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As proposed, Rule 3.3(B) provided that shade was not considered “adequate” to protect worker health and safety if it was located “too far for use during rest and meal periods.” Several commenters noted that, in light of the relatively short length of workers’ rest and meal breaks, if workers were required to walk long distances in order to reach a shaded area, such breaks would not effectively protect worker health and safety; rather than resting and recovering, employees would spend a significant portion of their allotted break time walking to (and returning from) the shaded location.<sup>18</sup> To ensure that rest breaks offer workers time to cool down in the shade, the Division clarified that employers are required to provide a shaded area that is located “as close as practicable to” the worksite and not “otherwise too far for employees to reasonably access” during breaks, *as well as* one that is located within 0.25 miles from the worksite for any workers who are traveling on foot (again, assuming a 3.5 mile per hour pace, it takes about four minutes to walk 0.25 miles). The Division notes that these requirements are conjunctive: *i.e.*, a shaded area must be located in a place that is both “as close as practicable” and reasonably accessible to the worksite *and* one that is located within 0.25 miles. For example, an employer would violate the rule if it provided a shaded area for employees with tents that were located 0.20 miles from the worksite, but located the tents on the top of a hill, and there was a much closer location where it would have been feasible, safe, and reasonable for it to locate the tents. Finally, because the COMPS Order provides that range workers are entitled to the same rest and meal breaks as other agricultural employees, Rule 3.3.2 was also modified from the proposed rule, to clarify that the requirement for range workers is that they be “be authorized and permitted to seek and use shade during rest and meal periods, and otherwise limit the impact of heat and sun exposure.”

#### 4. Rule 3.4: Increased Risk Conditions.

ALRRA authorizes Division heat protection rules to consider relevant factors other than just temperature, including “environmental factors, exposure time, acclimatization, and metabolic demands of the job.”<sup>19</sup> Rule 3.4.1 identifies “increased risk conditions” that, combined with the 80-degree threshold temperature, may increase health and safety risk to workers. When increased risk conditions are present or anticipated, the rules require the following additional safety measures: ensuring employees work no longer than two hours without rest, to lessen consecutive heat exposure time; and conducting a pre-shift briefing about heat safety procedures to ensure information about heat safety protections is communicated or reiterated to workers when most needed.

Rule 3.4.2 (numbered as Rule 3.4(A) in the proposed rules) provides that employers may satisfy these heightened rest break requirements by spacing other required rest periods and meal periods, but must provide additional break time to the extent that these already-required rest and meal periods do not cover the requirement. In workdays between eight and 12 hours, employers can accomplish this by spacing existing rest and meal periods, and adding one extra 10-minute break. The rule was also modified from the proposed rule in light of the adoption of the COMPS Order requirement that range workers have the same rights to take rest periods as other agricultural employees; accordingly, for range workers, “employers shall encourage spacing of the rest breaks provided in the COMPS Order, and other rest opportunities, to include rest every two hours to the maximum extent possible.”

The Division also modified the rule on employer notice during increased risk conditions (Rule 3.4.3; numbered as Rule 3.4(B) in the proposed rules). As proposed, the rule had stated that if an employer learned of an increased risk condition only after employees begin their shift or workday, it must provide such notice “during a shift.” Because time is of the essence when employees face increased risk conditions, and to better ensure employee health and safety, the

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<sup>17</sup> Written comment by Towards Justice 12/20/21, at 3.

<sup>18</sup> Written comment by Towards Justice 10/19/21, at 10 (noting that “shade must be located as close as practical to the areas where employees are working”); Written comment by Colorado Legal Services 10/18/21, at 5 (same).

<sup>19</sup> C.R.S. § 8-13.5-203(1).

Division modified the rule to provide that if an employer learns of an increased risk condition only after a workday or shift starts, it must notify employees “as soon as possible” during that shift. The proposed rule also had not specified whether employers could provide the required notice verbally, rather than in writing. To provide additional clarity and preserve flexibility for employers in choosing the most effective method for notifying employees,<sup>20</sup> the Division amended the rule to allow employers to provide such notification “by any effective means,” whether orally or in writing; such means could include, for example, providing verbal instructions (if the employees can hear and understand the speaker) or written notifications (if employees can read and speak the same language as the written notice), but would not include, for example, a sign that the employer posts in an inaccessible area of the worksite.

Two of the increased risk conditions, high heat (95 degrees or higher), and unhealthy air quality, apply to everyone at a worksite. Extremely high heat magnifies risks present under heat conditions; one study of worker heat deaths showed that most occurred on dates where the heat was unusually high compared to historical averages for that date,<sup>21</sup> and NIOSH recommends more rest time as temperatures rise, including specifically when the temperature in which heavy work is being performed reaches 95 degrees.<sup>22</sup> The rule assesses whether the 95-degree high temperature threshold is met using Rule 3.1 standards for selecting a forecast and locality (*i.e.*, the same standards for determining the 80-degree threshold).

The final rules, at Rule 3.4.4, state that when the worksite has, or is reasonably expected to have (as defined by Rule 3.1.4), a temperature of at least 95 degrees, employers must provide fans or equivalent cooling measures in all employer-provided housing. Comments to the Division emphasized the importance of recovery from heat exposure outside of work time — not only during rest, meal, and other work breaks, but also when work is over for the day.<sup>23</sup> Heat illness prevention guidance, including training resources cited in Rule 3.6, stress the import of circulating air, and the necessity of time in cooler conditions to recover from time spent working in the heat.<sup>24</sup> Employees in employer-provided housing also spend substantial time during hot daytime (or evening) hours in this housing, including time sleeping, recovering from heat illness and injury symptoms, other sick leave and days off, and time after shifts (including if shifts are shortened or rescheduled due to weather conditions). Employers need only provide employees with sufficient fans (or alternate equivalent cooling methods) to allow air to freely circulate in all sleeping quarters (*e.g.*, any bedroom within a larger housing structure, or any multi-bed dormitory room): a fan of any type (*e.g.*, an air conditioning unit, swamp cooler or other evaporative cooler, box fan, ceiling fan, or standing or table fan), that can continuously run (*e.g.*, the fan is fully functional, does not require a button to be held to operate, and batteries are provided without cost or deduction if required). If the high heat increased risk condition does not actually occur, nor is “reasonably expected” to occur at any point during the year, an employer need not provide fans or other cooling devices in employee housing under this rule.

Unsafe or unhealthy air quality is linked to lung and cardiovascular health problems, and its effects are magnified in conditions that are common in agricultural work: outdoor work and/or long hours.<sup>25</sup> Heat itself worsens air quality, both

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<sup>20</sup> This change addresses comments to the Division requesting clarification of these requirements. *E.g.*, written comment by Colorado Farm Bureau 12/8/21, at 2.

<sup>21</sup> Written comment by Towards Justice, Oct. 18, 2021, at 4, n. 19, citing Shipley et al. and Vose et al. (cited above).

<sup>22</sup> DHHS (NIOSH) Publication No. 2016-106 at 76, T.6-2.

<sup>23</sup> *E.g.*, Written comments by Tri-County Health Department (Caitlin Matthews, Food Systems Coordinator) 12/16/21, at 3 (citing study showing that 66.7% of farmworkers who lived in extremely hot housing suffered from heat illness compared to 24.3% of those who did not live in extremely hot housing) (citing Arcury, T. A., Summers, P., Talton, J. W., Chen, H., Sandberg, J. C., Johnson, C. R. S., & Quandt, S. A. (2015), “Heat illness among North Carolina Latino Farmworkers,” *Journal of Occupational and Environmental Medicine/American College of Occupational and Environmental Medicine*, 57(12), 1299. doi: 10.1097/JOM.0000000000000552)).

<sup>24</sup> *See, e.g.*, University of Washington Pacific Northwest Agricultural Safety and Health Center, “Heat Education and Awareness Tools (HEAT) Facilitator’s Guide,” at 19, <https://deohs.washington.edu/pnash/sites/deohs.washington.edu/pnash/files/2020-06/HeatTrainingBook-English.pdf> (discussing recommendations for “keeping cool in the home and community”); University of California Davis Western Center for Agricultural Health and Safety, “Heat Illness Prevention Employer Training Discussion Guides and Visual Aids,” at 3, [https://aghealth.ucdavis.edu/sites/g/files/dqvnsk261/files/media/documents/Heat%20Packet\\_English\\_FINAL.pdf](https://aghealth.ucdavis.edu/sites/g/files/dqvnsk261/files/media/documents/Heat%20Packet_English_FINAL.pdf) (stating that heat illness and injury trainers should discuss “rest and cool down at night,” including “sleep in a cool room”).

<sup>25</sup> Written comment by Towards Justice 10/19/21, at 1, n.1 (citing Michael DeYoanna, “Dangerous Air due to Wildfires Has Risen across Colorado in Last Five Years,” Sept. 28, 2021, [www.kunc.org/health/2021-09-28/dangerous-air-due-to-wildfires-has-risen-across-colorado-in-last-five-years](http://www.kunc.org/health/2021-09-28/dangerous-air-due-to-wildfires-has-risen-across-colorado-in-last-five-years)), n.4 (citing Bad Air Day, NIH News in Health, July 2011, <https://newsinhealth.nih.gov/2011/07/bad-air-day>; The Terrible 10: Air Pollution’s Top 10 Health Risks, American Lung Assn., Apr. 6, 2017, [www.lung.org/blog/air-pollutions-top-10-health-risks](http://www.lung.org/blog/air-pollutions-top-10-health-risks); Health and Environmental Effects of Particulate Matter (PM), U.S. Environmental Protection Agency, [www.epa.gov/pm-pollution/health-and-environmental-effects-particulate-matter-pm](http://www.epa.gov/pm-pollution/health-and-environmental-effects-particulate-matter-pm)).

by trapping pollutants and by drying out vegetation, increasing the risk of smoke from wildfires.<sup>26</sup> Study data showing “synergistic effects of heat and air pollution exposure” on health outcomes warrant including poor air quality as a compounding factor to heat in these rules.<sup>27</sup> The NIOSH publication recommends heat standards calibrated to “prevent harmful effects from interactions between heat and toxic chemical and physical agents,”<sup>28</sup> based on studies showing multiple ways that work in heat increases risks from toxic exposure, including from both skin absorption and inhalation:

Although heat rashes are not dangerous in themselves, each can impair areas of skin and reduce sweating that reduces evaporative heat loss and impacts thermoregulation. Wet and/or damaged skin can also absorb toxic chemicals more readily than dry, unbroken skin.<sup>29</sup>

[E]xposure to heat exacerbates chemical absorption and toxicity ... [C]hanges to the body’s core temperature can alter absorption, distribution, metabolism, and excretion of the toxicants. Increases in respiration can lead to further toxicant exposure through inhalation, whereas increases in sweat and skin blood flow can lead to more efficient transcutaneous absorption of some toxicants.<sup>30</sup>

Based on the above, the Division finds that poor air quality is an “increased risk condition” for workers already working in hot weather, justifying its inclusion as an increased risk condition triggering increased worker protections.<sup>31</sup>

As proposed, Rule 3.4.1(B) stated that the “unhealthy air quality” standard was met when an air quality forecast rated air quality conditions as “unhealthy,” “very unhealthy,” or “hazardous,” as defined by the forecasts of the Colorado Department of Public Health (CDPHE) or the United States Environmental Protection Agency (EPA), which publishes CDPHE data.<sup>32</sup> Further research by the Division on air quality forecasting confirmed that whether the CDPHE has issued an Air Quality Advisory (AQA) or an air quality-related Action Day for the worksite location is a better basis for determining whether an increased risk condition exists than a CDPHE or EPA forecast, because the CDPHE’s AQAs and Action Days cover all areas of the state, whereas air quality forecasts are issued only for defined areas in which air quality is consistently monitored (*e.g.*, the Denver Metro, Fort Collins, Greeley, Colorado Springs, Grand Junction, Colorado River Valley, and Four Corners areas).<sup>33</sup> Basing this increased risk condition on AQAs and Action Days also provides a simpler and easier route for employers to determine whether increased risk conditions apply, as it does not require determining the most appropriate forecast or air quality monitoring location. Employers may also sign up for automatic email updates about such AQAs and Action Days, further simplifying the assessment.<sup>34</sup> Accordingly, the Division modified the rule to provide that an increased risk condition applies if there is a CDPHE AQA or an Action Day in effect statewide, or for a locality or other area (*e.g.*, a region, or part of a county) in which the worksite is located.

The CDPHE generally issues AQAs when the Air Quality Index (AQI), which measures air pollution, exceeds or is expected to exceed 100 (a level deemed “unhealthy for sensitive groups”), or, in an area without a forecast based on continuous monitoring, if the CDPHE has evidence of conditions rising to this level. AQAs may be issued for “specific

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<sup>26</sup> National Oceanic & Atmospheric Administration, National Centers for Environmental Information, The Impact of Weather and Climate Extremes on Air and Water Quality (summarizing Thomas C. Peterson et al. (2014), Changes in weather and climate extremes: State of knowledge relevant to air and water quality in the United States, *Journal of Air & Waste Management Ass’n*, 64:2, 184-197, DOI: 10.1080/10962247.2013.851044), [www.ncdc.noaa.gov/news/impact-weather-and-climate-extremes-air-and-water-quality](http://www.ncdc.noaa.gov/news/impact-weather-and-climate-extremes-air-and-water-quality).

<sup>27</sup> Anenberg, S.C., Haines, S., Wang, E. et al. Synergistic health effects of air pollution, temperature, and pollen exposure: a systematic review of epidemiological evidence. *Environ Health* 19, 130 (2020), <https://doi.org/10.1186/s12940-020-00681-z> (reviewing studies, and finding that “an association was generally observed for synergistic effects of heat and air pollution exposure”).

<sup>28</sup> DHHS (NIOSH) Publication No. 2016-106 at 11.

<sup>29</sup> DHHS (NIOSH) Publication No. 2016-106 at 57 (citations omitted).

<sup>30</sup> DHHS (NIOSH) Publication No. 2016-106 at 128-129 (citations omitted).

<sup>31</sup> Anenberg, S.C., et al., Synergistic health effects of air pollution, temperature, and pollen exposure: a systematic review of epidemiological evidence. *Environ Health* 19, 130 (2020), <https://doi.org/10.1186/s12940-020-00681-z> (reviewing studies, and finding that “an association was generally observed for synergistic effects of heat and air pollution exposure”).

<sup>32</sup> The Air Quality Index (AQI) measures the level of airborne pollution on a scale from 0 to 500, and categorizes air quality as “healthy” or “unhealthy” for “sensitive groups” and the population at large. The CDPHE defines “good” or “moderate” air quality as an AQI below 100, and as AQI values increase, so do health concerns: an AQI between 101 and 150 is “unhealthy for sensitive groups”; between 151 and 300 is “unhealthy” or “very unhealthy” for all groups; and between 301 and 500 is “hazardous”. See CDPHE, “Colorado Air Quality Summary,” [www.colorado.gov/airquality/colorado\\_summary.aspx](http://www.colorado.gov/airquality/colorado_summary.aspx).

<sup>33</sup> CDPHE, “Overview of Colorado’s Air Quality Index Reporting, Forecasting, and Advisory Program,” [www.colorado.gov/airquality/forecast\\_overview.aspx](http://www.colorado.gov/airquality/forecast_overview.aspx).

<sup>34</sup> CDPHE, “Air Quality Alerts,” [www.colorado.gov/airquality/request\\_alerts.aspx](http://www.colorado.gov/airquality/request_alerts.aspx).

pollutants (e.g., ozone, fine particulate matter) or for specific types of air pollution events (e.g., blowing dust, wildfire smoke).<sup>35</sup> AQAs also typically include information about possible health effects, and, in certain cases, information about pollution mitigation.<sup>36</sup> Air quality Action Days are issued when “fine particulate matter, carbon monoxide, ozone or other pollutants indicates that either current air quality is unhealthy or conditions are expected to worsen later in the day or on the next day,” and “generally indicate” an AQI of “unhealthy for sensitive groups” (i.e., an AQI over 100).<sup>37</sup> Action Days also “trigger a variety of mandatory and voluntary pollution prevention measures” — including, in the case of ozone-based Action Days, recommendations to reduce pollution-emitting activities such as driving.<sup>38</sup>

However, the area covered by an ozone-based Action Day may include some places where the air quality is not actually poor, but where reducing pollution-generating activities would help improve air quality overall and in nearby locations. Specifically, some ozone-based Action Days may be overinclusive for purposes of these rules, and would not reflect actual worksite air quality conditions necessitating additional safety precautions. Rule 3.4.1(B)(1) therefore provides that employers can show that the air quality for their worksite location is still “good” or “moderate” (i.e., an AQI of 100 or less) on a (solely) ozone-based Action Day, and if so, they are not required to apply the unhealthy air quality increased risk condition. Employers may determine whether air quality for their worksite location meets this standard by using the federal National Oceanic and Atmospheric Administration’s (NOAA) National Weather Service (NWS) Air Quality Forecast Guidance, or CDPHE air quality monitor data. NWS guidance, available on the NOAA website (which the rule text links), contains a map showing color-coded ozone AQI levels across the state (and country).<sup>39</sup> The map is created by the NOAA by predicting and modeling ozone levels based on monitor data gathered by CDPHE and other state air quality authorities.<sup>40</sup> Employers may also rely on air quality monitor data from CDPHE for this exemption from the high heat increased risk condition, using data from the nearest available monitoring site (as published on the CDPHE website), as long as the monitoring site is within 50 miles of the worksite.

Especially long workdays, of 12 hours or more, mean longer heat exposure, and accordingly higher risk, warranting more frequent breaks and notice to workers of additional available heat protections applicable in increased risk conditions. The NIOSH publication expressly notes that “[w]orking for shorter time periods and taking appropriate rest breaks slows down the body’s heat accumulation,”<sup>41</sup> and recommends, as an “control” to lessen heat stress, “limiting or modifying the duration of exposure time,” including but not limited to by increasing break frequency.<sup>42</sup>

Clothing and equipment that varies substantially from traditional one-layer work clothing affects the heat exchange rate between clothing and skin, which also necessitates adjustment in determining overall heat stress.<sup>43</sup> The rule accounts for the types of clothing, equipment, or gear likely to increase this heat stress: an additional layer of vapor-barrier clothing or personal protective equipment (PPE), worn over regular clothing or covering most of the head and neck (i.e., PPE beyond a cloth face mask).<sup>44</sup> The rule does not require compliance with increased risk conditions requirements for an

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<sup>35</sup> CDPHE, “Overview of Colorado’s Air Quality Index Reporting, Forecasting, and Advisory Program,” [www.colorado.gov/airquality/forecast\\_overview.aspx](http://www.colorado.gov/airquality/forecast_overview.aspx).

<sup>36</sup> *Id.*

<sup>37</sup> CDPHE, [www.colorado.gov/airquality/advisory.aspx](http://www.colorado.gov/airquality/advisory.aspx).

<sup>38</sup> CDPHE, “Air Quality Advisories,” <https://cdphe.colorado.gov/public-information/air-quality-advisories>.

<sup>39</sup> National Oceanic and Atmospheric Administration’s National Weather Service (NOAA NWS) Air Quality Forecast Guidance, <https://airquality.weather.gov>.

<sup>40</sup> NOAA NWS, “About Air Quality Forecast Capability,” [www.weather.gov/sti/stimodeling\\_airquality\\_background](http://www.weather.gov/sti/stimodeling_airquality_background) (“EPA, through its relationships with state and local air quality agencies, collects air quality monitoring data and provides it to NOAA. NOAA incorporates these data and NOAA weather observations into operational AQF models developed concentration fields.”); see also NOAA NWS, “NOAA’s National Air Quality Forecast Capability operational and experimental updates,” at 4, 26, [www.weather.gov/media/sti/CMAS%202019.pdf](http://www.weather.gov/media/sti/CMAS%202019.pdf).

<sup>41</sup> DHHS (NIOSH) Publication No. 2016-106 at 93 (citing Dukes-Dobos FN, Henschel A [1973]. Development of permissible heat exposure limits for occupational work. ASHRAE, Journal of the American Society of Heating Refrigerating and Air-Conditioning Engineers 57-62.)).

<sup>42</sup> DHHS (NIOSH) Publication No. 2016-106 at 75 (citing OSHA-NIOSH [2011]. OSHA-NIOSH infosheet: protecting workers from heat illness. U.S. Dep’t of Health and Human Services, Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health. DHHS (NIOSH) Publication No. 2011-174, [www.cdc.gov/niosh/docs/2011-174/](http://www.cdc.gov/niosh/docs/2011-174/)).

<sup>43</sup> DHHS (NIOSH) Publication No. 2016-106 at 15–16.

<sup>44</sup> DHHS (NIOSH) Publication No. 2016-106 at 22 (“Heat stress is also likely to be increased with any two-layer protective ensembles or any effective single-layer vapor barrier system for protection against toxic products, unless some form of auxiliary



employee's own chosen type of clothing or equipment (e.g., their preference to wear a sweatshirt instead of a t-shirt), only that which the employer requires or which is required based on safety protocols for equipment used or work performed (e.g., pesticide application requiring employees to wear a protective hood and coveralls).

The final increased risk condition in the rule is heat “acclimatization,” defined as “physiological changes that occur in response to a succession of days of exposure to environmental heat stress and reduce the strain caused by the heat stress of the environment; and enable a person to work with greater effectiveness and with less chance of heat injury.”<sup>45</sup> Acclimatization is a significant factor in protecting against heat-related illness, injury, and death. In a study of OSHA citations, lack of acclimatization in a heat safety program was the “most commonly missing” element, and the element “most clearly associated with worker death.”<sup>46</sup> Rule 3.4.1(E) defines workers with increased heat risk due to acclimatization as those in their first four workdays (or first four days of work in over a month, for returning workers) — a standard supported by a study finding that 80% of heat-related injuries were in workers’ first four days.<sup>47</sup>

## 5. Rules 3.5 and 3.6: Training and Safety Procedures

Rule 3.5 covers minimum safety procedures required if the temperature is “reasonably expected” to reach the 80-degree Rule 3 threshold at any point in the calendar year, to ensure preparation for compliance when needed. Rather than require employers to draft their own safety procedures, the rules detail key requirements to include: regular communication with employees by voice, observation, and/or electronic means (3.5.1); monitoring and receiving reports of signs and symptoms of heat illness or injury, including identifying the individuals responsible for such monitoring at each worksite (3.5.2); responding to possible heat illness or injury, including by relief from duty, first aid, and/or emergency response (3.5.3); emergency response, including immediate contact to emergency personnel, and transportation of ill or injured employees to where those personnel can reach such employees (3.5.4); and advising employees of preventive measures, including access to water, shade, and cool-down rest breaks as needed to alleviate heat illness or injury symptoms (3.5.5).

As proposed, Rule 3.5.1 provided that if an employer could not “regularly communicate” with employees (e.g., with range workers who are located in an area lacking reliable cell phone reception), it was required to communicate with them “as frequently as possible.” In recognition that this language may read as imposing a duty for employers to *constantly* communicate with such employees, in prohibitively expensive or difficult fashions, the Division replaced this phrase with the specific steps employers are required to take in the event they could not “regularly communicate” with employees, *i.e.*, identifying and implementing means for (1) making contact with employees to monitor their well-being and (2) employees to obtain medical care in emergencies (such as those detailed in federal regulations for range worker visas). Similarly, proposed Rule 3.5.3(B) stated that if employees were working outside of the presence of others, an employer was required to monitor them for signs and symptoms of heat illness “to the maximum extent possible.” Recognizing that the reasonable required frequency of communication with an employee will depend on the particular circumstances at hand (e.g., it is reasonable for an employer to check in with employees relatively less frequently in cool weather, and relatively more frequently in hot weather), and to provide greater clarity and predictability, the Division revised Rule 3.5.3 to provide that employers must monitor the signs and symptoms of such employees by checking in with them “as frequently as weather, environmental, or other circumstances warrant to monitor [their] health and safety.”

Additionally, proposed Rule 3.5.5 provided that employers must implement “preventative measures,” including facilitating and allowing employees to take additional, preventative cool-down rest in shade if they believe they need to do so to avoid or remedy overheating. The modified rule clarifies that preventative cool-down rest time may be satisfied with

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cooling is provided” (citing Goldman RF [1978]. Prediction of human heat tolerance. In: Folinsbee LJ, ed. Environmental stress: individual human adaptations. New York: Academic Press; Goldman RF [1985a]. Heat stress in industrial protective encapsulating garments. In: Levine SP, Martin WF, eds. Protecting Personnel at Hazardous Waste Sites. Vol. 10. Boston: Butterworth Publishers).

<sup>45</sup> DHHS (NIOSH) Publication No. 2016-106 at xix.

<sup>46</sup> DHHS (NIOSH) Publication No. 2016-106 at 12, 33 (citing Arbury S, Jacklitsch B, Farquah O, Hodgson M, Lamson G, Martin H, Proffitt A, Office of Occupational Health Nursing OSHA [2014]. Heat illness and death among workers: United States, 2012–2013. MMWR Morb Mortal Wkly Rep 63(31): 661–665).

<sup>47</sup> Written comment by Whitney Pennington (High Plains Intermountain Center for Agricultural Health and Safety) 10/4/21, at 4 (identifying role of acclimatization in preventing heat illness and injury, citing findings that 80% of heat injuries occur during workers’ first four days) (citing Prudhomme, J.C., & Neidhardt, A. (2006). Memorandum: Cal/OSHA Investigation of Heat Related Illnesses. California Division of Occupational Safety and Health, [www.dir.ca.gov/dosh/heatillnessinvestigations-2005.pdf](http://www.dir.ca.gov/dosh/heatillnessinvestigations-2005.pdf)).

a rest or meal period “already required” by the COMPS Order or Rule 3, as long as it otherwise meets the requirements for cool-down rest, *i.e.*, monitoring under Rule 3.5.5(A), and at least 10 minutes of rest in shade under Rule 3.5.5(B)). The revised rule also notes that such preventative cool-down rest periods “otherwise qualif[y] as additional rest period time”; accordingly, if such preventative cool-down periods are provided in addition to (rather than by way of) rest periods that are already required under the COMPS Order or Rule 3, they are compensable under Rule 5.2.4 of the COMPS Order.<sup>48</sup>

Finally, if an employee is taking a preventative cool-down rest break outside the presence of others, proposed Rule 3.5.5 required an employer to communicate with the employee about his or her signs and symptoms of heat illness “to the maximum extent possible”; as with Rule 3.5.3(B), to provide additional clarity about the meaning of this requirement, the Division amended the rule to require an employer to communicate with such an employee “as frequently as weather, environmental, or other circumstances warrant to monitor employee health and safety.”

## 6. Rule 3.6: Training.

Rule 3.6 sets forth requirements for heat safety training, and provides suggested training resources. The NIOSH publication identifies subjects for training which are, in large part, incorporated here.<sup>49</sup> Three suggested training resources are provided, published by NIOSH Centers for Agricultural Safety and Health, which employers may use to fulfill their obligations to provide workers education about generally applicable training topics (*e.g.*, heat illness and injury signs and symptoms).<sup>50</sup> Employees must be able to understand training materials in order for such training to protect their health and safety. Accordingly, employers must train employees on specific requirements of these Rules, and on their own site-specific procedures for Rule compliance, including in the primary language of employees not fluent in English. Amended Rule 3.6.4 explains how employers can provide training to workers who are not fluent in English or who are illiterate or have low literacy. To preserve employer flexibility in providing information to such employees, the Division amended the rule to allow them to provide training that includes any mix of verbal instructions, written information, or online materials (such as videos or information) that are “in the employee’s primary language.” Several of the Division’s suggested training resources are also in Spanish, and employers can request assistance from the Division for materials in other languages. Additionally, such content must be “accessible to the employee,” *i.e.*, it must be possible for the employee to understand it. For example, an employer cannot fulfill its obligations under the rule solely by providing a Spanish-speaking employee who is illiterate with written materials in Spanish.

As with safety requirements, training must be conducted if the temperature is expected to reach the 80-degree heat threshold at any point during the calendar year, and at least annually thereafter, to ensure that important safety and health information is communicated and emphasized before the hottest season each year. The Division examined historical weather data and determined that, in areas of the state, temperatures begin to reach 80 degrees in April; to that end, the amended rule specifies that if at any point in the year a worksite temperature of at least 80 degrees is “reasonably expected,” as defined by Rule 3.1.4, an employer is required to provide safety training “by April 20th of each year...and upon hiring for new employees[.]” The Rules do not take effect until May 1, 2022, necessitating that employers conduct

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<sup>48</sup> Although outside the scope of these rules, the Division notes that it will provide additional guidance about how rest periods required under ALRRA, these rules, and the COMPS Order affect the accrual of paid sick leave under the Healthy Families and Workplaces Act (HFWA), 8-13.3-401 et seq. Among other things, HFWA requires employers to provide employees with “at least one hour of paid sick leave for every thirty hours worked by the employee.” C.R.S. § 8-13.3-403(2)(a).

<sup>49</sup> The NIOSH publication recommends training in the following areas for employees potentially being exposed to heat stress, and their supervisors: “(1) Heat stress hazards; (2) Predisposing factors; (3) Relevant signs and symptoms of heat injury and illness; (4) Potential health effects of excessive heat stress; (5) General first aid as well as worksite-specific first aid procedures; (6) Proper precautions for work in heat stress areas; (7) Workers’ responsibilities for following proper work practices and control procedures to help protect the health and provide for the safety of themselves and their fellow workers, including instructions to immediately report to the supervisor the development of signs or symptoms of heat related illnesses; (8) The effects of therapeutic drugs, over-the-counter medications, alcohol, or caffeine that may increase the risk of heat injury or illness by reducing heat tolerance; (9) The purposes for and descriptions of the environmental and medical monitoring programs and the advantages to the worker of participating in these surveillance programs; (10) If necessary, proper use of protective clothing and equipment; (11) Cultural attitude toward heat stress. [...]” DHHS (NIOSH) Publication No. 2016-106 at 7-8.

<sup>50</sup> These Centers were established “as part of a Centers for Disease Control and Prevention (CDC) / NIOSH Agricultural Health and Safety Initiative in 1990 [...] to conduct research, education, and prevention projects to address the nation’s pressing agricultural, forestry and fishing health and safety problems.” Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health, NIOSH Extramural Research and Training Programs - Research, Training Grants & State Surveillance - Centers for Agricultural Safety and Health, [www.cdc.gov/niosh/pep/agctrhom.html](http://www.cdc.gov/niosh/pep/agctrhom.html) (last reviewed Nov. 30, 2021).

such training in advance of temperatures exceeding the 80- and 95-degree threshold that may be expected in the summer of 2022; however, because the rules are not effective until after April 20, 2022 (and to allow additional time for employers to implement this new requirement), the rule provides an exception during 2022, allowing until May 31, 2022, for such training. Nevertheless, the Division emphasizes that the May 31, 2022, date provided in the rule is the final date to provide such training during the 2022 calendar year; to protect the health and safety of employees, the Division encourages employers to provide training by April or early May in areas that may have temperatures of 80 degrees by then.

### C. Rule 4: Access to Key Service Providers.

Rule 4.1 details rulemaking authority for service provider access rules, including purposes stated in ALRRA:

To ensure that agricultural workers have meaningful access to services, the director of the division shall promulgate rules regarding additional times during which an employer may not interfere with an agricultural worker's reasonable access to key service providers, including periods during which the agricultural worker is performing compensable work, especially during periods when the agricultural worker is required to work in excess of forty hours per week and may have difficulty accessing such services outside of work hours.<sup>51</sup>

In accord with this mandate, the rules provide service provider access opportunities beyond the on-site access rights already present in ALRRA — which, as comments to the Division emphasize, are broad,<sup>52</sup> and are tailored to the issues the statute targets: agricultural workers' difficulty accessing services when working long hours, when it would cost them pay, and when efforts to communicate with them at the worksite may fail.

Rule 4.2 details rights to *communication* access to service providers, which the Division finds critical to a key part of ALRRA's rulemaking mandate: assuring services provider access for those with long enough hours to create "difficulty accessing such services outside of work hours" (as quoted above). Thus, the rule requires employers to ensure, during rest and meal periods, employee access to quiet, private space with internet and phone service, to facilitate access (e.g., for video or phone appointments, scheduling, or follow-up with providers), with additional requirements for workers with employer-provided housing. The rule allows employers to provide alternate meaningful access if communication requirements cannot be met (e.g., if the area lacks cell service). The rule also requires employers to promptly provide employees any mail or other communications for them that the employer receives. Because it can be unobvious whether particular mail or other communications are from or related to service providers, the duty is to provide employees *all* communications, to avoid tasking employers with discerning which are and are not covered, and to avoid having employers face consequences for violations if they discern incorrectly. For those whose work over 40 hours per week may cause increased "difficulty accessing such services outside of work hours" (as the ALRRA instructs, above), employers must let employees extend one existing 30-minute rest or meal period per week to up to 60 minutes (the extra time can be unpaid) to facilitate employee communication with providers during the providers' hours of operation; employees must give employers at least 24 hours' notice (72 hours for range workers) of their wish to extend a break in that manner.

As proposed, Rule 4.2.2 did not specify how employers would satisfy the obligation to allow an extended break period to *all* employees working over 40 hours in a workweek if a request to see a service provider is made less than 24 hours in advance (or, for range workers, less than 72 hours in advance). Neither ALRRA nor Rule 4.2.2 permit employers to deny reasonable and timely break requests, but to add clarity and reasonableness, the Division has amended the rule to provide as follows: "If an employer denies a request made less than 24 hours in advance (or less than 72 hours in advance for a range worker), the employer must allow the employee to extend a different break during that workweek or any break during the next workweek (in addition to other breaks to which the employee may be entitled)."

Rule 4.3 requires employers to provide additional compensated break time to employees working especially long hours, based on the ALRRA mandate for this rulemaking to supplement the statutory requirement of service provider access during *unpaid* time (e.g., when on breaks or off-duty), by adding "additional times ..., including periods during which the agricultural worker is performing compensable work, especially" those whose long hours create "difficulty accessing such services outside of work hours."<sup>53</sup> Accordingly, Rule 4.3 provides employees working 60 or more hours in a workweek with one compensated 60-minute break, and those working 70 or more hours with two such breaks. If the

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<sup>51</sup> C.R.S. § 8-13.5-202(1)(c).

<sup>52</sup> E.g., written comment by Colorado Farm Bureau 9/28/21, at 3–4.

<sup>53</sup> C.R.S. § 8-13.5-202(1)(c).

employer had no reason to believe an employee would work such hours, and thus did not provide such breaks during that workweek, it may instead provide the required breaks in the following workweek. Employees may use this time for direct service provider access (*e.g.*, appointments) or for other personal use (*e.g.*, rest or errands) that indirectly but substantially can facilitate service provider access at other times. Because it is not *required* that employees use this time for direct service provider access, employers cannot require documentation or information about how such time is used. Rule 4.3.3, added to the rules as proposed, clarifies that 60-minute service provider breaks are compensated as other rest periods under the COMPS Order, and at the same rate as time worked.

The Division also received suggestions that Rule 4 should specify that employers may require third parties to follow safety-related rules. However, ALRRA provides the Division with the authority to promulgate access rules on only more limited matters: “additional times during which an employer may not interfere with agricultural worker’s reasonable access to key service providers.”<sup>54</sup> But Section 202(1)(d) already provides that employers “may require visitors accessing a work site to follow protocols designed to manage biohazards and other risks of contamination, to promote food safety, and to reduce the risk of injuries to or from livestock on farms and ranches except on the open range, if the same protocols are generally applied to any other third parties who may have occasion to enter the work site.”<sup>55</sup> The Division will consider further clarifying this issue, consistent with C.R.S. § 8-13.5-202(1)(d), in published guidance.

Finally, ALRRA states that employers that provide housing and transportation to agricultural workers “shall, at least one day per week, provide transportation to the agricultural workers to a location where the workers can access basic necessities, conduct financial transactions, and meet with key service providers; except that transportation must be provided not less than one day every three weeks for range workers who are actively engaged in the production of livestock on the open range....”<sup>56</sup> Some commenters suggested that the Division should amend the service provider rules to (1) clarify what it means to “provide” such transportation, (2) clarify the requirement to provide transportation for range workers “not less than one day every three weeks,” and (3) allow for workers to sign a waiver of the requirement to be provided transportation.<sup>57</sup> Again, the Division’s rulemaking authority as to service provider and other access is narrow, not encompassing this transportation statutory section. The Division will consider further clarifying this issue, consistent with C.R.S. § 8-13.5-202(1)(e), in published guidance.

**D. Rules 5: Enforcement, including Retaliation/Interference Prohibitions (5.1), Notice of Rights (5.2), and Complaints and Investigations (5.3).**

Rule 5 specifies the Division’s investigative authority and procedures for violations of these rules, prohibits retaliation related to exercising rights under these rules, identifies how the Colorado WARNING Rules detail relevant complaint procedures, and lists methods of compliance with ALRRA notice requirements.<sup>58</sup>

**V. EFFECTIVE DATE.** Rule 6 sets the effective date of these rules, May 1, 2021 — a date chosen to give employers time to implement the new requirements and adjust practices as needed, while ensuring that protections are in place before the mid-year period that most implicates the need for various of these new requirements, due to both hotter weather and the influx of more agricultural labor to Colorado by spring and summer.



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 Scott Moss  
 Director  
 Division of Labor Standards and Statistics  
 Colorado Department of Labor and Employment

January 31, 2022

\_\_\_\_\_  
 Date

<sup>54</sup> C.R.S. § 8-13.5-202(1)(c).

<sup>55</sup> *Id.* at (d).

<sup>56</sup> *Id.* at (e).

<sup>57</sup> Written comment by Colorado Wool Growers Association 12/8/21, at 1–2.

<sup>58</sup> C.R.S. § 8-13.5-202(3).