

Transmittal Sheet

Proposed Action on Regulations	
Date Filed with AELR Committee June 21, 2024	Date Filed with Division of State Documents
	Document Number 24-081-P
	Date of Publication in MD Register

1. Desired date of publication in Maryland Register: July 26, 2024

2. COMAR Codification

Title	Subtitle	Chapter	Regulation
09	12	32	01
09	12	32	02
09	12	32	03
09	12	32	04
09	12	32	05
09	12	32	06
09	12	32	07
09	12	32	08
09	12	32	09
09	12	32	10

3. Promulgating Authority

Maryland Department of Labor

4. Name of Regulations Coordinator

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5. Name of Person to Call About this Document

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6. Check applicable items:

- | | |
|-------------------------------------|--|
| <input checked="" type="checkbox"/> | New Regulations |
| <input type="checkbox"/> | Amendments to Existing Regulations |
| <input type="checkbox"/> | Repeal of Existing Regulations |
| <input type="checkbox"/> | Recodification |
| <input type="checkbox"/> | Incorporation by Reference of Documents Requiring DSD Approval |

7. Is there Emergency text that is identical to this Proposal:

Yes No

8. Incorporation by Reference

Incorporation by Reference (IBR) approval form(s) attached and 16 copies of documents proposed for incorporation submitted to DSD. (Submit 16 paper copies of IBR document to DSD and one copy to AELR.)

9. Public Body - Open Meeting

OPTIONAL - If promulgating authority is a public body, check to include a sentence in the Notice of Proposed Action that proposed action was considered at an open meeting held pursuant to General Provisions Article, §3-302(c), Annotated Code of Maryland

OPTIONAL - If promulgating authority is a public body, check to include a paragraph that final action will be considered at an open meeting

10. Children's Environmental Health and Protection

Check if the system should send a copy of the proposal to the Children's Environmental Health and Protection Advisory Council

11. Certificate of Authorized Officer

I certify that the attached document is in compliance with the Administrative Procedure Act. I also certify that the attached text has been approved for legality by Jean Baker, Assistant Attorney General, telephone #410 767 2210, on June 21, 2024. A written copy of the approval is on file at this agency.

Name of Authorized Officer

Devki Virk

Title

Commissioner of Labor and Industry

Telephone No.

410 767-2961

Date

June 21, 2024

Title 09

MARYLAND DEPARTMENT OF LABOR

Subtitle 12 DIVISION OF LABOR AND INDUSTRY

09.12.32 Heat Stress Standards

Authority: Labor and Employment Article, §§2-106(b)(5) and 5-1201(b), Annotated Code of Maryland

Notice of Proposed Action

[24-081-P]

The Commissioner of Labor and Industry proposes to:
adopt new Regulations .01-.10.

Statement of Purpose

The purpose of this action is to establish minimum requirements for employers to protect employees from heat stress-related illness caused by heat stress as required by Ch. 308, Laws of 2020 (House Bill 722).

Estimate of Economic Impact

I. Summary of Economic Impact. State agencies and local governments are employers subject to the Maryland Occupational Safety and Health Act, and will be required to comply with the proposed regulation. To the extent that they are not already providing the requisite water, shade, and rest to workers exposed to heat above the stated thresholds, and/or training to prevent heat related illness, governments will need to take steps to do so. Water must already be provided, so additional costs to provide the specified amounts should not be significant. Shade may be readily available to many workers. To the extent that shade must be provided, a variety of options are readily available from national retailers such as Home Depot, Lowes, Amazon, and Target. These include large umbrellas, canopies, and shade sails in a range of sizes, at costs of under \$50.00 to \$300 or more for larger sizes with walls as well as overhead protection. Personal protective equipment to reduce heat burden on employees, such as cooling vests, is available (again, from a variety of sources) for approximately \$50.00 (for water-based cooling) to \$200 or more for more advanced technology with greater cooling duration. See, e.g., https://www.uline.com/Grp_434/Cooling-Products. Employers may also rotate workers from heat-exposed environments to cool environments (such as air conditioned vehicles), adjust work hours to cooler times of day, or implement similar administrative measures with minimal cost. Employers implementing the recommended break schedules during high-heat conditions may incur increased downtime costs, and lower productivity, during those days. Cumulative break time at the 90-degree heat index level would total approximately 40 minutes for an 8 hour shift. However, most employers provide a meal break; since the proposed regulation permits heat breaks to take place concurrently with meal breaks, the incremental downtime of the required breaks is less than the full

40 minutes. (The same offset would apply to the lengthier breaks at the 100-degree heat index level, though the reduction would be more modest because the cumulative break time is longer.) To the extent that employers are not already providing additional break time to employees performing work in hot conditions, the proposed regulation could result in lost time and lower productivity, as well as some increase in costs. Although those costs are difficult to estimate, according to 2023 Bureau of Labor Statistics data, the mean hourly wage in Maryland is \$35.40 per hour. However, many of the occupations where workers experience significant heat exposure while working earn below that mean. For example, the mean wages of restaurant workers, janitors, couriers, landscaping workers, agricultural workers, and several categories of drivers are all below \$20.00 per hour. The wages of workers across all construction occupations also lies below the mean, at just over \$30.00 per hour. The number of days each year that either the 90-degree heat index or the 100-degree heat index thresholds would be met will vary year to year, though data shows that temperatures are trending upward. Heat index readings are localized and historical data was not readily available. However, temperature readings in various geographic points throughout Maryland are maintained historically by NOAA, and the data may have some use as identifying lower bound on the number of days in a particular region that heat illness prevention measures may be triggered under the proposed regulation. (Because the heat index takes humidity into account, and Maryland’s environment is quite humid, the heat index often exceeds the air temperature.) On the other side of the equation, employers implementing these measures may experience offsetting reductions in absenteeism due to heat-related illness, and/or increased productivity. Further, the costs of developing a written heat illness prevention program, which would require supervisory or management involvement, and potentially involvement of safety professionals, may be mitigated by using the resources of the agency’s public sector consultation program, which is designed to assist public sector entities in complying with safety standards.

II. Types of Economic Impact.

Impacted Entity	Revenue (R+/R-) Expenditure (E+/E-)	Magnitude
A. On issuing agency:		
(1) Division of Labor and Industry	(E-)	None
B. On other State agencies:		
(1) Maryland state agencies	(E-)	Indeterminable but potentially meaningful; may be offset to some extent by reduced absenteeism, illness and injury due to heat-related conditions.
C. On local governments:		
(1) county and local governments	(E-)	Indeterminable but potentially meaningful; may be offset to some extent by reduced absenteeism, illness and injury due to heat-related conditions.
	Benefit (+) Cost (-)	Magnitude
D. On regulated industries or trade groups:		
(1) businesses	(+)	Indeterminable but potentially meaningful; may be offset to some extent by reduced absenteeism, illness and injury due to heat-related conditions.
E. On other industries or trade groups:		
	NONE	

F. Direct and indirect effects on public:

(1) citizens of Maryland	(+)	Indeterminable, but public health will be improved due to greater protection from heat related illness.
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III. Assumptions. (Identified by Impact Letter and Number from Section II.)

A(1). The agency can absorb the costs of implementing the proposed regulation within existing resources.

B(1). State agencies and local governments are employers subject to the Maryland Occupational Safety and Health Act, and will be required to comply with the proposed regulation. To the extent that they are not already providing the requisite water, shade, and rest to workers exposed to heat above the stated thresholds, and/or training to prevent heat related illness, governments will need to take steps to do so. Water must already be provided, so additional costs to provide the specified amounts should not be significant. Shade may be readily available to many workers. To the extent that shade must be provided, a variety of options are readily available from national retailers such as Home Depot, Lowes, Amazon, and Target. These include large umbrellas, canopies, and shade sails in a range of sizes, at costs of under \$50.00 to \$300 or more for larger sizes with walls as well as overhead protection. Personal protective equipment to reduce heat burden on employees, such as cooling vests, is available (again, from a variety of sources) for approximately \$50.00 (for water-based cooling) to \$200 or more for more advanced technology with greater cooling duration. See, e.g., https://www.uline.com/Grp_434/Cooling-Products. Employers may also rotate workers from heat-exposed environments to cool environments (such as air conditioned vehicles), adjust work hours to cooler times of day, or implement similar administrative measures with minimal cost. Employers implementing the recommended break schedules during high-heat conditions may incur increased downtime costs, and lower productivity, during those days. Cumulative break time at the 90-degree heat index level would total approximately 40 minutes for an 8 hour shift. However, most employers provide a meal break; since the proposed regulation permits heat breaks to take place concurrently with meal breaks, the incremental downtime of the required breaks is less than the full 40 minutes. (The same offset would apply to the lengthier breaks at the 100-degree heat index level, though the reduction would be more modest because the cumulative break time is longer.) To the extent that employers are not already providing additional break time to employees performing work in hot conditions, the proposed regulation could result in lost time and lower productivity, as well as some increase in costs. Although those costs are difficult to estimate, according to 2023 Bureau of Labor Statistics data, the mean hourly wage in Maryland is \$35.40 per hour. However, many of the occupations where workers experience significant heat exposure while working earn below that mean. For example, the mean wages of restaurant workers, janitors, couriers, landscaping workers, agricultural workers, and several categories of drivers are all below \$20.00 per hour. The wages of workers across all construction occupations also lies below the mean, at just over \$30.00 per hour. The number of days each year that either the 90-degree heat index or the 100-degree heat index thresholds would be met will vary year to year, though data shows that temperatures are trending upward. Heat index readings are localized and historical data was not readily available. However, temperature readings in various geographic points throughout Maryland are maintained historically by NOAA, and the data may have some use as identifying lower bound on the number of days in a particular region that heat illness prevention measures may be triggered under the proposed regulation. (Because the heat index takes humidity into account, and Maryland's environment is quite humid, the heat index often exceeds the air temperature.) On the other side of the equation, employers implementing these measures may experience offsetting reductions in absenteeism due to heat-related illness, and/or increased productivity. Further, the costs of developing a written heat illness prevention program, which would require supervisory or management involvement, and potentially involvement of safety professionals, may be mitigated by using the resources of the agency's public sector consultation program, which is designed to assist public sector entities in complying with safety standards.

C(1). See (B)

D(1). See (B). Small businesses also will be able to mitigate the costs of developing a program by availing themselves of the free small business consultation service designed specifically to assist them in complying with health and safety laws.

F(1). These regulations will have a positive effect on public health due to reduced occupational heat illness.

Economic Impact on Small Businesses

The proposed action has a meaningful economic impact on small businesses. An analysis of this economic impact follows:

All employers subject to the Maryland Occupational Safety and Health Act, including small businesses, will be required to comply with the proposed regulation. To the extent that they are not already providing the requisite water, shade, and rest to workers exposed to heat above the stated thresholds, and/or training to prevent heat related illness, employers will need to take steps to do so.

Water must already be provided, so additional costs to provide the specified amounts should not be significant. Shade may be readily available to many workers. To the extent that shade must be provided, a variety of options are readily available from national retailers such as Home Depot, Lowes, Amazon, and Target. These include large umbrellas, canopies, and shade sails in a range of sizes, at costs of under \$50.00 to \$300 or more for larger sizes with walls as well as overhead protection. Personal protective equipment to reduce heat burden on employees, such as cooling vests, is available (again, from a variety of sources) for approximately \$50.00 (for water-based cooling) to \$200 or more for more advanced technology with greater cooling duration. See, e.g., https://www.uline.com/Grp_434/Cooling-Products. Employers may also rotate workers from heat-exposed environments to cool environments (such as air conditioned vehicles), adjust work hours to cooler times of day, or implement similar administrative measures with minimal cost. This flexibility is expressly permitted under the proposed regulation. Still, employers implementing the recommended break schedules during high-heat conditions may incur increased downtime costs, and lower productivity, during those days. Cumulative break time at the 90-degree heat index level would total approximately 40 minutes for an 8 hour shift. However, most employers provide a meal break; since the proposed regulation permits heat breaks to take place concurrently with meal breaks, the incremental downtime

of the required breaks would be less than the full 40 minutes for employers who already provide such breaks. (The same offset would apply to the lengthier breaks at the 100-degree heat index level, though the reduction would be more modest because the cumulative break time is longer.) To the extent that employers are not already providing additional break time to employees performing work in hot conditions, the proposed regulation could result in additional downtime and lower productivity, and a corresponding increase in costs. Although those costs are difficult to estimate, according to 2023 Bureau of Labor Statistics data, the mean hourly wage in Maryland is \$35.40 per hour. However, many of the occupations where workers experience significant heat exposure while working earn below that figure. For example, the mean wages of restaurant workers, janitors, couriers, landscaping workers, agricultural workers, and several categories of drivers are all below \$20.00 per hour. The wages of workers across all construction occupations also lies below the mean, at just over \$30.00 per hour. The number of days each year that either the 90-degree heat index or the 100-degree heat index thresholds would be met will vary year to year, though data shows that temperatures are trending upward. Heat index readings are localized and historical data was not readily available. However, temperature readings in various geographic points throughout Maryland are maintained historically by NOAA, and the data may have some use as identifying lower bound on the number of days in a particular region that heat illness prevention measures may be triggered under the proposed regulation. (Because the heat index takes humidity into account, and Maryland's environment is quite humid, the heat index often exceeds the air temperature.) On the other side of the equation, employers implementing these measures may experience offsetting reductions in absenteeism due to heat-related illness, and/or increased productivity, or reduced workers' compensation costs. Further, the costs of developing a written heat illness prevention program, which would require supervisory or management involvement, and potentially involvement of safety professionals, may be mitigated by using the free consultation services offered by the agency, which are designed to ease the burdens on small businesses from compliance with safety standards.

Impact on Individuals with Disabilities

The proposed action has no impact on individuals with disabilities.

Opportunity for Public Comment

Comments may be sent to Tiffany Jones, Outreach Coordinator, Division of Labor and Industry, Maryland Department of Labor, 10946 Golden West Drive, Hunt Valley, Maryland 21031, or call 410 767 2182, or email to dli.regulations+heat@maryland.gov. Comments will be accepted through August 26, 2024. A public hearing will be held on A virtual public hearing will be conducted on August 16, 2024 at 1 p.m. A link to the hearing will be available on the Maryland Department of Labor's website.

DEVKI VIRK
Commissioner of Labor and Industry

Economic Impact Statement Part C

A. Fiscal Year in which regulations will become effective: **FY 25**

B. Does the budget for the fiscal year in which regulations become effective contain funds to implement the regulations?

Yes

C. If 'yes', state whether general, special (exact name), or federal funds will be used:

general and federal funds

D. If 'no', identify the source(s) of funds necessary for implementation of these regulations:

E. If these regulations have no economic impact under Part A, indicate reason briefly:

F. If these regulations have minimal or no economic impact on small businesses under Part B, indicate the reason and attach small business worksheet.

G. Small Business Worksheet:

Impact Statement Part C — Legislative Information

Part C requests agencies to provide information required by the Department of Legislative Services in its report to

the AELR Committee. Answer the questions in the space provided. Part C is not printed in the Maryland Register.
Small Business Analysis Worksheet

This worksheet is designed to assist the agency in determining if and how the proposal impacts small businesses. Quantify the number of affected small businesses and estimates of costs and benefits to small businesses if possible. State Government Article, §2-1505.2, includes the following definitions which are relevant to the analysis:

“Economic impact analysis” means an estimate of the cost or the economic benefit to small businesses that may be affected by a regulation proposed by an agency pursuant to Title 10, Subtitle 1 of this article.

“Small business” means a corporation, partnership, sole proprietorship, or other business entity, including its affiliates, that: (i) is independently owned and operated;

(ii) is not dominant in its field; and (iii) employs 50 or fewer full-time employees.

1a. Intended Beneficiaries. Who are the intended beneficiaries of the proposed regulation? Are these intended beneficiaries primarily households or businesses?

Answer: The intended beneficiaries are Maryland workers.

1b. Intended Beneficiaries: Households. If households are the primary intended beneficiaries, will the proposal affect their income or purchasing power such that the volume or patterns of their consumer spending will change? If so, what directions of change would you anticipate? Will these expected spending changes have a disproportionate impact on small businesses? Can you descriptively identify the industries or types of business activities that are impacted?

Answer: We do not expect that the proposed regulation will affect income or purchasing power.

1c. Intended Beneficiaries: Businesses. If businesses are the intended beneficiaries, identify the businesses by industry or by types of business activities. How will businesses be impacted? Are these Maryland establishments disproportionately small businesses? If so, how will these Maryland small businesses be affected? Can you identify or estimate the present number of small businesses affected? Can you estimate the present total payroll or total employment of small businesses affected?

Answer: N/A

2a. Other Direct or Indirect Impacts: Adverse. Businesses may not be the intended beneficiaries of the proposal. Instead, the proposal may direct or otherwise cause businesses to incur additional expenses of doing business in Maryland. Does this proposal require Maryland businesses to respond in such a fashion that they will incur additional work-time costs or monetary costs in order to comply? Describe how Maryland establishments may be adversely affected. Will Maryland small businesses bear a disproportionate financial burden or suffer consequences that affect their ability to compete? Can you estimate the possible number of Maryland small businesses adversely affected? (Note that small business compliance costs in the area of regulation are the sum of out-of-pocket (cash) costs plus time costs — usually expressed as payroll, akin to calculations for legislative fiscal notes. Precise compliance costs may be difficult to estimate, but the general nature of procedures that businesses must accomplish to comply can be described.)

Answer: All employers subject to the Maryland Occupational Safety and Health Act, including small businesses, will be required to comply with the proposed regulation. To the extent that they are not already providing the requisite water, shade, and rest to workers exposed to heat above the stated thresholds, and/or training to prevent heat related illness, employers will need to take steps to do so.

Water must already be provided, so additional costs to provide the specified amounts should not be significant. Shade may be readily available to many workers. To the extent that shade must be provided, a variety of options are readily available from national retailers such as Home Depot, Lowes, Amazon, and Target. These include large umbrellas, canopies, and shade sails in a range of sizes, at costs of under \$50.00 to \$300 or more for larger sizes with walls as well as overhead protection. Personal protective equipment to reduce heat burden on employees, such as cooling vests, is available (again, from a variety of sources) for approximately \$50.00 (for water-based cooling) to \$200 or more for more advanced technology with greater cooling duration. See, e.g., https://www.uline.com/Grp_434/Cooling-Products. Employers may also rotate workers from heat-exposed environments to cool environments (such as air conditioned vehicles), adjust work hours to cooler times of day,

or implement similar administrative measures with minimal cost. This flexibility is expressly permitted under the proposed regulation. Still, employers implementing the recommended break schedules during high-heat conditions may incur increased downtime costs, and lower productivity, during those days. Cumulative break time at the 90-degree heat index level would total approximately 40 minutes for an 8 hour shift. However, most employers provide a meal break; since the proposed regulation permits heat breaks to take place concurrently with meal breaks, the incremental downtime of the required breaks would be less than the full 40 minutes for employers who already provide such breaks. (The same offset would apply to the lengthier breaks at the 100-degree heat index level, though the reduction would be more modest because the cumulative break time is longer.) To the extent that employers are not already providing additional break time to employees performing work in hot conditions, the proposed regulation could result in additional downtime and lower productivity, and a corresponding increase in costs. Although those costs are difficult to estimate, according to 2023 Bureau of Labor Statistics data, the mean hourly wage in Maryland is \$35.40 per hour. However, many of the occupations where workers experience significant heat exposure while working earn below that figure. For example, the mean wages of restaurant workers, janitors, couriers, landscaping workers, agricultural workers, and several categories of drivers are all below \$20.00 per hour. The wages of workers across all construction occupations also lies below the mean, at just over \$30.00 per hour. The number of days each year that either the 90-degree heat index or the 100-degree heat index thresholds would be met will vary year to year, though data shows that temperatures are trending upward. Heat index readings are localized and historical data was not readily available. However, temperature readings in various geographic points throughout Maryland are maintained historically by NOAA, and the data may have some use as identifying lower bound on the number of days in a particular region that heat illness prevention measures may be triggered under the proposed regulation. (Because the heat index takes humidity into account, and Maryland's environment is quite humid, the heat index often exceeds the air temperature.) On the other side of the equation, employers implementing these measures may experience offsetting reductions in absenteeism due to heat-related illness, and/or increased productivity, or reduced workers' compensation costs. Further, the costs of developing a written heat illness prevention program, which would require supervisory or management involvement, and potentially involvement of safety professionals, may be mitigated by using the free consultation services offered by the agency, which are designed to ease the burdens on small businesses from compliance with safety standards.

2b. Other Direct or Indirect Impacts: Positive. Maryland businesses may positively benefit by means other than or in addition to changed consumer spending patterns. How may Maryland businesses be positively impacted by this initiative? Will Maryland small businesses share proportionately or disproportionately in these gains? Can you estimate the possible number of Maryland small businesses positively affected?

Answer: Employers implementing these measures may experience offsetting reductions in absenteeism due to heat-related illness, and/or increased productivity, or reduced workers' compensation costs.

3. Long-Term Impacts. There are instances where the longer run economic impact effect from regulations differ significantly from immediate impact. For example, regulations may impose immediate burdens on Maryland small businesses to comply, but the overall restructuring of the industry as a consequence of monitoring and compliance may provide offsetting benefits to the affected small businesses in subsequent years. Can you identify any long run economic impact effects on Maryland small businesses that over time (a) may compound or further aggravate the initial economic impact described above, or (b) may mitigate or offset the initial economic impact described above?

Answer: We do not anticipate long-term impacts on businesses of the types described.

4. Estimates of Economic Impact. State Government Article, §2-1505.2 requires that an agency include estimates, as appropriate, directly relating to: (1) cost of providing goods and services; (2) effect on the work force; (3) effect on the cost of housing; (4) efficiency in production and marketing; (5) capital investment, taxation, competition, and economic development; and (6) consumer choice.

Answer: As noted above, employers that are not already implementing heat illness prevention measures may incur some increased costs of protective equipment (examples of which are provided above), and increased labor costs per hour. At the same time, we anticipate that the proposed regulation will have a positive effect on worker

health, and businesses may experience benefits as a result, including reduced illness and lost work time from absenteeism, and lower workers compensation costs. We do not anticipate a material effect on capital investment, taxation, competition, or economic development, or on consumer choice.

Title 09 Department of Labor

Subtitle 12 Division of Labor and Industry

09.12.32 Heat Stress Standards

Authority: Labor and Employment Article, §§2-106(b)(4), 5-312, and 5-1201, Annotated Code of Maryland

.01 Purpose

The purpose of this chapter is to establish minimum requirements for employers to protect employees from heat-related illness caused by heat stress in the workplace.

.02 Scope

- *This chapter applies to an employer with employees whose employment activities, indoor or outdoor, expose employees to a heat index in the area where the employee is working that equals or exceeds 80 degrees Fahrenheit.*
- *This chapter does not apply to:*
 - *Emergency operations and essential services as defined in Regulation .03B(4) of this chapter that involve protecting life or property;*
 - *Incidental exposures when an employee is not required to perform work activities for more than 15 consecutive minutes per hour; or*
 - *Buildings, structures, and vehicles that have a mechanical ventilation system or fan that maintains the heat index below 80 degrees.*

.03 Definitions

- *In this chapter, the following terms have the meanings indicated.*
- *Terms Defined.*

1. *“Acclimatization” means the body's temporary adaptation to work in heat that occurs as a person is exposed over time.*
2. *“Alternative Cooling and Control Measures” means engineering, work-practice, administrative, or other controls to manage heat including job rotation, mechanical ventilation systems, misting equipment, cooling vests, air or water-cooled garments, and access to recreational water.*
3. *“Drinking water” means potable water that is safe to drink and cool in temperature.*
4. *“Emergency Operations and Essential Service” means work in connection with an emergency that requires the involvement of law enforcement, emergency medical services, firefighting, rescue and evacuation operations, or emergency restoration of essential utilities or telecommunications.*
5. *“Heat Index” means a measure of how hot it feels when relative humidity is taken into account along with the actual air temperature which can be extrapolated from temperature and relative humidity using the National Weather Service Heat Index Calculator.*
6. *“High Heat Conditions” means working conditions where the heat index of the work area equals or exceeds 90 degrees Fahrenheit.*
7. *“Shade or Shaded Areas” means blockage of direct sunlight.*

.04 Heat Illness Prevention and Management Plan

- *An employer shall monitor the heat index throughout the work shift in area(s) where employees perform work using one of the following methods:*
- *Direct measurement of the temperature and humidity at the same time and location in the area(s) where employees perform work;*
- *Use of local weather data reported by the National Weather Service or other recognized source to determine the heat index; or*
- *Use of the National Institute for Occupational Safety and Health’s Heat Safety Tool application to determine the heat index.*

- *An employer whose employees work in buildings and structures that do not have a mechanical ventilation system must directly measure the temperature and humidity at the same time and location in area(s) where employees perform work.*
- *An employer shall develop, implement, and maintain an effective heat illness prevention and management plan in writing.*
- *The heat illness prevention and management plan shall contain the following elements:*
 - *How sufficient amounts of drinking water will be provided;*
 - *How employees will be provided sufficient opportunities and encouragement to stay hydrated by drinking water;*
 - *How to recognize the symptoms of heat-related illnesses, including heat exhaustion and heat stroke;*
 - *How to respond to suspected heat-related illnesses, including heat exhaustion and heat stroke;*
 - *How employees will be provided with sufficient time and space to rest in a shaded or cool, climate-controlled area(s) to cool off;*
 - *How the employer will implement rest break schedules as necessary;*
 - *How the employer will consider environmental conditions, workload, required clothing, personal protective equipment, and alternative cooling and control measures when determining rest break schedules;*
 - *How employees will be encouraged to take rest breaks as needed to prevent heat-related illness;*
 - *How employees will be trained on the hazards of heat exposure and the necessary steps to prevent heat-related illnesses;*
 - *The use and maintenance of alternative cooling and control measures used to manage heat;*
 - *Procedures for heat acclimatization in accordance with Regulation .05 of this chapter;*
 - *Procedures for high heat conditions in accordance with Regulation .08 of this chapter; and*
 - *The emergency response plan in accordance with Regulation .09 of this chapter.*
- *The written plan shall be made available and accessible to:*
 - *employees; and*
 - *MOSH upon request.*

.05 Acclimatization

1. *An employer shall provide for acclimatization of exposed employees for a period of up to 14 days:*
 1. *When an employee is newly exposed to heat in the workplace; and*
 2. *When an employee returns to work after seven or more consecutive days of absence from the workplace.*
2. *An employer shall monitor employees during the acclimatization period for signs of heat-related illnesses through regular communication via:*
 1. *phone or radio;*
 2. *a buddy system; or*
 3. *other effective means of observation.*
3. *An employer shall develop and implement an acclimatization schedule which complies with one of the following:*
 1. *A schedule which gradually increases exposure time over a 5-14 day period, with a maximum 20% increase each day;*
 2. *A schedule which uses the current National Institute for Occupational Safety and Health's recommendations for acclimatization; or*
 3. *A schedule which uses a combination of gradual introduction and alternative cooling and control measures that acclimate an employee to the heat.*
4. *The acclimatization schedule shall be in writing and consider the following elements:*
 - *Acclimated and unacclimated employees;*
 - *The environmental conditions and anticipated workload;*
 - *The impact of required clothing and personal protective equipment to the heat burden on employees;*
 - *The personal risk factors that put an employee at a higher risk of heat-related illness;*
 - *Re-acclimatizing employees as necessary, in accordance with § A of this regulation; and*
 - *The use of alternative cooling and control measures.*

.06 Shade Access

- 1) *Except as provided in §§ C and D, an employer shall provide shaded areas to exposed employees as close to the work area as practicable.*
- 2) *Shaded areas shall:*

1. *Be outside, open, and exposed to air on at least three sides;*

2. *Prevent contributing heat sources from reducing effectiveness;*
 3. *Be sufficiently sized for the number of employees utilizing the shaded area;*
 4. *Be arranged in a configuration that allows employees to sit in normal posture; and*
 5. *Accommodate the removal and storage of personal protective equipment during periods of use.*
- 3) *If creating outdoor shade is demonstrably infeasible or unsafe in the work area, the employer must implement alternative cooling and control measures that provide equivalent protection to shade.*

D. An employer may provide cooling with an indoor mechanical ventilation system as an alternative to outdoor shade provided that the indoor space satisfies the requirements of § B(2), (3), (4), and (5) of this regulation.

.07 Drinking Water

1. *An employer shall:*

1. *provide drinking water at no cost to exposed employees as close to the work area as practicable; and*
2. *make available at least 32 ounces of drinking water per hour to each exposed employee per work day.*
3. *An employer is not required to provide the entire drinking water supply at the beginning of an employee's shift but must make drinking water available at all times while work is being performed.*

.08 High Heat Procedures

1. *An employer shall implement high heat procedures when the heat index reaches or exceeds 90 degrees Fahrenheit in the area where the work is being performed.*

B. The high heat procedures shall include a work and rest schedule to protect employees from heat illness that is adjusted for environmental conditions, workload, and impact of required clothing or personal protective equipment.

C. Except as provided in § D, the high heat procedures shall include:

(1) a minimum rest period of 10 minutes for every 2 hours worked where employees are exposed to a heat index above 90 and below 100 degrees Fahrenheit; and

(2) a minimum rest period of 15 minutes for every hour worked where employees are exposed to a heat index above 100 degrees Fahrenheit; or

(3) a rest period as provided for in the current National Institute for Occupational Safety and Health recommendations for work and rest schedules to manage heat exposures.

D. If an employer can demonstrate effective heat management and protection from heat illness through alternative cooling and control measures, the work and rest schedules set forth in § C may not be required.

E. If an employer utilizes alternative cooling and control measures under § D, the measures must:

(1) be readily available and accessible to employees at all times work is being performed;

(2) be documented in writing; and

(3) not supersede any other requirements of this chapter.

F. An employer may coincide rest periods with a scheduled rest or meal period.

G. Rest periods shall be taken in the shade in accordance with .06 of this chapter.

H. An employer shall not discourage employees from taking rest breaks as needed to prevent heat-related illness.

I. When high heat procedures are in effect, an employer shall monitor exposed employees for signs of heat-related illnesses with regular communication via:

- (1) phone or radio;*
- (2) a buddy system; or*
- (3) other effective means of observation.*

J. An employer shall make high heat procedures available in writing in a language and manner that all employees can understand.

.09 Emergency Response

An employer shall implement an emergency response plan that includes procedures for:

- 1. Ensuring effective and accessible means of communication at all times at the worksite to enable an employee to contact a supervisor or emergency medical services;*
- 2. Responding to signs and symptoms of possible heat-related illness in employees;*
- 3. Monitoring and providing care to employees who are exhibiting symptoms of heat-related illness; and*
- 4. Contacting emergency medical services and, if necessary, transporting employees to a location accessible to emergency medical services.*

.10 Training

1. An employer shall:

(1) provide initial heat stress training to employees and supervisors covered by this chapter prior to an employee's first exposure to heat;

(2) re-train employees and supervisors at least:

- 1. annually prior to exposure; and*
- 2. immediately following any incident at the worksite involving a suspected or confirmed heat-related illness;*
- 3. present training in a language and manner that all employees and supervisors can understand;*
- 4. ensure that training includes at least:*
 - 1. The work and environmental conditions that affect heat illness;*
 - 2. The personal risk factors that affect heat illness;*
 - 3. The concept, importance, and methods of acclimatization;*
 - 4. The importance of frequent consumption of water and rest breaks in preventing heat-related illness;*
 - 5. The types of heat illnesses, signs and symptoms of heat illnesses, and the appropriate first aid and emergency response measures;*
 - 6. The importance of and procedures for employees immediately reporting to the employer signs and symptoms of heat illness; and*
 - 7. The employer's procedures and the requirements for complying with this chapter;*
- 8. maintain training records for one year from the date on which the training occurred.*

1. The training records required by this regulation shall include:

- 1. The names of the persons trained;*
- 2. The dates of the training sessions; and*
- 3. A summary or outline of the content of the training sessions.*

4. The training records shall be made available to MOSH upon request.

DEVKI VIRK
Commissioner of Labor and Industry