement, even in the capacity of enforcing regulations for employers, is a barrier to trust.¹⁰¹

¹⁰⁰ See *id.*; see also TILTH ALLIANCE, Washington State Organic & Sustainable Farming Fund, <https://tilthalliance.org/our-work/wa-farming-agriculture/washington-state-organic-sustainable-farming-fund/> [<https://perma.cc/5ZMU-BHFC>], (Last visited Oct 3, 2023).

¹⁰¹ See Mattes & Mahon, PC, *Undocumented immigrants and the police* (Feb 15, 2021), MATTES & MAHON, PC BLOG <https://www.immiglawus.com/blog/2021/02/undocumented-immigrants-and-the-police/> [<https://perma.cc/P5UP-QP6X>], (last visited Jan. 13, 2023); Susan Ferriss, *These Essential Workers Are Afraid To Report Labor Violations*, THE CTR. FOR PUB. INTEGRITY (Mar. 4, 2022), <https://publicintegrity.org/inside-publici/newsletters/watchdog-newsletter/immigrants-fear-reporting-labor-violations/> [<https://perma.cc/A7GB-BEDM>].

Law enforcement involvement will prevent both undocumented and documented people from being able to access resources and protections that all workers should have.¹⁰² Still, a mechanism to ensure compliance with the new regulations is essential. Any new labor regulations that come about as a result of this task force should include input from affected groups, with at least 50% of the task force evenly split between workers and industry partners such as the UFW union and farm owners. Furthermore, the taskforce should include a condition that only the Department of Labor or Department of Agriculture may perform investigations or enforcement actions, so law enforcement officers are not part of the enforcement mechanism and workers feel comfortable reporting violations.¹⁰³ Washington law prohibits state workers from collecting data on nationality or collaborating with ICE and CBP.¹⁰⁴ These measures provide a baseline framework to ensure new labor regulations address key issues and enforcement measures incentivize worker participation.

Similarly balancing a diverse array of interests, any environmental and agricultural regulations should strike a balance between preparing Washington for unpredictable and hazardous changes to our climate and maintaining agricultural productivity in both the short- and long-term. Climate scientists, agricultural scientists, and farm owners should collaborate on what will work for farms today and create a foundation for any future regulations that will help adapt to new growing seasons and a changing environment. Key regulations in this area include air pollution, fertilizer, and pesticide control measures. Additionally, the state could create a grant program for farms willing to experiment and determine which crops will grow best as Washington's growing

¹⁰² *See id.*

¹⁰³ *See* Danyelle Solomon, Tom Jawetz & Sanam Malik, *The Negative Consequences of Entangling Local Policing and Immigration Enforcement*, CENTER FOR AMERICAN PROGRESS (Mar. 21, 2017), <https://www.americanprogress.org/article/negative-consequences-entangling-local-policing-immigration-enforcement/> [<https://web.archive.org/web/20231207045056/https://www.americanprogress.org/article/negative-consequences-entangling-local-policing-immigration-enforcement/>] (last visited Jan. 13, 2023).

¹⁰⁴ WASH. REV. CODE § 43.17.425.

season changes; these programs and regulations will set out guidelines for using Washington's farmland in sustainable and flexible ways and will help our state meet food needs in the future.

In terms of workers' justice, the state should support undocumented persons by creating stronger labor protections and backing up its executive orders with statutory consequences for discrimination. The state could implement a statutory right to sue or prosecute employers and people who leverage documentation status against workers, going beyond the current Washington Law Against Discrimination in RCW §49.50.¹⁰⁵ Housing justice is another large issue for the undocumented agricultural worker community, and regulations improving housing standards for farm workers would improve health and quality of life immediately. Additionally, creating a statutory mechanism with immediate consequences for people who call in threats against undocumented people would create a culture of protection and halt the practice of weaponizing documentation status as a punishment for requesting basic labor protections.

A. Regulations Supporting Environmental Justice

As unpredictable climate disasters become increasingly likely, Washington State has an opportunity to support environmental justice by implementing new climate-centric regulations. By establishing more robust air quality and health protection measures, lives will be saved immediately. As insect populations continue to rise, workers must be granted greater protection when working with pesticides. Farm owners also deserve state support through programs assisting them to experiment with crops and growing seasons and shift away from pesticide use.

1. Air Quality Regulations that Respond to the Reality of Wildfires

As wildfires become more common, the state must respond to ecological hazards by reducing air pollution. Current regulations provide limited, but inflexible, protection; officials are

¹⁰⁵ WASH. REV. CODE § 49.50.

only able to adjust regulations on businesses creating pollution if the state declares an environmental emergency, which is rare.¹⁰⁶ The regulations govern a variety of smoke- and pollution-producing industries, including farms that burn waste products.¹⁰⁷ Two additional regulations would help shield the people of Washington, especially farm workers, from hazardous air quality: first, adjustable air pollution levels for industrial air polluters and second, blanket bans on unnecessarily burning waste products in agricultural lands during fire seasons.

At present, the Department of Ecology cannot mitigate the risks ecological air pollution, such as wildfires, pose to human health by reducing the allowed rates of industrial pollution¹⁰⁸ Unchecked pollution endangers human health, and as wildfires become more common, increased air pollution will worsen respiratory health issues.¹⁰⁹ The state cannot regulate the occurrence or intensity of natural wildfires; however, it could feasibly target industrial polluters through regulations, creating a cap on emissions biweekly or monthly as air conditions change. Atmospheric scientists should use air quality data to calculate appropriate levels of industrial pollution in response to current and historical smoke and air quality conditions. This would balance industry considerations by providing certainty on a regular basis, allowing companies and farms to help mitigate pollution causing poor air quality. As wildfires become endemic, these regulations will become, if not welcome, predictable based on historical adjustments for similarly sized wildfires.

¹⁰⁶ See WASH. ADMIN. CODE § 173-400-205 (2023).

¹⁰⁷ See *id.*; See WASH. ADMIN. CODE § 173-430-040 (2023).

¹⁰⁸ See WASH. ADMIN. CODE § 173-400-205 (2023).

¹⁰⁹ See *Wildland Fire Risk Rising; Lands Commissioner Franz Reveals Wildfire Strategic Plan that Calls for Change*, WASH. DEP'T OF NAT. RES., (Jan. 17, 2019), [<https://perma.cc/CPB7-S4RB>], (last visited Jan. 13, 2023); Claire Bugos, *Wildfire Smoke More Dangerous for Your Lungs Than Other Pollution*, VERYWELL HEALTH (March 22, 2021), [<https://www.verywellhealth.com/wildfire-smoke-lung-health-study-5116848>] [<https://perma.cc/8LKB-AWXF>].

Another regulation allowing a total ban on burns in agricultural areas during active wildfires would serve two important purposes: preventing further wildfires and protecting workers' respiratory health. The Department of Ecology already limits agricultural burns, including a required "burn decision process," and imposes fees on various kinds of burns.¹¹⁰ This regulatory scheme is enough for current levels of air pollution, but it will likely be insufficient as wildfires become more common. Passing regulatory authority for this measure before wildfires are endemic will ensure it can be used as soon as necessary without an agency notice and comment procedure period¹¹¹ when it is ecologically essential. Although a total burn ban may inconvenience farms that depend on burns for waste disposal, the state could provide subsidized composting supplies or a state-supported composting plan for affected businesses when it determines that burns are too risky.¹¹² This would likely increase costs of waste management in the short term, but as farms use and optimize composting systems and dispose of waste in alternate ways, they may be able to shift costs in other areas, such as soil enhancement.¹¹³

2. Regulations Protecting Workers from Pesticides and Reducing the Proliferation of Pesticide-resistant

Insects

Insect populations increase in lockstep with rising temperatures. Since Washington's average temperature is expected to increase by over five degrees by 2050, insect populations will likely increase as well.¹¹⁴ Pesticides are ubiquitously used in non-organic farms to control insect

¹¹⁰ See WASH. ADMIN. CODE §§ 173-430-040–041 (2006).

¹¹¹ Agencies use notice and comment periods as a way to incorporate community input when writing official rules.

¹¹² See Office of Resource Conservation and Recovery, *Reducing the Impact of Wasted Food by Feeding the Soil and Composting*, EPA, <https://www.epa.gov/sustainable-management-food/reducing-impact-wasted-food-feeding-soil-and-composting> [<https://perma.cc/992Q-E6H2>], (last visited Jan. 13, 2023); Charles Gould, *Compost handling in agriculture systems: Right-to-Farm coverage of on-farm compost production*, MSU EXTENSION AGRICULTURE (Mar. 2, 2022), <https://www.canr.msu.edu/news/compost-handling-in-agriculture-systems-right-to-farm> [<https://perma.cc/43TY-GR7W>].

¹¹³ See *id.*

¹¹⁴ See Rebekah Frankson & K.E. Kunkel, *State Climate Summaries 2022 Washington*, STATE SUMMARIES NAT'L CTRS FOR ENV'T INFO., <https://statesummaries.ncics.org/chapter/wa/> [<https://perma.cc/SG2W-HAYC>], (last visited

populations, but even current pesticide levels are hazardous to human health and negatively affect ecosystems near farms that depend on non-pest insect species.¹¹⁵ Many pesticides are carcinogenic and poisonous to humans, as well as their intended targets, insects.¹¹⁶ In humans, both short-term intense exposure and long-term mild exposure lead to skin and intestinal problems and can cause neurological problems, hormonal issues, and cancer if the people handling these products do not receive adequate protection.¹¹⁷ Pesticides are usually sprayed over entire fields, so more pesticides than necessary are used, exposing people to levels beyond what is required to protect crops from insects.¹¹⁸ The most effective regulations would shift agricultural practices more deeply than less comprehensive measures, but because of the unpredictable and potentially catastrophic nature of climate change, it may be beneficial to mitigate potential issues quickly.

The most significant regulatory change possible would be a move towards entirely natural or nontoxic pesticides. Natural and organic farming utilizing integrated pest management (IPM) would reduce the risk of exposure to toxic pesticides by using naturally occurring compounds and insects to control pest populations.¹¹⁹ IPM focuses on preventing pest populations by maintaining a clean and weatherized¹²⁰ workplace and reducing pesticide use by using heat or cold treatment,

Jan. 13, 2023); L. Lindström and P. Lehmann, *Climate change effects on agricultural insect pests in Europe* (2015), CLIMATE CHANGE AND INSECT PESTS, 12(5)(440), pp. 136–153, doi:10.1079/9781780643786.0136.

¹¹⁵ See Ferguson, Rafter, et. al., *Farmworkers at Risk*, UNION OF CONCERNED SCIENTISTS (2019), <https://www.ucsusa.org/sites/default/files/2019-12/farmworkers-at-risk-report-2019-web.pdf> [<https://perma.cc/BJ9B-B28H>], (last visited Oct. 31 2022); *Factsheet on Ecological Risk Assessment for Pesticides*, ENV'T PROT. AGENCY, <https://www.epa.gov/pesticide-science-and-assessing-pesticide-risks/factsheet-ecological-risk-assessment-pesticides> [<https://perma.cc/WUM7-JFMZ>], (last visited Jan. 12, 2023).

¹¹⁶ See Micaela Edelson, *The Chemical Contract*, EDGEEFFECTS, (June 14, 2022), <https://edgeeffects.net/farmworker-pesticide-exposure/> [<https://perma.cc/KM3F-PUJV>], (last visited Oct. 31 2022).

¹¹⁷ See *id.*; Ferguson, *supra* note 115.

¹¹⁸ See Edelson, *supra* note 116; Ferguson, *supra* note 115.

¹¹⁹ See *Introduction to Integrated Pest Management*, ENV'T PROT. AGENCY, (June 20, 2023), <https://www.epa.gov/ipm/introduction-integrated-pest-management> [<https://perma.cc/7LJM-4FBN>], (last visited Oct. 31, 2022).

¹²⁰ Weatherization in this context refers to the process of sealing buildings so that pests cannot enter and cause damage.

pest trapping, and predator insects to manage populations.¹²¹ Although this method would be more time-consuming, it is less expensive in the long-term and would prevent the proliferation of pesticide-resistant insects.¹²² An end to pesticide use would make all surrounding ecosystems healthier.

Striking a balance between current market realities and future environmental and agricultural needs is crucial in creating incentive structures and regulations. Although it is not feasible to ask all farmers to switch to natural or organic farming methods in only a few years, the Departments of Agriculture and Ecology could incentivize this practice by providing training sessions and subsidizing the costs of switching from a chemical-based to an integrated pest management system as has been attempted in other areas.¹²³ Washington already operates the Organic Certification Cost-Share Program, which reimburses farms for some organic certification costs.¹²⁴ Expanding the program by increasing access to training, setting up peer support opportunities, and subsidizing crops for an appropriate period while farmers transition from conventional farming to organic farming would likely improve program involvement. Increasing access to organic and natural farming would decrease the need for toxic chemicals in the agricultural process, reduce health issues in farm workers significantly, and decrease health costs for employers.

An additional method of pesticide management uses an approach of harm reduction rather than eradication of all pesticides. This method entails sourcing less-toxic pesticide chemicals,

¹²¹ *Introduction to Integrated Pest Management*, EPA, <https://www.epa.gov/ipm/introduction-integrated-pest-management> [<https://perma.cc/S2RU-XYEP>], (last visited Oct 31, 2022).

¹²² *Id.*

¹²³ FOOD AND AGRIC. ORG. OF THE U. N., *New tools and farmer training could revolutionize pesticide management in West Africa* (Feb. 17, 2014), <https://www.fao.org/news/story/en/item/214049/icode/> [<https://perma.cc/5CCB-JGCR>], (last visited Oct 31, 2022).

¹²⁴ John Wyss, *Farm Service Agency (FSA) Administered Programs*, U.S. DEPT. OF AGRIC., <https://www.fsa.usda.gov/state-offices/Washington/programs/index> [<https://perma.cc/L25P-HNFQ>], (last visited Oct 31, 2022).

using all available protective equipment, and timing pesticide use so as few workers as possible encounter it.¹²⁵ Rather than harmful pesticides, such as chlorpyrifos, natural alternatives, such as neem, horticultural oils, and diatomaceous earth can control many common pest species that appear in Washington farms.¹²⁶ Even alternative chemical pesticides can be safer if they operate by a non-neurological mechanism.¹²⁷ Switching from hazardous chemicals to manage farm yields more gently will ensure that our water and soil is not polluted.¹²⁸ The state can facilitate a more rapid change to natural or organic agricultural production by providing farmers with education, tools, and appropriate incentives to shift away from pesticides that have historically been used on Washington farms.¹²⁹ The economic and ecological benefits make this approach a good choice for the agricultural industry as well as balance the need for change with practices and infrastructure already in place.

3. Creating a Grant Program for Implementing New Crops and Growing Seasons

As the average temperature in Washington increases, the growing season and the kinds of crops that can be successfully cultivated will change.¹³⁰ To remain competitive in a changing world, the Department of Agriculture should support farmers who want to experiment with new crops to adapt to changing farming conditions. The Department should also subsidize infrastructure updates which will be necessary as climate change worsens, including water-

¹²⁵ PENN STATE EXTENSION, *Less Harmful Pesticides* (2022), <https://extension.psu.edu/less-harmful-pesticides> [<https://web.archive.org/web/20231207045952/https://extension.psu.edu/less-harmful-pesticides>] (last visited Oct 31, 2022); Hesperian, *How to Reduce Harm From Pesticide Use*, HESPERIAN HEALTH GUIDES (Nov. 17, 2022), https://en.hesperian.org/hhg/A_Community_Guide_to_Environmental_Health:How_to_Reduce_Harm_from_Pesticide_Use [<https://perma.cc/SAH7-TYGL>].

¹²⁶ Penn State Extension *supra* note 125.

¹²⁷ *Id.*

¹²⁸ GREENTUMBLE, Pros and Cons of Integrated Pest Management (Dec. 14, 2016), <https://greentumble.com/advantages-and-disadvantages-of-integrated-pest-management/> [<https://perma.cc/PU6H-PTJK>], (last visited Oct 31, 2022).

¹²⁹ FOOD AND AGRIC. ORG. OF THE U. N., *supra* note 123.

¹³⁰ *Climate Change Indicators: Length of Growing System*, ENV'T PROT. AGENCY, <https://www.epa.gov/climate-indicators/climate-change-indicators-length-growing-season> [<https://perma.cc/J6YZ-C7MM>], (last visited Oct 31, 2022).

efficient irrigation systems, erosion mitigation, and shelters for workers. Inflation is increasing across all sectors of the economy and production costs associated with farming have risen sharply, by about eighteen percent between 2020 and 2022.¹³¹ To avoid a rapid decrease in future agricultural output, both in terms of food production and contributions to the state economy, the state should invest in its farms and its agricultural future now.

The federal government and Washington state offer subsidies meant to incentivize sustainable and economically responsible farming practices.¹³² A subsidy system for crop development and infrastructure improvements would fit well in the existing farm support network. The USDA currently offers a subsidy for farmers who plant cover crops, and this practice is associated with an increased workload and improved yields for farms.¹³³ Likewise, a subsidy supporting farmers who are willing to take risks by planting new crops will improve crop diversity and yields in Washington as our growing season changes. Washington State currently offers a disaster program meant to offset financial losses incurred due to wildfires and droughts, indicating an awareness of the negative impact of climate change on Washington farmers.¹³⁴ The state also runs a Tree Assistance Program which reimburses orchard and vineyard owners as well as decorative tree growers if their yields are affected by natural disasters.¹³⁵ A regulatory scheme that proactively works to mitigate the impacts of climate change would allow farmers to adjust their practices and prepare for future conditions, which will be more extreme than what the state has

¹³¹ FARM BUREAU, *Analyzing farm inputs: The cost to farm keeps rising* American Farm Bureau Federation - The Voice of Agriculture (Mar. 17, 2022), <https://www.fb.org/market-intel/analyzing-farm-inputs-the-cost-to-farm-keeps-rising> [<https://perma.cc/KE9B-TKZN>], (last visited Oct 31, 2022).

¹³² Wyss *supra* note 124.

¹³³ *Id.*

¹³⁴ John Wyss, *Washington State Programs*, U.S. DEP'T OF AGRIC., <https://www.fsa.usda.gov/state-offices/Washington/programs/index> [<https://web.archive.org/web/20231207050246/https://www.fsa.usda.gov/state-offices/Washington/programs/index>] (last visited Oct 31, 2022).

¹³⁵ *Id.*

historically experienced.¹³⁶ We should proactively invest in improving our state’s agricultural diversity and learn what will work as growing conditions respond to climate change, instead of being caught flat-footed when its worst effects arrive.

B. Labor Regulations Supporting Worker Health and Sustainable Employment

The labor regulations currently in place are a strong foundation and will provide guidelines for future expansions to help a broader population. Such regulations can support workers exposed to pesticides and smoke as well as increase the scope of heat protection and decrease heat-related illnesses. They can also effectuate improved housing for workers, which is essential to reducing exposure to toxins and heat. Finally, stronger support for Washington’s undocumented population is essential to make sure these regulations are fully enforced in practice.

1. Labor Regulations for Ecological Concerns Including Pesticide and Smoke Exposure

Washington state currently requires employers to provide employees who work outside in hazardous weather and air conditions certain protective equipment, including respirators.¹³⁷ Additionally, the state requires that employees who handle pesticides be trained on safe-handling practices, possible health effects, and required protective equipment while spraying pesticides.¹³⁸ While these are strong protections, they will only become more crucial as climate change continues, increasing both insect populations and wildfires.¹³⁹ Therefore, the Departments of Agriculture and Labor should take a two-pronged approach of education and protection to ensure worker safety from increased pesticide use and worsening air quality caused by wildfires. By educating workers about health hazards, mitigation strategies, and their legal rights while simultaneously requiring employers to provide a wider variety of protective equipment—as is

¹³⁶ Rebekah Frankson & K.E. Kunkel, *Washington State Climate Summaries*, N.C. INST. FOR CLIMATE STUD. (2022), <https://statesummaries.ncics.org/chapter/wa/> [<https://perma.cc/TA7K-TPM3>], (last visited Jan 13, 2023).

¹³⁷ WASH. ADMIN. CODE § 296-307-624.

¹³⁸ WASH. ADMIN. CODE § 16-223-021; WASH. ADMIN. CODE § 16-233-216.

¹³⁹ Frankson, *supra* note 114; Lindström, *supra* note 114.

called for by Washington’s Heat Smart regulations, workers will be able to work safely for longer periods of time.¹⁴⁰ All educational materials or presentations should be presented in languages workers can easily understand and should be presented on a recurring basis to avoid the issues posed by worker turnover.¹⁴¹

To prevent health issues associated with pesticide exposure, employers and the Departments of Agriculture and Labor must provide increased education and training about safe use of pesticides along with their associated health risks, full protective gear, and medical attention for workers affected by pesticide exposure.¹⁴² The Washington Administrative Code requires employers to notify employees about health hazards indicated on pesticide labels and requires handlers to wear protective clothing.¹⁴³ However, warning labels often contain confusing language, especially for people who do not primarily speak English.¹⁴⁴ The EPA, which regulates pesticides and creates warning labels, actively seeks out new studies on pesticide effects and implements epidemiology review protocols; they mainly prioritize health studies which have been confirmed by multiple sources.¹⁴⁵ These are good safety practices, but pesticide labels as printed are unlikely to warn users of the full extent of the harm pesticides may cause because only health hazards confirmed in multiple studies are included on labels.¹⁴⁶ Because warning labels exclusively rely on studies that have been confirmed multiple times, to be careful, employers may

¹⁴⁰ WASH. ST. DEP’T OF LAB. & INDUS., *Be heat smart*, <https://www.lni.wa.gov/safety-health/safety-training-materials/workshops-events/beheatsmart> [<https://web.archive.org/web/20231207050736/https://www.lni.wa.gov/safety-health/safety-training-materials/workshops-events/beheatsmart>] (last visited Oct 31, 2022).

¹⁴¹ *Id.*

¹⁴² WASH. ADMIN. CODE § 16- 228-1400.

¹⁴³ WASH. ADMIN. CODE § 16- 233-216.

¹⁴⁴ Edelson, *supra* note 116.

¹⁴⁵ Pesticide Registration Division, *Understanding the Science behind EPA’s Pesticide Decisions*, EPA, <https://www.epa.gov/pesticide-registration/understanding-science-behind-epas-pesticide-decisions> [<https://perma.cc/UZ98-M2M2>], (last visited Oct 31, 2022).

¹⁴⁶ *See id.*

need to assume pesticides are more harmful than their labels indicate and provide workers handling pesticides with the most extensive protective gear possible, including facepiece respirators with filters, chemical-resistant clothing, and gloves used only for pesticide application.¹⁴⁷

All workers, not just those directly handling pesticides, deserve protection from these health conditions. At a minimum, employers should provide all workers with face masks, chemical-resistant gloves, and protective arm sleeves.¹⁴⁸ If financially feasible, chemical-resistant shirts and pants for all employees would prevent rashes and chemical burns caused when pesticides absorb into clothes and react with skin.¹⁴⁹ With this level of pesticide protection, pesticide handlers and farm workers alike would receive appropriate safeguards from chemicals that can cause long-term neurological and endocrine disruptions.¹⁵⁰

Employers, the Department of Agriculture, and the Department of Labor should also work together to provide up-to-date and comprehensive information regarding the hazards of smoke inhalation for agricultural employees. Informing farm workers of the dangers of smoke exposure and inhalation will incentivize them to wear protective equipment, take breaks, and drink water regularly.¹⁵¹ Most importantly, workers must learn the physical and behavioral symptoms of toxic smoke inhalation in themselves and others.¹⁵² Employers should provide protective equipment for smoke exposure including face masks and respirators with a rating of N95 or greater, and possibly

¹⁴⁷ Pesticide Worker Safety Division, *Personal Protective Equipment for Pesticide Handlers*, EPA, <https://www.epa.gov/pesticide-worker-safety/personal-protective-equipment-pesticide-handlers> [<https://perma.cc/MC5Q-EFYR>], (last visited Oct 31, 2022).

¹⁴⁸ *Id.*

¹⁴⁹ Ferguson, *supra* note 115.

¹⁵⁰ *Id.*

¹⁵¹ WASH. ST. DEP'T OF LAB. & INDUS., Respirators, <https://www.lni.wa.gov/safety-health/safety-topics/topics/respirators> [<https://web.archive.org/web/20231207050954/https://www.lni.wa.gov/safety-health/safety-topics/topics/respirators>], (last visited Jan 13, 2023).

¹⁵² DIV. OF OCCUPATIONAL SAFETY AND HEALTH, *Protecting Outdoor Workers Exposed to Smoke from Wildfires*, <https://www.dir.ca.gov/dosh/wildfire/Worker-Protection-from-Wildfire-Smoke.html> [<https://web.archive.org/web/20231207051331/https://www.dir.ca.gov/dosh/wildfire/Worker-Protection-from-Wildfire-Smoke.html>], (last visited Jan 13, 2023).

eye protection if particulates are large enough.¹⁵³ Additionally, employers should maintain an enclosed rest area with air filtration so employees can seek respite if they notice signs of toxic smoke inhalation.¹⁵⁴ Although it may be an expensive investment at first, these measures will reduce respiratory illnesses and increase worker productivity, and possibly decrease personal injury and labor law violation suits, benefiting owners as well as workers.

2. Enhanced Labor Rights and Housing Regulations to Mitigate Heat-related Illnesses

a. Shade, Breaks, Water Requirements, and Solutions for Worker Safety

The Washington Department of Labor and Industries passed emergency heat regulations in 2019, which have been renewed annually since then. These regulations apply to outdoor workers in all industries, including agriculture, between May 1 and September 30 every year. Employers must provide adequate shaded locations and a quart of “suitably cool” drinking water for every hour of a worker’s shift.¹⁵⁵ They must require ten-minute breaks for every two hours worked in temperatures over eighty-nine degrees.¹⁵⁶ Additionally, employers must provide: information about heat-related illnesses, including environmental and physical factors; procedures to report and respond to heat-related illness; and mandated work protections.¹⁵⁷ Because of increased temperatures, farm owners are experimenting with alternative work hours and growing periods to avoid hotter periods and worker heat exhaustion.¹⁵⁸ These measures are a good start, but the current scientific understanding of heat-related illnesses leads to the conclusion that more protections are

¹⁵³ *Id.*

¹⁵⁴ WASH. ST. DEP’T OF LAB. & INDUST., *Protecting workers from wildfire smoke exposure*, <https://www.lni.wa.gov/forms-publications/F101-190-000.pdf> [<https://perma.cc/4M65-7Z8H>], (last visited Jan 14, 2023).

¹⁵⁵ Washington State Department of Labor & Industries, *Be heat smart*, <https://www.lni.wa.gov/safety-health/safety-training-materials/workshops-events/beheatsmart> [<https://perma.cc/4XC5-SMY2>], (last visited Oct 31, 2022).

¹⁵⁶ *Id.*

¹⁵⁷ *Id.*

¹⁵⁸ *Growing Seasons in a Changing Climate*, USDA, <http://www.climatehubs.usda.gov/growing-seasons-changing-climate> [<https://web.archive.org/web/20231207051630/https://www.climatehubs.usda.gov/growing-seasons-changing-climate>], (last visited Jan 13, 2023).

needed, and these current measures will be inadequate to balance worker safety and farm productivity as temperatures continue to rise.¹⁵⁹

To ensure worker safety, the state legislature must lower the temperature threshold that triggers increased breaks and provide air-conditioned space for breaks. The scientific consensus that risk of heat exhaustion begins at eighty-four degrees leads to the conclusion that ten-minute breaks should be required when the temperatures are eighty-four degrees or even lower.¹⁶⁰ Air-conditioned spaces available to farm workers would provide time and space for them to completely recover from heat sickness.¹⁶¹ Additionally, misting stations may be feasible in some locations; these would improve air quality in break areas and help cool workers down in hot temperatures.¹⁶² Early morning work hours would also provide protection from the heat, but laborers already work long hours, so changing schedules to fully compensate for heat exposure may not be possible.¹⁶³ However, improving access to cool break spaces, like portable building structures or misted areas, would help decrease the negative effects of long-term heat exposure. Increased access to breaks and to safe, cool break environments will reduce heat fatigue and heat-related deaths.

b. Workers' Housing Regulations to Provide Dignified and Safe Living Spaces

Migrant farm workers often live in temporary housing or tents that provide inadequate protection against smoke or high temperatures, as construction guidelines do not require air conditioning or air filtration.¹⁶⁴ Workers on farms and orchards often do not have permanent

¹⁵⁹ Nargi, *supra* note 26.

¹⁶⁰ *Id.*

¹⁶¹ *Id.*

¹⁶² Protecting workers..., *supra* note 154.

¹⁶³ Nargi, *supra* note 26.

¹⁶⁴ *Checklist for Temporary Worker Housing Construction Standard*, WASHINGTON STATE DEPARTMENT OF HEALTH 1-3, (July 1, 2003), <https://doh.wa.gov/sites/default/files/legacy/Documents/2300//4crschecklist.pdf?uid=625c7c02a4af9> [https://perma.cc/5W54-5RD3].

residences and live in housing that is available on the farms and orchards.¹⁶⁵ Furthermore, to meet increased demand for housing, the Department of Health has decreased its minimum living standards for workers laboring on crops with shorter growing seasons, like cherries.¹⁶⁶ These workers frequently have to live in tents without air conditioning or air filtration and with scarce kitchen or communal living space.¹⁶⁷ The legislature should create a task force to craft regulations that raise the standard of living for migrant workers and give them housing dignity regardless of where they work. Additionally, better living spaces will improve worker performance because they will suffer less heat fatigue and will not be as exposed to smoke and other environmental hazards.

After the legislature consults with affected workers and farm owners, new regulations for temporary housing must include heating, cooling, and air filtration requirements.¹⁶⁸ If employers provide workers with air-conditioned and HEPA-filtered living spaces, health problems related to heat exhaustion and smoke inhalation would decline.¹⁶⁹ Washington has previously provided financial support to farm workers for housing and could work further with employers to create permanent accommodations that protect inhabitants from environmental hazards.¹⁷⁰ Although it is useful to include industry partners in housing design, workers should have the option to dictate the designs of their homes while also taking into account the relevant environmental hazards.

3. Protections Against Immigration and Law Enforcement Involvement

¹⁶⁵ S. A. Quandt, et. al., *Farmworker Housing in the United States and Its Impact on Health*, NEW SOLUTIONS: A JOURNAL OF ENVIRONMENTAL AND OCCUPATIONAL HEALTH POLICY (2015), 25(3) 263-286. doi:10.1177/1048291115601053.

¹⁶⁶ WASH. ADMIN. CODE § 246-358-077 (2016).

¹⁶⁷ *Id.*

¹⁶⁸ WASH. ADMIN. CODE § 246-358-075 (2016)

¹⁶⁹ HEALTHLINE, <https://www.healthline.com/health/air-purifier-for-smoke> [https://web.archive.org/web/20231207051942/https://www.healthline.com/health/air-purifier-for-smoke#our-picks], (last visited Jan 13, 2023).

¹⁷⁰ WASHINGTON STATE DEPARTMENT OF HEALTH, <https://doh.wa.gov/licenses-permits-and-certificates/facilities-z/temporary-worker-and-migrant-farmworker-housing/temporary-worker-housing-migrant-farmworker> [https://perma.cc/H2X6-6YRZ], (last visited Jan 13, 2023).

a. *Expansion of Agency Investigations for Compliance with Labor and Agricultural Requirements*

About 44% of farm workers in Washington are undocumented, and any encounter with law enforcement increases the risk of deportation for people who do not have legal status.¹⁷¹ Therefore, to achieve maximum effect and compliance with these proposed regulations, the state should rely on investigators and educators from the Departments of Ecology, Agriculture, Labor, and Health as much as possible to enact new regulations and bring employers into compliance as necessary. This is a doubly important protection because state employees cannot collect data on nationality, documentation status, or collaborate with enforcement agencies. While this is a good start in protecting undocumented and other vulnerable communities, agencies should have specialized training on cultural competency when working with undocumented individuals: providing services, referring people to community organizations, or giving advice on how to deal with hostile employers.¹⁷² In all these areas, public employees should improve their awareness regarding the myriad of challenges facing undocumented people rather than relying on stereotypes or even actively dissuading use of social safety nets through hostility or insensitivity.¹⁷³

Law enforcement interactions increase deportation and other risks for undocumented people, and their involvement in enforcement processes for new regulations and standards should be minimal. If emergency responses are required at farms, law enforcement agents should not be called unless absolutely necessary, such as in a response to a crime situation.¹⁷⁴ Additionally, the Departments should collectively create an anonymous tip line to triage allegations of labor law

¹⁷¹ Esther Yu Hsi Lee, *More than 4 out of 10 farmworkers in these three states are undocumented*, THINKPROGRESS (Mar. 27, 2015, 7:05 PM), <https://archive.thinkprogress.org/more-than-4-out-of-10-farmworkers-in-these-three-states-are-undocumented-71b4fc4b7c3c/> [<https://perma.cc/MP3A-EHWG>].

¹⁷² Quijano, *supra* note 64.

¹⁷³ *Id.*

¹⁷⁴ Danyelle Solomon, Tom Jawetz & Sanam Malik, *The Negative Consequences of Entangling Local Policing and Immigration Enforcement*, CTR. FOR AMER. PROGRESS (Mar. 21, 2017), <https://www.americanprogress.org/article/negative-consequences-entangling-local-policing-immigration-enforcement/> [<https://perma.cc/U7FT-CHSB>].

violations to protect the identity of the whistleblowers. In the past few years, actions from the Legislature and Governor's Office have reduced state agency and law enforcement compliance with ICE and CBP actions, so it is likely that any regulations the state promulgates in this area will further limit law enforcement involvement.¹⁷⁵

b. Statewide Ban on Reporting to ICE and Law Enforcement

All workplace protections are enforceable regardless of documentation status, but undocumented workers often fear workplace retaliation if they bring claims of unfair treatment against their workplace.¹⁷⁶ Employers often terminate workers without cause and sometimes provide anonymous tips to ICE, leading to the workers' deportation and separation from their families and communities in Washington.¹⁷⁷ Undocumented people subject to these threats are less likely to exercise their rights, even with the use of measures like anonymous tip lines and the Keep Washington Working law banning state agency complicity with ICE and CBP agents and investigations.¹⁷⁸ To create a culture of trust, the state should remove the focus from any individual whistleblower who reports violations of labor, environmental, or other laws and regulations when investigating issues and instead focus on community knowledge. Officers may need cultural sensitivity training to fully appreciate the strengths of this kind of information gathering. Seeking information from various sources will lead to more comprehensive investigations and will diffuse the huge consequences of retaliation away from any one employee.

Even with protective measures in place, employers may choose to report individuals to ICE or unlawfully terminate workers.¹⁷⁹ In these situations, Washington could act by creating a

¹⁷⁵ WASHINGTON STATE OFFICE OF THE ATTY. GEN., *Keep Washington Working Act FAQ for Law Enforcement*, <https://www.atg.wa.gov/keep-washington-working-act-faq-law-enforcement> [<https://perma.cc/K767-TE9T>], (last visited Jan 13, 2023).

¹⁷⁶ Quijano, *supra* note 64.

¹⁷⁷ *Id.*

¹⁷⁸ *Id.*

¹⁷⁹ *Id.*

statutory mechanism to prosecute employers and individuals for intimidation based on national origin, both in the workplace and in the broader community. If the state consistently prosecutes farms and other companies engaging in workplace intimidation, the financial and reputational damage would serve as a warning to other workplaces considering similar illegal tactics. Additionally, it would provide other workers with a sense that Washington takes their struggles seriously and will not abide by mistreatment due to lack of documentation.

Finally, as a way to stop employer threats of deportation, the state could prosecute all people and businesses who make threats of ICE investigation. In California, Colorado, Maryland, New York, and Virginia, threats regarding deportation are seen as extortion and coercion and can be prosecuted as such.¹⁸⁰ This law would not only protect workers' rights, but it would also increase the legal standing of people who may hesitate to report violations of other laws, such as tenants, and protect people experiencing domestic violence.¹⁸¹ This, coupled with the state-wide mandate for agencies to refuse cooperation with ICE investigations, would give workers more power to demand fair and ethical working conditions.

III. CONCLUSION

Climate change is an acute threat to our workers and economy for which labor and environmental regulations are needed to respond to the new ecological realities. Thus, it is imperative that the Washington State Legislature and its related agencies act quickly. The legislature has a long history of passing and enacting environmental justice laws, strengthening labor protections, and providing tangible support for undocumented workers. Washington can expand on this history by being a leader in protections for undocumented farm workers and

¹⁸⁰ Massarah Mikati, *In New York it's now illegal to threaten to report someone to ICE*, THE NEW YORK STATE SENATE (Oct. 14, 2021), <https://www.nysenate.gov/newsroom/in-the-news/anna-m-kaplan/new-york-its-now-illegal-threaten-report-someone-ice> [<https://perma.cc/SNX5-KQLK>].

¹⁸¹ *Id.*

creating proactive solutions for the worst potential effects of climate change on the state's workers and farms.

Climate change will cause reverberating effects on Washington's citizens and economy. The actions taken in the next few years will have compound effects, either negative or positive, as wildfires worsen, temperatures heighten, and pest populations increase. All these effects will disproportionately impact outdoor workers since state agencies and hospitals are difficult to navigate with the fear of deportation or other immigration involvement always present. By reducing those fears and improving regulatory protections, Washington will be a nation-wide leader in preparing for the agricultural realities of the changing world. Clear-eyed policies informed by scientific perspectives and industry needs are the best way to move forward.

Further areas of legal and policy research in this area include more comprehensive immigration reforms at the state and federal level, studies regarding labor protection enforcement in rural areas, and long-term studies on programs directed at aiding farm adaptation. The legislature should prioritize making Washington a safe and welcoming state for all immigrants, both in statutory and regulatory language as well as in the state's direct interactions with immigrants. Such labor protections will make everyone safer and raise the standard of living. Farm adaptations will ensure our economy is nimble and continues to grow despite climate disruptions. Making investments in these areas now will strengthen the entire state in the long-term, and Washington will become a beacon of environmental, labor, and immigrant justice for other states, and the federal government to follow.