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1	SENATE BILL NO. 411
2 3	Offered January 8, 2020
3	Prefiled January 7, 2020
4	A BILL to amend the Code of Virginia by adding a section numbered 40.1-44.2, relating to the
5 6	protection of employees; standards for heat illness prevention.
0	Patron—Hashmi
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8	Referred to Committee on Commerce and Labor
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10	Be it enacted by the General Assembly of Virginia:
11 12	1. That the Code of Virginia is amended by adding a section numbered 40.1-44.2 as follows: § 40.1-44.2. Standards for heat illness prevention.
13	A. As used in this section:
14	"Acclimatization" means the gradual, temporary adaptation of the body to work in the heat when a
15	person is exposed to heat.
16	"Environmental risk factors for heat illness" means working conditions that create the possibility that
17	heat illness could occur, including air temperature, relative humidity, radiant heat from the sun and
18	other sources, conductive heat sources such as the ground, air movement, workload severity and
19 20	duration, protective clothing, and personal protective equipment worn by employees. "Heat illness" means a serious medical condition resulting from the body's inability to cope with a
20 21	particular heat load and includes heat cramps, heat exhaustion, heat syncope, and heat stroke.
22	"Heat wave" means any day in which the predicted high temperature for the day will be at least 80
23	degrees Fahrenheit and at least 10 degrees Fahrenheit higher than the average high daily temperature
24	in the preceding five days.
25	"Landscaping" means providing landscape care and maintenance services or installing trees, shrubs,
26 27	plants, lawns, or gardens, or providing these services in conjunction with the design of landscape plans. "Landscaping" includes the construction, installation, or maintenance of walkways, retaining walls,
28	decks, fences, ponds, and similar structures.
29	"Oil and gas extraction" means operating or developing oil and gas field properties, exploring for
30	crude petroleum or natural gas, mining or extracting of oil or gas, or recovering liquid hydrocarbons
31	from oil or gas field gases.
32 33	"Personal risk factors for heat illness" means factors such as an individual's age, degree of
33 34	acclimatization, health, water consumption, alcohol consumption, caffeine consumption, and use of prescription medications that affect the body's water retention or other physiological responses to heat.
35	"Potable water" means water that is suitable for drinking purposes found in Occupational Safety and
36	Health Administration (OSHA) standard 29 C.F.R. 1910.141(a)(2).
37	"Rest period" means a cool-down period made available to an employee to prevent heat illness.
38	"Shade" means the complete blockage of direct sunlight that allows the body to cool. Shade may be
39	provided by any natural or artificial means that does not expose employees to unsafe or unhealthy
40 41	conditions and does not deter or discourage access or use. "Temperature" means the dry bulb temperature in degrees Fahrenheit obtainable by using a
42	thermometer to measure the outdoor temperature in an area where there is no shade.
43	B. The Safety and Health Codes Board shall adopt regulations establishing reasonable standards as
44	provided in this section that are designed to protect employees from heat illness while engaged in
45	outdoor work. This section applies to the control of risk of occurrence of heat illness. These standards
46	shall apply to all outdoor places of employment, except that only employers engaged in the following
47 48	industries shall be required to comply with the standards established pursuant to subsection E:
40 49	1. Agriculture; 2. Construction;
5 0	3. Landscaping;
51	4. Oil and gas extraction; or
52	5. Transportation or delivery of agricultural products, construction materials, or other heavy
53	materials, including furniture, lumber, freight, cargo, cabinets, and industrial or commercial materials,
54 55	except for employment that consists of operating an air-conditioned vehicle and does not include loading
55 56	or unloading. C. Such standards shall require each employer to provide water as follows:
57	1. Employees shall be permitted to have access to potable drinking water at all times.

51 1. Employees shall be permitted to have access to potable drinking water at all times.
58 2. The water shall be located as close as practicable to the areas where employees are working.

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59 3. Where drinking water is not plumbed or otherwise continuously supplied, it must be provided in 60 sufficient quantity, from the beginning to the end of the work shift, to supply at least one quart of 61 drinking water per employee per hour.

62 4. Employers may begin the shift with smaller quantities of water if effective procedures are 63 established for replenishment during the shift as needed.

64 5. The water provided shall be filtered, fresh, pure, suitably cool, and shall be provided to employees 65 free of charge.

6. The frequent drinking of water, as described in subdivision I 1 c (3), shall be encouraged. The 66 water shall be located as close as practicable to the areas where employees are working and shall not 67 in any event be farther than 400 feet walking distance from an employee's work area. **68** 69

D. Such standards shall require each employer to provide access to shade as follows:

1. When the outdoor temperature in the work area exceeds 80 degrees Fahrenheit, the employer 70 shall ensure there are one or more areas with shade provided and maintained at all times while 71 employees are present that are either open to the air or provided with ventilation or cooling. The 72 amount of shade provided shall be at least enough to accommodate the number of employees on rest 73 74 periods, so that they can sit in a normal posture fully in the shade without having to be in physical contact with each other. The shade shall be located as close as practicable to the areas where 75 76 employees are working. Subject to the same specifications, the amount of shade present during meal 77 periods shall be at least enough to accommodate the number of employees on the meal period who 78 remain onsite.

79 2. When the outdoor temperature in the work area does not exceed 80 degrees Fahrenheit, employers 80 shall either provide shade in accordance with subdivision 1 or provide timely access to shade upon an 81 employee's request.

82 3. Employees shall always be allowed and encouraged to take a cool-down rest period in the shade 83 for preventative measures, including but not limited to protecting themselves from overheating. An 84 individual employee who takes a preventative cool-down rest (i) shall be asked if the employee is experiencing symptoms of heat illness; (ii) shall be encouraged to remain in the shade; and (iii) shall 85 86 not be ordered back to work until any signs or symptoms of heat illness have abated, but in no event 87 less than five minutes in addition to the time needed to access the shade.

88 4. Notwithstanding the provisions of subdivisions 1 and 2, except for employers in the agricultural 89 industry, cooling measures other than shade, including the use of misting machines, may be provided in 90 lieu of shade if the employer is able to demonstrate that these measures are at least as effective as 91 shade in allowing employees to be cooled.

92 E. Such standards shall require each employer, when the temperature equals or exceeds 90 degrees 93 Fahrenheit, to implement high-heat procedures that:

94 1. Ensure that employees are able to contact their supervisor by any effective communications 95 vehicle when necessary.

96 2. Require effectively observing/monitoring employees for signs or symptoms of heat illness by 97 implementing two or more of the following:

98 a. Supervisor or designee observation of 20 or fewer employees; 99

b. Mandatory buddy system;

100 c. Regular communication with sole employee such as by radio or cellphone; or

101 d. Other effective means of observation.

102 3. Designate one or more employees on each worksite as authorized to call for emergency medical 103 services, and if no designated employees are available, allowing other employees to call on their behalf. 104 4. Require reminding employees throughout the work shift to stay properly hydrated.

105 5. For employees employed in agriculture, conduct pre-shift meetings before the commencement of 106 work to review the high heat procedures, encourage employees to drink plenty of water, and remind 107 employees of their right to take a cool-down rest when necessary. 108

F. Such standards shall require each employer to provide rest periods as follows:

109 1. An employer shall authorize, permit, and ensure that all employees take a rest period of five 110 minutes for every hour worked. An employer shall not require an employee to work during a rest period. A rest period shall be counted as hours worked, for which there shall be no deduction from 111 112 wages.

113 2. When temperatures reach 90 degrees or above, the employer shall ensure that the employee takes 114 a minimum five-minute rest period every half hour.

115 3. If an employer fails to provide a rest period in accordance with this subsection, the employer shall pay the employee one additional hour of pay at the employee's regular rate of compensation for 116 117 each workday that a required rest period is not provided.

G. Such standards shall require each employer to implement effective emergency response 118 119 procedures pursuant to which the employer shall:

1. Ensure that effective communication by voice, observation, or electronic means is maintained so 120

121 that employees at the worksite can contact a supervisor or emergency medical services when necessary.

122 An electronic device, such as a cellphone or text messaging device, may be used for this purpose only if 123 reception in the area is reliable.

124 2. Respond to signs and symptoms of possible heat illness if a supervisor observes, or any employee 125 reports, any signs or symptoms of heat illness in any employee. The supervisor shall take immediate 126 action commensurate with the severity of the illness, including but not limited to first aid measures and 127 how emergency medical services will be provided. If they are the employee is exhibiting signs of 128 symptoms severe enough to indicate heat illness, the employee shall not be sent home without being 129 offered onsite first aid or provided with emergency medical services. 130

H. Such standards shall require each employer to provide for acclimatization as follows:

131 1. All employees shall be closely observed by a supervisor during a heat wave. For purposes of this 132 subdivision only, "heat wave" means any day in which the predicted high temperature for the day will be at least 80 degrees Fahrenheit and at least 10 degrees Fahrenheit higher than the average high daily 133 134 temperature in the preceding five days.

135 2. An employee who has been newly assigned to a high heat area shall be closely observed by a 136 supervisor or designee for the first 14 days of the employee's employment.

137 I. Such standards shall require each employer to provide effective training that is: 138

1. For employees:

139 a. In a language the supervisor or employee understands;

140 b. Provided to each supervisor and non-supervisory employee before the employee begins work that 141 may reasonably result in exposure to the risk of heat illness; and

142 c. On the following topics:

143 (1) The environmental and personal risk factors that contribute to or may increase the susceptibility 144 to heat-related illness, including, but not limited to, medical conditions, water consumption, alcohol use, 145 use of medications that affect the body's response to the heat, and burden caused by personal protective 146 equipment;

147 (2) The employer's procedures for complying with the requirements of this standard, including the 148 employer's responsibility to provide water, shade, cool-down rests, and access to first aid, as well as the 149 employees' right to exercise their rights under this standard without retaliation;

150 (3) The importance of frequent consumption of water, up to four cups per hour, when the work 151 environment is above 80 degrees and employees are likely sweating more than usual; 152

(4) The importance of acclimatization;

153 (5) The different types of heat illness, the common signs and symptoms of heat illness, and 154 appropriate first aid and emergency responses to the different types of heat illness;

155 (6) The importance of immediately reporting to the employer, directly or through the employee's 156 supervisor, symptoms or signs of heat illness in themselves, or in coworkers; and

157 (7) The employer's procedures for responding to signs or symptoms of possible heat illness, including 158 how emergency medical services will be contacted and provided should they become necessary; and 159 2. For supervisors:

a. Provided to supervisors prior to supervising employees performing work that may reasonably 160 result in exposure to the risk of heat illness; and 161

162 b. On the following topics:

163 (1) The topics required to be provided to employees listed in subdivision 1 c;

164 (2) The procedures the supervisor is required to follow to implement the applicable provisions in this 165 section:

166 (3) The procedures the supervisor is require to follow when an employee exhibits signs or reports 167 symptoms consistent with possible heat illness, including emergency response procedures; and

168 (4) The procedures for moving or transporting an employee to a place where the employee can be 169 reached by an emergency medical service provider, if necessary.

170 J. The standards established pursuant to this section shall take into consideration the NIOSH 171 Criteria for a Recommended Standard: Occupational Exposure to Heat and Hot Environments published 172 by the National Institute for Occupational Safety and Health in 2016.

173 K. The rules and regulations adopted by the Safety and Health Codes Board pursuant to this section 174 shall be enforced as specified in §§ 40.1-49.3 through 40.1-49.7.

175 L. It is a violation of § 40.1-51.2:1 to discharge or discriminate in any other manner against 176 employees for exercising their rights under this or any other provision offering occupational safety and 177 *health protection to employees.*