

townhall.virginia.gov

# Notice of Intended Regulatory Action (NOIRA) Agency Background Document

Agency name	Virginia Department of Labor and Industry/Safety and Health Codes Board
Virginia Administrative Code (VAC) citation(s)	16 VAC 25-210
Regulation title(s)	Heat Illness Prevention
Action title	NOIRA on Heat Illness Prevention
Date this document prepared	March 26, 2020

This information is required for executive branch review and the Virginia Registrar of Regulations, pursuant to the Virginia Administrative Process Act (APA), Executive Order 14 (as amended, July 16, 2018), the Regulations for Filing and Publishing Agency Regulations (1 VAC 7-10), and the *Virginia Register Form, Style, and Procedure Manual for Publication of Virginia Regulations.* 

# **Brief Summary**

Please provide a brief summary (preferably no more than 2 or 3 paragraphs) of the subject matter, intent, and goals of this regulatory change (i.e., new regulation, amendments to an existing regulation, or repeal of an existing regulation).

On March 5, 2020, The Virginia Safety and Health Codes Board adopted a Notice of Intended Regulatory Action (NOIRA) to initiate the regulatory process to a adopt regulation applicable to Heat Illness Prevention. Heat-related illnesses generally include:

Heat Stroke Heat Exhaustion Heat syncope (temporary loss of consciousness) or fainting Heat Rash Heat Cramps Rhabdomyolysis (muscle breakdown)

The intent of the regulatory action is to reduce/eliminate employee injuries, illnesses, and fatalities due to exposure to excessive heat at indoor and outdoor places of work. Goals for the

regulation would include identifying methods to reduce or eliminate heat illness hazards; and educating employees and employers about heat-related illness external risk factors, heat-related illness internal risk factors, medical conditions that can contribute to heat illness, symptoms of heat-related illness, and precautions to take to reduce or eliminate heat illness hazards.

## **Acronyms and Definitions**

Please define all acronyms or technical definitions used in the Agency Background Document. .

BLS - Bureau of Labor Statistics NIOSH - National Institute for Occupational Safety and Health OSHA - Occupational Safety and Health Administration OSHRC - Occupational Safety and Health Review Commission VOSH - Virginia Occupational Safety and Health

# **Mandate and Impetus**

Please identify the mandate for this regulatory change, and any other impetus that specifically prompted its initiation (e.g., new or modified mandate, petition for rulemaking, periodic review, board decision, etc.). For purposes of executive branch review, "mandate" has the same meaning as defined in Executive Order 14 (as amended, July 16, 2018), "a directive from the General Assembly, the federal government, or a court that requires that a regulation be promulgated, amended, or repealed in whole or part."

Neither the Virginia Occupational Safety and Health (VOSH) program nor OSHA (Occupational Safety and Health Administration) has a comprehensive heat illness prevention regulation. During the 2020 Virginia General Assembly Session, three bills were introduced and carried over to the 2021 Session pending action by the Virginia Safety and Health Codes Board:

House Bill No. 805 House Bill No. 1610 Senate Bill No. 411

The bills are similar but not identical, and direct the Board to adopt a regulation to protect employees from heat illness.

### Heat-related Illness Statistics

From 1999-2010, heat illness accounted for 7,415 work and non-work related deaths in the United States, an average of 618 per year.<sup>1</sup>

Between 1992 and 2016, the Bureau of Labor Statistics (BLS) reported that 783 U.S. workers died from heat illness and 69,374 were seriously injured.<sup>2</sup> These numbers are generally understood to be undercounts for a variety of reasons.<sup>3</sup>

<sup>&</sup>lt;sup>1</sup> <u>https://www.cdc.gov/mmwr/preview/mmwrhtml/mm6136a6.htm</u>

<sup>&</sup>lt;sup>2</sup> <u>https://www.citizen.org/wp-content/uploads/2439.pdf</u>, Page 5

<sup>&</sup>lt;sup>3</sup> "But the BLS data vastly understate the number of injuries and fatalities for several reasons. Regarding injuries, some of the shortcomings stem from the fact that BLS relies on employer logs. The Occupational Safety and Health (OSH) Act of 1970 requires most employers to record injuries and illnesses sustained by their workers on a form known as the Form 300 Log of Injury (or Form 300 log). But the OSH Act does not apply to federal government agencies, self-employed persons, and household workers. The Act also exempts small farms with fewer than 11

According to BLS, in 2015 there were 100 nonfatal occupational injuries and illnesses in Virginia caused by exposure to environmental heat.<sup>4</sup>

From May 2008 to July 2014, 106 heat illness related-fatalities were reported in federal OSHA jurisdictions.<sup>5</sup> Industries and jobs involved in the fatal accidents included:

Asbestos remediation Steel erection Orchards Trucking/Freight hauling Roofing Tree trimming Catering Tire repair/replacement Forest firefighter Archaeological dig Automobile repair Landscaping Recycling Electrical Oil and gas drilling Exterior painting Road paving Golf course Turkey production HVAC Telecommunications Tent/Pavilion Install

Drywall finishing Residential construction Concrete construction Solid Waste collection Flour milling Agriculture field labor Sawmill Bricklayer Industrial cleaning crew Water well drilling

Since July 1999, the VOSH Program has investigated eleven (11) fatal accidents and one (1) non-fatal catastrophic incident (involving the hospitalization of three employees) involving employee heat-related illnesses:

June, 2017	Residential construction site	
July, 2016	Agricultural field work	
July, 2015	Construction site	
July 2015	Bridge construction site	
June, 2010	Roofing construction site	
August, 2009	Agricultural field work	
August, 2006	Logging site	
July, 2006	Manufacturing plant	
July, 2005	Non-fatal catastrophe, three employees hospitalized during agricultural field work	
August, 2002	Construction site	
July, 2002	Agricultural field work	
July, 1999	Meatpacking plant	

# Legal Basis

Please identify (1) the agency or other promulgating entity, and (2) the state and/or federal legal authority for the regulatory change, including the most relevant citations to the Code of Virginia or Acts of Assembly chapter number(s), if applicable. Your citation must include a specific provision, if any,

Pages 10-12, https://www.citizen.org/wp-content/uploads/2439.pdf

workers, which means that BLS injury data do not capture heat-related events for a significant number of agricultural workers, the sector at highest risk of heat-related illness. Moreover, OSHA does not require that an injury be reported if it does not lead to one or more of the following: death, days away from work, restricted work or transfer to another job, medical treatment beyond first aid, loss of consciousness, or a diagnosis of significant injury by a health care professional....Two additional factors lead not only to underreporting of heat illness but also to undercounting of heat deaths, which does not rely on employer logs. First, heat stress is not always recognized as a cause of heat-induced illness or death because many of the symptoms, such as rash, sweating, headache, and fatigue, are nonspecific and overlap with more common diseases....Second, heat stress also diminishes performance and makes other accidents and injuries more likely, giving rise to the possibility that heat stress is a significant factor in an untold number of fatalities or serious injuries that are not recorded as having anything to do with heat."

<sup>&</sup>lt;sup>4</sup> https://www.bls.gov/opub/ted/2017/work-injuries-in-the-heat-in-2015.htm

<sup>&</sup>lt;sup>5</sup> http://www.osha.gov/SLTC/heatillness/map.html

authorizing the promulgating entity to regulate this specific subject or program, as well as a reference to the agency or promulgating entity's overall regulatory authority.

The Virginia Safety and Health Codes Board is authorized by Title 40.1-22(5) to: "... adopt, alter, amend, or repeal rules and regulations to further, protect and promote the safety and health of employees in places of employment over which it has jurisdiction and to effect compliance with the federal OSH Act of 1970...as may be necessary to carry out its functions established under this title".

"In making such rules and regulations to protect the occupational safety and health of employees, the Board shall adopt the standard which most adequately assures, to the extent feasible, on the basis of the best available evidence that no employee will suffer material impairment of health or functional capacity".

"However, such standards shall be at least as stringent as the standards promulgated by the Federal OSH Act of 1970 (P.L.91-596). In addition to the attainment of the highest degree of health and safety protection for the employee, other considerations shall be the latest available scientific data in the field, the feasibility of the standards, and experiences gained under this and other health and safety laws."

### Purpose

Please describe the specific reasons why the agency has determined that this regulation is essential to protect the health, safety, or welfare of citizens. In addition, please <u>explain any potential issues that</u> <u>may need to be addressed as the regulation is developed.</u>

The purpose of the proposed regulatory action is to reduce/eliminate employee injuries, illnesses, and fatalities by considering for adoption a comprehensive regulation to address employee exposure to heat illness hazards during indoor and outdoor work activities in all industries under the jurisdiction of the Virginia State Plan for occupational safety and health.

NOTE: VOSH jurisdiction over the maritime industry only extends to state and local government employers and employees. Federal OSHA retains jurisdiction over the maritime industry in the private sector in Virginia.

Goals for the regulation would include identifying methods to reduce or eliminate heat illness hazards; and educating employees and employers about heat-related illness external risk factors, heat-related illness internal risk factors, medical conditions that can contribute to heat illness, symptoms of heat-related illness, and precautions to take to reduce or eliminate heat illness hazards.

Excessive heat exposure poses a direct threat to Virginia's employees, employers, and its economy. Working in excessive heat can result in employees suffering diminished mental acuity and physical ability, which increases the risk of accidents and even death. Heat-related injuries and illnesses increase workers' compensation costs and medical expenses, and decrease productivity.

Heat-related illnesses generally include:

Heat Stroke (is life threatening and result in permanent disability or death) Heat Exhaustion Heat syncope (temporary loss of consciousness) or fainting Heat Rash Heat Cramps Rhabdomyolysis (muscle breakdown)

Heat-Related Illness	Symptoms and Signs
Heat stroke	<ul> <li>Confusion</li> <li>Slurred speech</li> <li>Unconsciousness</li> <li>Seizures</li> <li>Heavy sweating or hot, dry skin</li> <li>Very high body temperature</li> <li>Rapid heart rate</li> </ul>
Heat exhaustion	<ul> <li>Fatigue</li> <li>Irritability</li> <li>Thirst</li> <li>Nausea or vomiting</li> <li>Dizziness or lightheadedness</li> <li>Heavy sweating</li> <li>Elevated body temperature or fast heart rate</li> </ul>
Heat cramps	<ul><li>Muscle spasms or pain</li><li>Usually in legs, arms, or trunk</li></ul>
Heat syncope	<ul><li>Fainting</li><li>Dizziness</li></ul>
Heat rash	<ul> <li>Clusters of red bumps on skin</li> <li>Often appears on neck, upper chest, and skin folds</li> </ul>
Rhabdomyolysis (muscle breakdown)	<ul><li>Muscle pain</li><li>Dark urine or reduced urine output</li><li>Weakness</li></ul>

The VOSH Program intends to conduct a review of existing federal and state regulations as well as national consensus standards and guidelines designed to protect employees from heat illness hazards. The proposal would address indoor and outdoor heat illness hazards experienced by similarly situated employees in all industries covered by VOSH jurisdiction.

Issues to be analyzed for possible inclusion in any proposed regulation include, but are not limited to:

- Definitions of appropriate terms
- Employer requirement to monitor indoor and outdoor temperatures
- Temperature action levels tied to the type of clothing being worn by the employee
- Acclimatization procedures
- Access to potable drinking water, and electrolytes as needed
- Cool down rest periods with access to shade or a climate controlled environment at certain temperature action levels
- Prohibiting employees from being ordered back to work until any signs or symptoms of heat illness have abated

- Additional communication, observation, monitoring requirements, first aid, and emergency response requirements at certain temperature trigger levels
- An exception to the requirements of the regulation for "incidental exposure" which exists when an employee is not required to perform a work activity outdoors for more than 15 minutes in any 60 minute period
- Written heat illness prevention plan
- Employee and supervisory training on heat illness hazards and preventative measures in a language the employee and supervisor understands

Heat illness factors to be considered in any proposed regulation include external risk factors, internal risk factors and medical conditions.

Heat-related illness external risk factors generally include, but are not limited to:

- High temperature and humidity
- Direct sun exposure/no shade
- Radiant heat from the sun or other objects
- Limited air movement
- Physical exertion
- Personal Protective Equipment use (e.g., bulky protective clothing, respirators, etc.)

Heat-related illness internal risk factors generally include, but are not limited to:

- Personal factors of the exposed employee, such as medical conditions, physical fitness, age, sleep, etc.
- Acclimatization
- Medications (prescription and over the counter)
- Level of hydration, including the presence of caffeine and alcohol

Medical conditions that can contribute include, but are not limited to:

- o Diabetes
- Heart disease and high blood pressure
- o Obesity
- Thyroid disease
- o Infections
- o Gastro-intestinal disease
- Pregnancy
- Skin problems, including sunburn

Some of the symptoms of heat-related illnesses are non-specific. This means that when a worker is performing physical labor in a warm environment, any unusual symptom can be a sign of overheating.<sup>6</sup>

### Substance

Please briefly identify and explain the new substantive provisions that are being considered, the substantive changes to existing sections that are being considered, or both.

<sup>&</sup>lt;sup>6</sup> <u>https://www.osha.gov/SLTC/heatstress/heatrelated\_illness\_firstaid.html</u>

The VOSH Program intends to conduct a review of existing federal and state regulations as well as national consensus standards and guidelines designed to protect employees from heat illness hazards. The proposal would address indoor and outdoor heat illness hazards experienced by similarly situated employees in all industries covered by VOSH jurisdiction.

Issues to be analyzed for possible inclusion in any proposed regulation include, but are not limited to:

- Definitions of appropriate terms
- o Employer requirement to monitor indoor and outdoor temperatures
- o Temperature action levels tied to the type of clothing being worn by the employee
- Acclimatization procedures
- o Access to potable drinking water, and electrolytes as needed
- Cool down rest periods with access to shade or a climate controlled environment at certain temperature action levels
- Prohibiting employees from being ordered back to work until any signs or symptoms of heat illness have abated
- Additional communication, observation, monitoring requirements, first aid, and emergency response requirements at certain temperature trigger levels
- An exception to the requirements of the regulation for "incidental exposure" which exists when an employee is not required to perform a work activity outdoors for more than 15 minutes in any 60 minute period
- Written heat illness prevention plan
- Employee and supervisory training on heat illness hazards and preventative measures in a language the employee and supervisor understands

# Alternatives

Please describe any viable alternatives to the regulatory change that were considered, and the rationale used by the agency to select the least burdensome or intrusive alternative that meets the essential purpose of the regulatory change. Also, include discussion of less intrusive or less costly alternatives for small businesses, as defined in § 2.2-4007.1 of the Code of Virginia, of achieving the purpose of the regulatory change.

Neither OSHA nor VOSH has a comprehensive heat illness regulation.

OSHA has been petitioned twice in recent years to adopt either an emergency temporary standard and/or a permanent heat illness standard by the consumer and health advocacy group, Public Citizen, on September 1, 2011<sup>7</sup> and July 17, 2018<sup>8</sup>. OSHA officially responded to the 2011 petition and denied the organization's request by letter dated June 7, 2012<sup>9</sup>. It does not appear that OSHA has responded to the 2018 petition.

There are several federal OSHA laws and regulations adopted by the VOSH program and two Virginia unique regulations that indirectly address certain heat illness issues:

<sup>&</sup>lt;sup>7</sup> <u>https://www.citizen.org/wp-content/uploads/petition-for-a-heat-standard-090111.pdf</u>

<sup>&</sup>lt;sup>8</sup> https://citizenvox.org/wp-content/uploads/2018/07/180717 Petition-to-OSHA-on-Heat-Stress-Signed FINAL.pdf

<sup>&</sup>lt;sup>9</sup> https://www.citizen.org/wp-content/uploads/migration/denial-of-heat-stress-petition.pdf

Requirements to provide potable drinking water to employees are contained in 1910.141<sup>10</sup> (for general industry); 16VAC25-160-10<sup>11</sup> (Virginia unique regulation that is the functional equivalent of 1926.51 for Construction); 16VAC25-180<sup>12</sup> (Virginia unique regulation that is the functional equivalent of 1928.110); 1915.88<sup>13</sup>; 1917.127<sup>14</sup>; 1918.95<sup>15</sup>.

Va. Code 40.1-51(a), otherwise known as the "general duty clause" (the Virginia equivalent to 5(a)(1) of the OSH Act of 1970)<sup>16</sup>, provides that:

"It shall be the duty of every employer to furnish to each of his employees safe employment and a place of employment which is free from recognized hazards that are causing or are likely to cause death or serious physical harm to his employees...."

While Congress intended that the primary method of compliance and enforcement under the OSH Act of 1970 would be through the adoption of occupational safety and health standards<sup>17</sup>, it also provided the general duty clause as an enforcement tool that could be used in the absence of an OSHA (or VOSH) regulation.

Federal case law has established that the general duty clause can be used to address "serious" recognized hazards to which employees are exposed through reference to such things as national consensus standards, manufacturer's requirements, or an employer's safety and health rules.

However, there are limitations to use of the general duty clause that make it problematic to enforce and result in its infrequent use. The recent 2019 decision of the Occupational Safety and Health Review Commission's (OSHRC) in *Secretary of Labor v. A. H. Strugill Roofing, Inc.*,<sup>18</sup> demonstrates the complexities and difficulties of establishing a heat illness general duty "recognized hazard" and accompanying violation in a case where an employee of a roofing contractor collapsed and later died with a diagnosis of heat stroke where the employee's core body temperature was determined to be 105.4°F.<sup>19</sup>

As is evident from the wording of the general duty statute, it does not directly address the issue of heat illness hazards. While preferable to no enforcement tool at all, the general duty clause does not provide either the regulated community, employees, or the VOSH Program with substantive and consistent requirements on how to reduce or eliminate heat illness hazards.

Other problems with the use of the general duty clause include the inability to use it to enforce any national consensus standard, manufacturer's requirements or employer safety and health rules which use "should" or "may" language; and the inability to cite other-than-serious general duty violations because the statutory language specifies that the hazard be one that is "causing or likely to cause death or serious physical harm".<sup>20</sup>

<sup>18</sup> OSHRC Docket No. 13-0224, <u>https://www.oshrc.gov/assets/1/18/A.H.</u> <u>Sturgill\_Roofing\_Inc.%5E13-0224%5EComplete\_Decision\_signed%5E022819%5EFINAL.pdf?8324</u>

<sup>&</sup>lt;sup>10</sup> https://www.osha.gov/laws-regs/regulations/standardnumber/1910/1910.141

<sup>&</sup>lt;sup>11</sup> http://leg1.state.va.us/cgi-bin/legp504.exe?000+reg+16VAC25-160-10

<sup>&</sup>lt;sup>12</sup> http://leg1.state.va.us/cgi-bin/legp504.exe?000+reg+16VAC25-180-10

<sup>&</sup>lt;sup>13</sup> https://www.osha.gov/laws-regs/regulations/standardnumber/1915/1915.88

<sup>&</sup>lt;sup>14</sup> https://www.osha.gov/laws-regs/regulations/standardnumber/1917/1917.127

<sup>&</sup>lt;sup>15</sup> https://www.osha.gov/laws-regs/regulations/standardnumber/1918/1918.95

<sup>&</sup>lt;sup>16</sup> https://www.osha.gov/laws-regs/oshact/section\_5

<sup>&</sup>lt;sup>17</sup> The Law of Occupational Safety and Health, Nothstein, 1981, page 259.

<sup>&</sup>lt;sup>19</sup> Id. at pages 2-3, Contributing factors included that the worker had some preexisting medical conditions, it was his first day on the job, and the outside temperature at the time of collapse was estimated to be 82°F with 51 percent relative humidity. The work took place on a flat roof with periods of direct sun alternating with clouds; and involved removing a single-ply sheet rubber membrane and Styrofoam insulation so that a new roof could be installed. <sup>20</sup> An other than serious violation "means a violation which is not, by itself, a serious violation within the meaning of the law but which has a direct or immediate relationship to occupational safety or health." 16VAC25-60-10.

General requirements to train construction employees "in the recognition and avoidance of unsafe conditions" are contained in 1926.21<sup>21</sup> (no requirements in general industry, agriculture, or maritime).

General requirements to provide personal protective equipment to employees are contained in 1926.28<sup>22</sup>, 1926.95<sup>23</sup>, 1910.132(d)<sup>24</sup>, 1915.152<sup>25</sup>; 1917.95<sup>26</sup> (no requirements in agriculture).

Medical services and first aid requirements are contained in 1926.50<sup>27</sup>; 1910.151<sup>28</sup>; 1915.87<sup>29</sup>: 1917.26<sup>30</sup>; 1918.97<sup>31</sup> (no requirements in agriculture, with the exception of agricultural establishments housing a temporary labor camp under 1910.142<sup>32</sup>).

Injury and illness recordkeeping requirements are contained in 1904.7(b)(5)<sup>33</sup>.

Three OSH State Plan States have adopted regulations addressing employee exposure to extreme heat, California<sup>34</sup> (outdoor only), Minnesota<sup>35</sup> (indoor and outdoor), and Washington<sup>36</sup> (outdoor only). California is currently in the process of promulgating a regulation addressing "Heat Illness Prevention in Indoor Places of Employment."

These state regulations variously include requirements on:

Definitions for such terms as acclimatization<sup>37</sup>; environmental risk factors for heat illness<sup>38</sup>; heavy, moderate and light work<sup>39</sup>; indoor<sup>40</sup>; outdoor environment<sup>41</sup>; personal risk factors for heat illness<sup>42</sup>; shade<sup>43</sup>; temperature<sup>44</sup>; vapor barrier clothing<sup>45</sup>; wet bulb globe temperature index, natural wet-bulb temperature, globe temperature<sup>46</sup>

Written heat prevention/training plan

Provision of potable drinking water

Access to shade47

<sup>&</sup>lt;sup>21</sup> https://www.osha.gov/laws-regs/regulations/standardnumber/1926/1926.21

<sup>&</sup>lt;sup>22</sup> https://www.osha.gov/laws-regs/regulations/standardnumber/1926/1926.28

<sup>&</sup>lt;sup>23</sup> https://www.osha.gov/laws-regs/regulations/standardnumber/1926/1926.95

<sup>&</sup>lt;sup>24</sup> https://www.osha.gov/laws-regs/regulations/standardnumber/1910/1910.132

<sup>&</sup>lt;sup>25</sup> https://www.osha.gov/laws-regs/regulations/standardnumber/1915/1915.152

<sup>&</sup>lt;sup>26</sup> https://www.osha.gov/laws-regs/regulations/standardnumber/1917/1917.95

<sup>&</sup>lt;sup>27</sup> https://www.osha.gov/laws-regs/regulations/standardnumber/1926/1926.50

<sup>&</sup>lt;sup>28</sup> https://www.osha.gov/laws-regs/regulations/standardnumber/1910/1910.151 <sup>29</sup> https://www.osha.gov/laws-regs/regulations/standardnumber/1915/1915.87

<sup>&</sup>lt;sup>30</sup> https://www.osha.gov/laws-regs/regulations/standardnumber/1917/1917.26

<sup>&</sup>lt;sup>31</sup> https://www.osha.gov/laws-regs/regulations/standardnumber/1918/1918.97

<sup>&</sup>lt;sup>32</sup> https://www.osha.gov/laws-regs/regulations/standardnumber/1910/1910.142

<sup>&</sup>lt;sup>33</sup> https://www.osha.gov/laws-regs/regulations/standardnumber/1904/1904.7

<sup>&</sup>lt;sup>34</sup> https://www.dir.ca.gov/title8/3395.html, Title 8 CCR Section 3395, Heat Illness Prevention

<sup>&</sup>lt;sup>35</sup> https://www.revisor.mn.gov/rules/5205.0110/, MAR 5205.0110, Indoor Ventilation and Temperature in Places of Employment; https://www.revisor.mn.gov/rules/5206.0500/ MAR 5205-0500, Harmful Physical Agents;

https://www.revisor.mn.gov/rules/5206.0700/, MAR 5205-0700, Training

<sup>&</sup>lt;sup>36</sup> https://www.dir.ca.gov/dosh/doshreg/Heat-illness-prevention-indoors/

<sup>&</sup>lt;sup>37</sup> California and Washington

<sup>&</sup>lt;sup>38</sup> California and Washington

<sup>&</sup>lt;sup>39</sup> Minnesota

<sup>&</sup>lt;sup>40</sup> Minnesota

<sup>&</sup>lt;sup>41</sup> Washington

<sup>&</sup>lt;sup>42</sup> California

<sup>&</sup>lt;sup>43</sup> California

<sup>44</sup> California

<sup>&</sup>lt;sup>45</sup> Washington

<sup>&</sup>lt;sup>46</sup> Minnesota 47 California

Rest periods<sup>48</sup>

High heat procedures when the temperature equals or exceeds 95°F<sup>49</sup>

Information and training for employees and supervisors, in a language the employee and supervisor understands  $^{\rm 50}$ 

Acclimatization<sup>51</sup>

Emergency response procedures

Heat is classified as a "harmful physical agent" and where there is a reasonably foreseeable potential for exposure to a harmful physical agent, employer are required to provide a written training to employees<sup>52</sup>

Employees shall not be exposed to indoor environmental heat conditions in excess of certain temperature trigger levels depending on the work activity level<sup>53</sup>

Employees shall not be exposed to indoor environmental cold conditions in excess of certain temperature trigger levels depending on the work activity level<sup>54</sup>

Outdoor temperature action levels tied to the type of clothing being worn by the employee<sup>55</sup>

An exception to the requirements of the regulation for "incidental exposure" which exists when an employee is not required to perform a work activity outdoors for more than 15 minutes in any 60 minute period<sup>56</sup>

Employees showing signs or demonstrating symptoms of heat illness must be relieved from duty and provided sufficient means to reduce body temperature<sup>57</sup>

Training must be provided to employees prior to initial assignment and at least annually thereafter<sup>58</sup>

The National Institute for Occupational Safety and Health (NIOSH), created by Congress in the OSH Act of 1970 to research occupational safety and health hazards, has published criteria for a recommended standard for occupational heat stress<sup>59</sup>. The NIOSH document includes recommendations for employers about how to prevent heat-related illnesses:

"Heat-related occupational illnesses, injuries, and reduced productivity occur in situations in which the total heat load (environmental plus metabolic heat) exceeds the capacities of the body to maintain normal body functions. The reduction of adverse health effects can be accomplished by the proper application of engineering and work practice controls, worker training and

<sup>48</sup> California

<sup>49</sup> California

<sup>&</sup>lt;sup>50</sup> California, Minnesota, Washington contains the language requirement

<sup>&</sup>lt;sup>51</sup> California and Washington

<sup>&</sup>lt;sup>52</sup> Minnesota

<sup>&</sup>lt;sup>53</sup> Id.

<sup>&</sup>lt;sup>54</sup> Id.

<sup>&</sup>lt;sup>55</sup> Washington

<sup>&</sup>lt;sup>56</sup> Id.

<sup>&</sup>lt;sup>57</sup> Id.

<sup>58</sup> Minnesota

<sup>&</sup>lt;sup>59</sup> <u>https://www.cdc.gov/niosh/docs/2016-106/pdfs/2016-106.pdf?id=10.26616/NIOSHPUB2016106</u>

acclimatization, measurements and assessment of heat stress, medical monitoring, and proper use of heat-protective clothing and personal protective equipment (PPE).<sup>°60</sup>

During the 2020 Virginia General Assembly Session, three bills have been introduced and carried over to the 2021 Session pending action by the Safety and Health Codes Board:

House Bill No. 805<sup>61</sup> House Bill No. 1610<sup>62</sup> Senate Bill No. 411<sup>63</sup>

The bills are similar but not identical, and would direct the Safety and Health Codes Board to adopt a regulation to protect employees from heat illness. The bills variously address the following heat-related employee exposure issues:

Definitions for such terms as acclimatization, environmental risk factors, heat illness, heat wave, personal risk factors, shade, and temperature<sup>64</sup>

Application to outdoor workplaces in Virginia

Application to indoor workplaces in Virginia<sup>65</sup>

Access to potable drinking water, and electrolytes as needed<sup>66</sup>

Cool down rest periods with access to shade or a climate controlled environment at certain temperature trigger levels for outdoor and indoor work

Employees shall not be ordered back to work until any signs or symptoms of heat illness have abated

Acclimatization procedures

Additional communication, observation, monitoring requirements, first aid and emergency response requirements at certain temperature trigger levels

Employee and supervisory training on heat illness hazards and preventative measures in a language the employee and supervisor understands

Requirement for a written heat illness prevent plan<sup>67</sup>

Special requirements for agriculture, construction, landscaping, oil and gas extraction and certain transportation employers when the temperature equals or exceeds 90°F<sup>68</sup>

The regulation established by the Board shall take into consideration the NIOSH Criteria for a Recommended Standard: Occupational Exposure to Heat and Hot Environments published by the National Institute for Occupational Safety and Health in 2016.<sup>69</sup>

<sup>&</sup>lt;sup>60</sup> Id. at page 1.

<sup>&</sup>lt;sup>61</sup> <u>http://lis.virginia.gov/cgi-bin/legp604.exe?201+sum+HB805</u>

<sup>62</sup> http://lis.virginia.gov/cgi-bin/legp604.exe?201+sum+HB1610

<sup>&</sup>lt;sup>63</sup> http://lis.virginia.gov/cgi-bin/legp604.exe?201+cab+SC10108SB0411+SBREF

<sup>&</sup>lt;sup>64</sup> SB 411 contains the definition for "temperature".

<sup>&</sup>lt;sup>65</sup> HB 805 is the only bill that applies to indoor as well as outdoor workplaces.

<sup>&</sup>lt;sup>66</sup> HB 805 includes the provision on electrolytes.

<sup>&</sup>lt;sup>67</sup> HB 1610.

<sup>&</sup>lt;sup>68</sup> HB 805 and SB 411.

<sup>&</sup>lt;sup>69</sup> Id.

As noted, the existing regulatory framework does not consistently and uniformly address the serious heat illness hazards experienced by similarly situated employees working indoors or outdoors in a variety of industries covered by VOSH jurisdiction (e.g., construction, general industry, agriculture, and state and local government maritime). The NOIRA will review, analyze, and identify occupational safety and health methods found to reduce/eliminate employee injuries, illnesses, and fatalities due to employee exposure to heat illness hazards during indoor and outdoor work activities in all industries under the jurisdiction of the Virginia State Plan for occupational safety and health.

### Periodic Review and Small Business Impact Review Announcement

If you wish to use this regulatory action to conduct, and this NOIRA to announce, a periodic review (pursuant to § 2.2-4017 of the Code of Virginia and Executive Order 14 (as amended, July 16, 2018)), and a small business impact review (§ 2.2-4007.1 of the Code of Virginia) of this regulation, keep the following text. Modify as necessary for your agency. <u>Otherwise, delete the paragraph below and insert</u> "This NOIRA is not being used to announce a periodic review or a small business impact review."

This NOIRA is not being used to announce a periodic review or a small business impact review.

# **Public Participation**

Please indicate how the public should contact the agency to submit comments on this regulation, including ideas to assist the agency in the development of the regulation and the costs and benefits of the alternatives stated in this notice or other alternatives.

A public hearing will not be held on the NOIRA.

A panel will be appointed and the agency's contact if you are interested in serving on the panel is:

Jay Withrow Director, Division of Legal Support, ORA, OPPPI, and OWP Virginia Department of Labor and Industry 600 E. Main Street, Suite 207 jay.withrow@doli.virginia.gov

The Department of Labor and Industry is seeking comments on this regulation, including but not limited to: ideas to be considered in the development of this regulation, the costs and benefits of the alternatives stated in this background document or other alternatives, and the potential impacts of the regulation. Also, the agency/board is also seeking information on impacts on small businesses as defined in § 2.2-4007.1 of the *Code of Virginia*. Information may include: 1) projected reporting, recordkeeping, and other administrative costs; 2) the probable effect of the regulation on affected small businesses; and 3) the description of less intrusive or costly alternatives for achieving the purpose of the regulation.

Anyone wishing to submit written comments for the public comment file may do so through the Public Comment Forums feature of the Virginia Regulatory Town Hall web site at <a href="https://www.townhall.virginia.gov">https://www.townhall.virginia.gov</a>.

Written comments must include the name and address of the commenter. Comments may also be submitted by mail, email or fax to:

Jay Withrow Director, Division of Legal Support, ORA, OPPPI, and OWP Virginia Department of Labor and Industry 600 E. Main Street, Suite 207 jay.withrow@doli.virginia.gov

In order to be considered, comments must be received by 11:59 pm on the last day of the public comment period.

A public hearing will be held following the publication of the proposed stage of this regulatory action, and notice of the hearing will be posted on the Virginia Regulatory Town Hall website (<u>https://www.townhall.virginia.gov</u>) and on the Commonwealth Calendar website (<u>https://www.virginia.gov/connect/commonwealth-calendar</u>). Both oral and written comments may be submitted at that time.