[Company Name]

Heat Illness Prevention Plan

Last Updated XX/XX/YYYY

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Instructions

Use this plan to document compliance with the Heat Illness Prevention Standards that apply to your facility. Complete the text in **[Bold]** with your facility's information. If your facility is in a state with more stringent regulations, follow them as appropriate.

Heat Illness Prevention Plan Purpose

[Organization Name] understands that employees who work in indoor or outdoor hot environments for extended periods are at risk for heat-related illnesses and that every employee has the right to a heat-illness-free workplace.

[Organization Name] is committed to taking every precaution to protect employees exposed to heat stress, including establishing safe work practices, heat illness prevention controls, and emergency preparedness, which will be detailed in this plan. **[Organization Name]** complies with local, state, and federal regulations and follows best practices. This plan is available to all employees in English, the language most employees understand. Please also refer to relevant state-specific heat illness prevention addendums and requirements.

Goals

The goals for our plan include:

- Documenting the minimum essential heat illness prevention steps that apply to most work settings.
- Acknowledging that some employees will be more susceptible to heat illnesses than others.
- Understanding the importance of acclimatization, hydration, shade, cool-down rest periods, training, etc.
- Recognize signs and symptoms of different heat illnesses.
- Know what to do if you or someone else is experiencing signs of a heat illness.

General Criteria

This program applies whenever an employee is required to perform work activities indoors or outdoors in a high-heat environment that puts them at risk for heat-related Illnesses. At a minimum, we recognize the U.S. Occupational Safety and Health Administration's (OSHA) definition of heat-related days of interest are days that exceed 80º F for heat illness risk unless more stringent standards apply or tasks put employees at risk of heat illness at lower temperatures because of clothing or personal protective equipment (PPE), radiant heat sources, or other factors. Heat illness regulations may vary between state plans. Please refer to the relevant state-specific illness prevention addendums and requirements.

EXCEPTIONS

The following roles are excluded from this plan and its procedures:

- Employees who work from home or at locations of their choosing.[1]
- Employees who always work in temperature-controlled environments, such as air-conditioned spaces. While employees who work in a climate-controlled space are generally excluded from the procedures in this plan, they need to be aware of acclimatization protocols should their work change and heat illness symptoms that could occur if they leave a climate-controlled area.

[1] *Employees under Oregon OSHA's jurisdiction who work from home are only partially exempt from this plan. See the Oregon Addendum.*

Responsible Parties

MANAGEMENT:

Management is responsible for the following:

- The formation and implementation of **[Organization Name]**'s Heat Illness Prevention Plan
- Making the written plan available to all employees on-site in English and other languages most employees understand.
- Providing sufficient water, shade, rest areas, and other heat illness controls for employees
- Establishing work practices to minimize heat stress risks, such as acclimatization, required rest periods, employee monitoring, and strategic scheduling.
- Providing access to first aid and emergency response procedures
- Assuring that employees will not experience retaliation for reporting heat illness symptoms or unaddressed heat stress hazards.
- Designating a procedure for contacting emergency services, including who is responsible for getting them.
- Providing training to any employee who could be exposed to the risk of heat illness before the employee starts work on:
    - Plan requirements
    - Work practices
    - Heat illness prevention, detection, and treatment
    - Who to contact in an emergency.
- Provide all supervisors with a copy of this plan and train them in the following:
    - Requirements of this Heat Illness Prevention Plan and how to implement these requirements.
    - Procedures must be followed when an employee exhibits symptoms of a possible heat illness, including first aid and emergency procedures.
    - How to monitor weather conditions and indoor/outdoor temperatures, check extended weather forecasts, and respond to hot weather advisories.

PLAN ADMINISTRATOR:

[Responsible Person] shall administrate the Heat Illness Prevention Plan for **[Organization Name]**. The Plan Administrator is responsible for the following tasks:

- Developing and overseeing the **[Organization Name]**'s Heat Illness Prevention Plan
- Conduct periodic heat stress hazard assessments of the grounds and facilities.
- Determining control methods to eliminate or reduce the risks.
- Maintaining plan records.
- Reviewing this policy at least once a year and updating it as needed.

SUPERVISORS:

Supervisors are responsible for the following:

- Implementing the Heat Illness Prevention Plan as set out by the employer.
- Completing all necessary heat illness prevention training
- Know how to monitor employees for the signs and symptoms of heat illness and how to follow emergency response procedures.
- Know how to monitor weather reports and respond to heat advisories.

- Reporting any heat stress hazards that need to be addressed.

EMPLOYEES:

Employees are responsible for the following:

- Understanding their right to a heat stress-free workplace and what heat stress mitigation steps to expect from their organization.
- Receiving appropriate training from their employer
- Knowing their role in heat-illness prevention and following guidelines to mitigate risks.
- Recognize the symptoms of heat illness and immediately report them.
- Reporting heat stress hazards that the Heat Illness Prevention Plan has not addressed.
- The Company complies with the Americans with Disabilities Act (ADA). Work with Human Resources on appropriate accommodations if your health condition could impact your heat stress tolerance. For example, certain medications can affect the body's ability to manage heat.
- Wear appropriate clothing and use provided protective equipment as needed, or required, to assist your body in managing the effects of extreme temperatures.

Hazard Assessment

[Responsible Person] shall conduct the hazard assessment for **[Organization Name].** Employees' risk factors may vary based on their exertion level, clothing, exposure to heat sources, and environmental conditions**.** To fully assess the worker's total heat stress risk, the **[Responsible Person]** uses environmental measurements (heat index, wet bulb globe temperature), clothing adjustment factors, worksite conditions, and exertion level to determine the best employee protections. Job hazard analyses are conducted based on these measurements to protect indoor and outdoor workers from dangerous exposure.

RISK FACTORS

- Worksite Temperatures
- Humidity
- A lack of air movement and exchange
- The amount of time employees spend working in the heat.
- The time-of-day work takes place.
- Sources of radiant heat (e.g., sunlight, fire, hot equipment, boilers, furnaces)
- Work that produces heat (e.g., welding, laying asphalt, forge work)
- Physical contact with warm or hot objects, liquids, or steam.
- Required clothing and personal protective equipment (PPE)
- Physically strenuous work (See table below for examples of work categories)

The table below summarizes different types of work and their exertion levels.

Strenuous Work Categories Based on Exertion Levels		
Work Category	**Metabolic Rate (Watts)**	**Examples**
Rest	115	Sitting
Light	180	Sitting, standing, light arm/hand work, and occasional walking
Moderate	300	Normal walking, moderate lifting
Heavy	415	Heavy material handling, walking at a fast pace
Very Heavy	520	Pick and shovel work

Source: OSHA Technical Manual (OTM), Section III: Chapter 4

Use the results to determine appropriate controls for mitigating hazards whenever possible, planning acclimatization, and scheduling to limit employee exposure.

The Responsible Person may be required to conduct additional assessments to determine an employee's actual heat exposure beyond utilizing the heat index. This could be due to indoor and outdoor exposure to radiant heat sources such as heat-generating equipment, such as forge work, asphalt pouring, or working near ovens while wearing additional PPE or heavy clothing. To determine the most accurate temperature the employees are being exposed to, a Wet Bulb Globe Temperature (WBGT) Meter is used to measure the temperature in the employee's working area. This reading is used with calculations for the employee's clothing and exertion level to determine their actual exposure level. Employers may use OSHA's Heat Stress Calculator to calculate if the heat-related work is within appropriate limits. For more information about calculations, refer to OSHA's Technical Manual for Heat Stress. [***Note:*** *This is an optional best practice.*]

WORKSITE OBSERVATIONS:

The Responsible Person shall conduct periodic worksite observations to ensure that everyone follows heat illness prevention procedures and that hazards are sufficiently controlled.

Due to the hazard assessment, the Responsible Person determined that physiological monitoring is required in their worksite observations to evaluate the effectiveness of controls to protect employee wellbeing. [***Note:*** *This is an optional best practice.*]

Employees in high-risk heat areas can be monitored by tracking the following:

- Heart Rate
- Core Body Temperature
- Extent of Body Water Loss
- Recovery Heart Rate

Based on the result of the monitoring, the appropriate work-to-rest ratios can be established based on individual health and required monitoring. The Responsible Person determined the respective ratios and has documented this in the workplace hazard assessment. [***Note:*** *This is an optional best practice.*]

Training

The Responsible Person shall administrate the training program for **[Organization Name]** and keep training records.

TRAINING REQUIREMENTS:

Both employees and supervisors must be trained on the topics below before beginning work.

- Training must be in a language the employees and supervisors understand.
- Refresher training is required annually or if the program is not followed or remembered.
- Training shall include an in-person opportunity for employees to ask about their work-site-specific information and practices.
- If discrepancies are found between work practices and the information in the training, either the training or the work practices (as appropriate) must be updated to match the other.

Employee Training Requirements	Supervisor Training Requirements
• The details of this heat illness prevention plan • How employees have a right to report heat illness concerns without fear of retaliation • Environmental and personal risk factors that affect heat illnesses. • The different types of heat illnesses, their symptoms, and the appropriate first aid and emergency responses • The concept, importance, and methods of acclimatization • The employer's specific processes for reducing heat illness threats in the workplace. • The importance of frequent consumption of small quantities of water (up to 32 oz. per hour) • The importance for employees to immediately tell their supervisor if they or a coworker may be experiencing signs of a heat illness. • Steps for contacting emergency medical services, including how to proceed when there are non-English speaking employees and how to give clear and precise directions to the site	All of the Employee Training Requirements plus the following: • Required procedures, frequency, and timing for complying with heat illness prevention, including, but not limited to, the employer's responsibility to provide water, heat conditions information (including employees' risks of experiencing a heat-related illness), shade, preventative rest breaks, and access to first aid. • Monitoring weather reports • Calculating heat index values • When to implement high heat procedures and what they consist of • Knowing what the supervisor's responsibilities are during emergency heat illness situations.

INCREASING TRAINING EFFECTIVENESS:

- **[Designated Person]** will hold short daily meetings with employees and supervisors to review basic safety information and specific hazards, such as the current weather. ***[Note:** This is an optional best practice.]*
- If a heat wave or high heat is anticipated, supervisors and employees should be warned before their shifts and reminded of the special high heat procedures.
- Training will include question-and-answer sessions and practical demonstrations to ensure understanding. ***[Note**: This is an optional best practice.]*

Drinking Water

Employees must be given access to potable drinking water at no charge. The Responsible Person oversees distributing and replenishing water. ***[Note:** This is an optional best practice.]*

Water shall be placed **[Insert Locations Here]**. [***Note:** Locations should be as near as possible to where employees are working, and there should be enough locations so employees will have sufficient water. Placing water only in designated shade areas may not be enough*.]

Water should be:

- Fresh and free of contaminants
- Free of taste or smell that would discourage employees from drinking it.
- Temperature should be between 50-60º F.
- Obtained from an approved source (e.g., Hoses must be government-approved, and wells must be tested.).

ADDITIONAL REQUIREMENTS:

- The water must be sufficient for the number of employees. Employers must provide at least 1 quart of water per employee per hour of work for the entire shift.
- The water must be replenished before employees report it, or they feel the need to ration their consumption.
- During a heat wave, the water must be replenished more often to keep it available and cool.
- Water containers (and all spouts and levers) will be kept clean.
- Employers will provide single-use drinking cups. [***Note:** This is an optional best practice*.]
- Employers will provide accessible sanitation facilities. [***Note:** This is an optional best practice*.]
- As needed, as employees move, water will be moved closer to them. [***Note:** This is an optional best practice*.]
- As needed, employers will provide electrolyte-replacement drinks or powders to help replenish lost salts on high-heat days. [***Note:** This is an optional best practice*.]

SUPERVISORS ARE RESPONSIBLE FOR THE FOLLOWING:

- Drinking sufficient water during the shift.
- Also, drinking sufficient water before and after work. [***Note:** This is an optional best practice*.]
- Encouraging the frequent drinking of small amounts of water throughout the shift. In high-heat environments, remind employees that drinking extra water may be necessary.
- Discouraging the choice of drinks with caffeine or sugar that may dehydrate employees instead of water. Also, discourage the drinking of alcohol.

- Monitor the water supply. If applicable, water containers will be refilled with cool drinking water when the water level within a container drops below 50% of the capacity. Additional water containers will be delivered to replace water as needed. Supervisors will test drinking water periodically to ensure that it is suitably cool. During hot weather, the water must be cooler than the ambient temperature but not so cool as to cause discomfort.
- If employees become dehydrated and cannot alleviate symptoms with the steps below, get immediate medical attention.

EMPLOYEES ARE RESPONSIBLE FOR DOING THE FOLLOWING:

- Drink up to 4 cups per hour, especially when the weather is hot.
- Also, drink sufficient water before and after work. [***Note:*** *This is an optional best practice.*]
- Be aware that you may need to drink more in high-heat situations.
- Monitor yourself for signs of dehydration. If you feel dehydrated:
- Inform your supervisor.
- Rest in the shaded resting area.
- Drink water in small amounts but frequently.

Access to Shade

Access to shaded areas will be provided to employees as needed. Employees are encouraged to use these areas when they feel overheated. Use of shaded regions must always be permitted.

- The Responsible Person shall oversee the proper implementation of the shaded areas.
- The Responsible Person will communicate to employees the current location of shaded areas every day. [***Note:*** *This is an optional best practice.*]
- The type of shade provided is **[describe shaded areas here]**. [***Note:*** *If multiple types of shade are provided or if it depends on the day, give an overview of the options that may be used.*]
- Shaded rest areas are located **[insert locations here]**. [***Note:*** *If the locations are permanent, consider creating a map for employees. If the locations depend on the day, list the spots where they might be or give an overview.*]

SHADED AREA REQUIREMENTS:

- Shade must be strong enough to cool employees down. Other shadows should not be visible in the shade.
- Shade will be provided by the employer when the air temperature exceeds 80°F.
- If the temperature is less than 80°F, shade should still be available and must be provided upon employee request.
- The Responsible Person will monitor when the air exceeds (and exceeds) 80°F.
- Air will be monitored hourly at the worksite, and the shade will be set up immediately if 80°F is exceeded. [***Note:*** *This is one sample option.*]
- If the temperature is expected to exceed 80°F, the shade will be set up at 5:00 p.m. the previous night. [***Note:*** *This is another sample option.*]
- It should be located as close as practical to areas where employees work.
- Shade must be easy to access.
- The shaded area must not be unsafe, unhealthy, or insufficiently cool. Nothing about it should discourage access or use.
- Shaded areas should be large enough to accommodate all employees on meal, rest, or recovery periods without crowding. (i.e., Employees should not be in contact with each other or unable to sit usually.)

SHADED AREA REQUIREMENTS (CONTINUED):

- Employees will be provided with places to sit, not directly on the ground, as this will allow better cooling. [***Note:*** *This is an optional best practice.*]
- Employers and supervisors must not pressure employees to leave the site or use their air-conditioned vehicles for lunch: there must be enough room for all employees who wish to stay on-site for lunch.
- If shaded areas cannot be permanent, alternate shade solutions that provide equivalent protection can be used.
- If natural vegetation is used for shade, the Responsible Person will evaluate the shade for effectiveness.

EMPLOYEE RESPONSIBILITIES:

Employees are responsible for doing the following:

- Take ordinary rest breaks in the shaded area.
- Monitor themselves for signs of heat stress and go to the shaded area when they need to cool down. (This is a "preventive cool-down rest period.")
- Report any problems with the shaded area to the Responsible Person.

WHEN EMPLOYEES USE SHADED AREAS FOR PREVENTIVE COOL-DOWN:

- The Responsible Person will do the following:
  - Encourage employees to stay in the shade until they feel better.
  - Monitor employees.
  - Ask them if they are experiencing symptoms of heat illness.
  - If an employee reports symptoms of heat illness, activate emergency services for the employee.
- The employee will not be returned to work before symptoms have ended and, at a minimum, given at least 5 minutes to rest.

Monitoring and Scheduling

MONITORING:

- Monitor employees for signs of heat illness.
- The Responsible Person will monitor when the air exceeds (and exceeds) 80°F.
- Throughout the summer, weather, and temperature will be monitored two weeks ahead, and the work schedule will be planned to accommodate the expected weather.

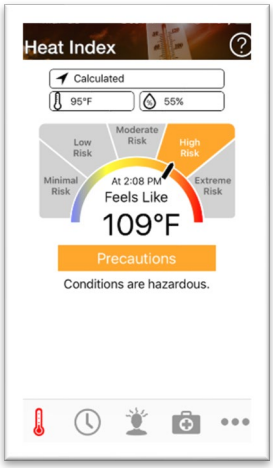
MEASUREMENTS

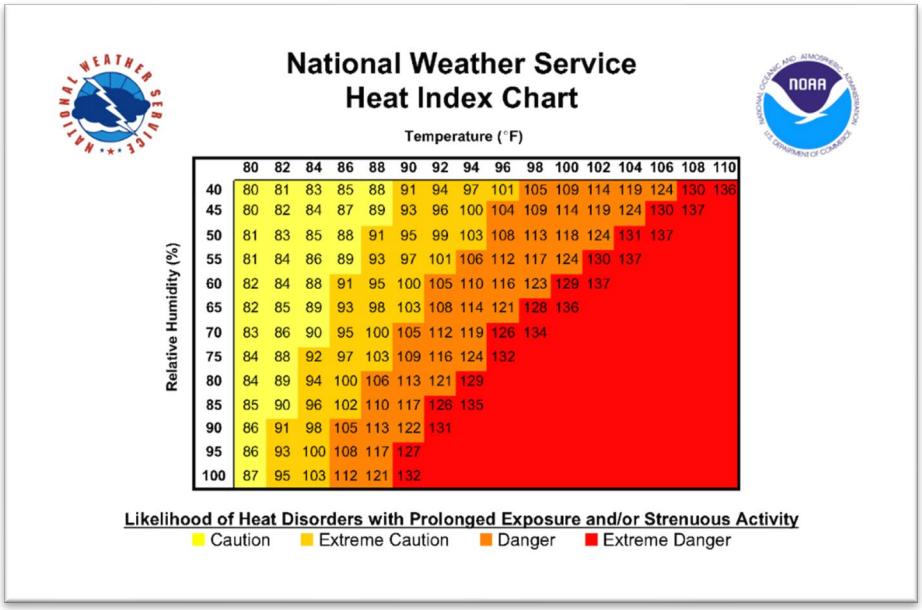
The application of this program depends on the heat index values employees are exposed to. The **heat index** measures how hot it feels when relative humidity and the actual air temperature are considered.

OSHA's & NIOSH's Heat Safety Tool mobile app can determine the outdoor heat index in the area where work will be performed. In addition to providing real-time heat index values, this tool features hourly forecasts, first aid measures for heat-related illnesses, and precautionary recommendations specific to heat index-associated risk levels.

If access to the mobile app is unavailable, the outdoor heat index can be determined by referencing the Heat Index Chart below. The relative humidity and air temperature must be determined in a shaded area,

away from radiant heat sources.





Source: National Weather Service

The indoor heat index can also be determined by referencing the Heat Index Chart upon identifying the relative humidity and air temperature in the location where work will be performed. Complete these measurements away from radiant heat sources. **Remember:** Heat index values do not account for heat produced by radiant heat sources. Hazards associated with radiant heat exposure should be assessed as described in the Hazard Assessment section and documented to determine an employee's actual level of heat exposure.

SCHEDULING:

- Scheduling accommodations may include:
  - Working during cooler hours
  - Working at night
  - Stopping work early
  - Rescheduling the entire job
  - Increased breaks
- In general, reschedule strenuous jobs for the coolest part of the day.
- Special precautions are required for temperatures about 80°F, temperatures above 95°F, and heat waves.

Acclimatization and New Employee Procedures

[Organization Name] requires employees to be acclimatized to better tolerate heat in the workplace. Acclimatization is the physical process of adapting to a different thermal environment, allowing better heat toleration. Acclimatization procedures require gradual exposure that gives the employee time to adjust to each level of exposure.

Acclimatization is essential for new employees but is necessary for all employees when the temperature significantly changes, or the employee has been away from the environment for an extended period.

Heat stress is much more likely if these procedures are not followed.

The Responsible Person and supervisors observe new employees in high-heat areas during their first 14 days of employment.

RE-ACCLIMATIZATION:

Re-acclimatization is necessary if:

- Employees are away for a week or more.
- The temperate increases significantly.

Heat Wave and Extreme Heat Procedures

HEAT WAVE PROCEDURES:

- A heat wave is defined as consistent temperatures over 80°F or if the temperature is 10° higher than the average daily temperatures in the preceding five days.
- Assign supervisors to observe and monitor employees during a heat wave closely.
- Institute a ratio of one supervisor to 20 or fewer employees, a mandatory buddy system, or a consistent practice for supervisors to check on employees.
- Pre-shift meetings to review high-heat procedures with employees are recommended.

EXTREME HEAT PROCEDURES:

When worksite temperatures equal or exceed 95°F, the employer will enact extreme heat procedures:

- Changes in normal emergency response procedures include **[Insert any changes or delete this bullet if not applicable.]**.
- In high heat conditions, employees will be closely observed by **[their supervisor or designated person]** for signs of heat illness.
- New employees will be supervised for acclimatization. However, acclimatized employees are still at risk for heat illness.
- Employees' heart rates and body temperatures will be monitored. Shorten work cycles and increase rest periods if body temperatures are over 98.6°F or heart rates are over 110 beats per minute. [***Note:*** *This is an optional best practice.*]
- Effective communication and monitoring will be assured by **[Insert the method used].** [***Note:*** *Choose* ***at least one*** *of the following options: instituting a ratio of one supervisor to 20 or fewer employees, a mandatory buddy system that requires training or a communication system to remain in regular contact with each employee.*].
- Communications between employees and supervisors will be established and maintained so that employees can quickly contact a supervisor, when necessary, by **[Insert the method used.** [***Note:*** *If cell phones are used, there must be reception*.]
- Mandatory 10-minute break periods are required for every two hours worked. Supervisors must enforce this rule.
- Pre-shift meetings will occur to review procedures and to remind employees to drink water and take cool-down rests if needed.
- Supervisors must remind employees to rest and drink water. Employees should drink more water than usual.
- Convective heat will be controlled by [**Insert the method used.** *For example, decreasing air velocity and clothing covering exposed skin are helpful.*]

Emergency Response Procedures

[Organization Name] provides appropriate care for all employees who report or show symptoms of heat illness.

ROLES AND CONTACTS:

- The following persons are designated to call for emergency medical services: **[Responsible Persons]**.
- In an emergency, if no designated person or supervisor is available to call for emergency services, all employees are permitted to do so directly.
- To call emergency services **[Appropriate Directions, e.g., "Call 911"]**.
- Employees feeling or witnessing signs of heat stress should contact **[Designated Person or a Supervisor]** by **[Method of Contact].** [***Note:*** *If there is no reception for electronic devices, another method should be in place.*]
- The following individuals can provide first aid: **[Applicable Names]**.
- **[Responsible Person(s)]** will evaluate whether there is a language barrier at the worksite and plan how to overcome this in an emergency. [***Note:*** *This is an optional best practice.]*
- Medical facilities are located: **[Medical Facilities Used and Their Locations]**.

EMERGENCY PREPARATION:

- The employer shall maintain effective communication with employees so they can contact a supervisor or emergency medical services when necessary.
- Employers will ensure that supervisors or designees can provide clear and precise directions to the worksite and have a reliable method of communication.
- Employers will ensure that the work area is staffed with a person able to administer first aid.
- Employers will ensure all designated individuals are trained and ready to respond to emergencies.
- Communication methods will be checked at the beginning of each shift. **[*Note:*** *This is an optional best practice.*]

EMERGENCY RESPONSE PROCEDURE:

- If employees show signs of heat illness, they will be monitored and shall not be left alone or sent home without being offered first aid or emergency medical services.
- If an employee reports symptoms of heat illness or a supervisor or coworker sees evidence of the symptoms, the supervisor will take **immediate action** appropriate to the signs. **[If the supervisor will summon someone more experienced in first aid, include this here.]**
- If symptoms indicate **severe** heat illness, the employer will activate emergency response procedures.
- **[Insert information about who will respond to emergencies.]**
- **[If employees will need to be transported to a place where they can be reached by emergency personnel, insert information about how/where they will be transported.]**
- **[If mobile crews are used, describe how their location will be communicated to emergency responders, e.g., with maps.]**

Heat Illness Detection and Response

Your body has two main processes to maintain a stable 98.6° F (37° C) body temperature: blood circulation closer to the skin's surface and sweating. **Heat illness refers to severe and potentially life-threatening medical conditions that happen when the body cannot cope with excessive heat.** Both

outdoor and indoor work environments may have hot conditions that can lead to one or more heat illnesses.

	Type of Heat Illness	Description	Symptoms
Mild	**Heat Rash**	Visible skin irritation, such as a cluster of blisters, is caused by excessive sweating and clogged pores during hot, humid weather.	• Clusters of red bumps on the skin • Often appears on the neck, upper chest, and skin folds
Moderate	**Heat Cramps**	Because sweating causes the body to lose salts, electrolytes, fluids, and minerals, painful muscle cramps may result.	• Muscle spasms or pain • Usually in legs, arms, or trunk
Moderate	**Heat Syncope**	In high-heat environments, the body compensates for how it circulates blood; insufficient oxygenated blood may reach the brain.	• Fainting • Dizziness
Severe	**Rhabdomyolysis / Rhabdo**	Associated with prolonged physical exertion and heat stress. Muscle breakdown happens when proteins and electrolytes, normally part of the muscle tissue, are released into the bloodstream. These substances may damage the heart, kidneys, or other organs.	• Muscle pain • Dark urine or reduced urine output • Weakness
Severe	**Heat Exhaustion**	This happens when the body has lost too much water, salt, and electrolytes. The person may have a combination of heat illnesses, excessive weakness, shallow breathing, and a weak pulse.	• Fatigue • Irritability • Thirst • Nausea • Dizziness or lightheadedness • Heavy sweating • Elevated body temperature or fast heart rate
Severe	**Acute Kidney Injury**	Kidneys may become damaged when inadequate blood flow or rhabdomyolysis affects kidney muscle tissue. If undiagnosed, it may lead to kidney failure.	• Diagnosed by elevated creatinine levels in the blood • Reduced urine output
Deadly	**Heatstroke**	**THIS IS A LIFE-THREATENING CONDITION. It requires IMMEDIATE emergency medical care.** If a person's body temperature rises too quickly, there is the potential for severe damage to the brain, muscles, and vital organs and death.	• Confusion • Slurred speech • Unconsciousness • Seizures • Heavy sweating or hot, dry skin • Very high body temperature • Rapid heart rate

Other Heat Controls

[Insert information about engineering controls in place]. *Examples of controls that may be appropriate include:*

- *Ventilation that cools and moves the air.*
- *Reflective screens or shields installed between the radiant heat source and the employee.*
- *Insulation for hot indoor surfaces.*

CLOTHING AND PPE:

[***Note:*** *Please alter this section if the work has specific clothing requirements or restrictions*.]

- Employees should choose reflective, light-colored, lightweight, loose-fitting, and breathable clothing.
- Employee clothing should cover the exposed parts of the body.
- In direct sun, a hat with a wide brim or bill may be helpful.
- The organization shall provide **[insert any specialized cooling garments as applicable—** *e.g., ice vests, water-cooled garments, phase change liquid cooling vests, or cooling cloths made from special fabrics*].

MANAGING EMPLOYEE RISK FACTORS:

Be aware of how your health can affect your risk of heat stress. The following increases risk:

- Fever
- Gastrointestinal illnesses
- Heart disease
- Obesity
- Medications (amphetamines, diuretics/water pills, blood pressure antihypertensives, anticholinergics for COPD, and antihistamines for allergies)
- Diabetes
- Pregnancy
- High blood pressure
- Lower level of physical fitness

MANAGE RISK FACTORS:

- Maintain your health outside of work.
- Be aware of the effects of your medications.
- Drink adequate amounts of water.
- Eat light, cool meals during work shifts, and save heavy meals until after the shift.
- Do not skip meals: food helps replace electrolytes lost when sweating.
- Take breaks as needed.
- Do not consume alcohol before working in a hot environment.

[***Note:*** *While employees should be encouraged to discuss personal health risk factors with their healthcare providers, this information should be kept private and not discussed during training.]*

Appendix A: Summary of California Heat Illness Prevention Requirements

Item	California Requirement
Measurement to Use	Dry Bulb/Air Temperature
When Heat Illness Prevention Measures In Effect	When employees work outdoors
Acclimatization	Required for the first 14 days for new employees and employees returning to work after a prolonged absence. See below.
Heat Waves Refers to any day in which the predicted high temperature will be 80° F or higher AND at least 10° F higher than the average high daily temperature in the past five days.	• Cut work short or reschedule it. • Hold pre-shift meetings to review heat illness prevention procedures, the weather forecast, the importance of hydration, and cool-down rest breaks. • Institute a buddy system.
High Heat Procedures Only the following industries are required to implement high-heat procedures: (1) agriculture; (2) construction; (3) landscaping; (4) oil and gas extraction; and (5) transportation or delivery of agricultural products, construction materials, or other heavy materials, except for employment that consists of operating an air-conditioned vehicle and does not include loading or unloading.	Required when temperature equals or exceeds 95° F. • Ensure effective and regular communication methods by voice, observation, or electronic means so employees can contact their supervisor. • Remind employees about the importance of drinking water. • Ensure effective employee observation/monitoring by implementing one or more of the following: (1) supervisor/designee observation of 20 or fewer employees; (2) mandatory buddy system; (3) regular communication with the sole employee via radio or cell phone; or (4) other effective means of observation. • Designate one or more employees who will call emergency services, if necessary, and allow other employees to contact emergency services when designated employees are unavailable. • Hold pre-shift meetings to review high-heat procedures, hydration, and rest breaks. • Agricultural employees shall take a minimum 10-minute rest break every 2 hours.
Access to Shade	• Always available at any temperature and upon request. • Required when the temperature exceeds 80° F. • Must either be open to the air or provided with ventilation or cooling. • Must accommodate the number of employees on recovery or rest periods so they can sit in a normal posture without physically contacting others.
Access to Water	• Provide fresh, pure, suitably cool water to employees free of charge. • If the water isn't continually supplied, ensure each employee obtains 1 quart of water per hour.
System for Communicating	• Notify employees about Company's Heat Illness Prevention Plan *before* employees have exposure to the risk of heat illness. • Alert employees when heat illness procedures are in effect. • Designate who will ensure heat illness measures are properly executed. • Implement a buddy system to monitor employee health.

Item … Continued	California Requirement … Continued
Training Requirements – Employees It must be done annually before employees are exposed to heat illness risk.	• Environmental and personal risk factors that affect heat illnesses. • Added burden of heat load on the body caused by exertion, clothing, and PPE. • Employer's specific procedures around water, shade, rest breaks, and first aid. • Importance of frequent consumption of small quantities of water—up to 4 cups per hour. • Concept, methods, and importance of acclimatization. • Signs and appropriate responses for heat illnesses. • Importance of immediately reporting heat illness symptoms. • Ability for employees to report heat illness concerns without retaliation. • Emergency response procedures.
Training Requirements - Supervisors Must be done annually before managers oversee employees who have exposure to the risk of heat illness.	• All of the employee training requirements listed above. • Special procedures that supervisors need to follow for heat illness safety. • What to do if an employee shows signs of a heat illness. • How to monitor weather reports and respond to hot weather advisories.

ACCLIMATIZATION

- For the first 14 days on the job, the supervisor or Company designee will closely observe new employees and those newly assigned to work in a high-heat area.
- During a 2-week break-in period, the new employees' work intensity will be lessened. This will be accomplished by scheduling slower-paced work and, whenever possible, doing less physically demanding work during the hot parts of the day, with the heaviest work activities taking place during the cooler parts of the day (early morning or evening).
- Company supervisors will document steps to lessen new employees' workload intensity.

MONITORING TEMPERATURE — DRY BULB/AIR TEMPERATURE

California employers must monitor what's known as dry bulb/air temperature for employees who work outdoors. This is how cold or hot it is in your area. Generally, 80-100°+ F temperatures are concerning for heat illnesses, but lower temperatures may also be problematic, depending on employees' work clothing.

STATE-SPECIFIC RESOURCES

The Company will reference the following to ensure a compliant approach.

California Dial-A-Forecast

Eureka (707) 443-7062
Hanford (559) 584-8047
Los Angeles (805) 988-6610 (#1)
Sacramento (916) 979-3038
San Diego (619) 297-2107 (#1)
San Francisco (831) 656-1725 (#1)

FAQs
Heat Illness eTool
Cal/OSHA Heat Illness Prevention Website

Appendix B: Summary of Oregon Heat Illness Prevention Requirements

Item	Oregon Requirement
Measurement to Use	Heat Index
When Heat Illness Prevention Measures In Effect	The heat index is 80° F or higher indoors or outdoors.
Acclimatization	Follow National Institute for Occupational Safety and Health (NIOSH) or develop your own plan. See below.
High Heat Procedures	Required when engineering and/or administrative controls fail to reduce an employee's exposure to a heat index of less than 90° F. • Ensure effective and regular communication methods by voice, observation, or electronic means so employees can contact their supervisor. • Maintain regular communication with employees working alone or create a mandatory buddy system. • Ensure employees take their cooling rest breaks. • Designate and equip one or more employees who will call emergency services and allow others to contact emergency services when designated employees are unavailable. • When employees work in buildings without mechanical ventilation systems, the temperature and humidity must be measured at the same time and location where employees will be working to determine the current indoor heat index or, unless the building is designed or known to be affected by outdoor humidity (e.g., greenhouses), use NIOSH's Heat Safety Tool app to determine the outdoor heat index and assume it is the same inside. • The following rest break schedule will be implemented: (1) when the heat index is 90° F or greater, a 10-minute break is required once every two hours; (2) when the heat index is 95° F or greater, a 20-minute break is required every hour; (3) when the heat index is 100° F or greater, a 30-minute break is required every hour; and (4) when the heat index is 105° F or greater, a 40-minute break is required every hour. The break periods are calculated using only the time spent in the shade and when employees are not performing work other than "rest" or "light" work activities conducted in a temperature-controlled environment.
Access to Shade	Required when heat index exceeds 80° F • Must be open to the air or have mechanical ventilation for cooling. • Be located as close as practical to areas where employees are working. • Accommodate at least the number of employees on break and have room for them to sit.

Item … Continued	Oregon Requirement … Continued
Access to Water	Required when heat index equals or exceeds 80° F. • Make water immediately and readily available to employees at all times. • Provide enough water so each employee can drink 32 oz. per hour. • Keep drinking water cool (66-77° F) or cold (35-65° F). • Water electrolyte-replenishing drinks without caffeine are acceptable but can't replace all required fresh water.
Emergency Medical Plan	Required when heat index exceeds 80° F. • List procedures for responding to employees' signs and symptoms of possible heat illness. • Describe the use of first aid and when emergency response procedures must be implemented. • Identify emergency medical services. • Remove employees from duty and understand ways to reduce their body temperature effectively.
System for Communicating	Must occur in language and vocabulary readily understood by all employees, by voice, electronic, or other equally effective means, so that employees at the worksite can contact a supervisor at any time, when necessary. An electronic device, such as a cell phone, may be used if reception in the area is constant and reliable.
Training Requirements – Employees & Supervisors Must be done annually before new hires, employees, or supervisors have exposure to heat illness.	• Environmental and personal risk factors, including medications, alcohol use, and obesity, may limit an individual's tolerance to excessive heat. • Added burden of heat load on the body caused by exertion, clothing, and PPE. • Employer's responsibilities include providing water, daily heat index information, shade, rest breaks, reporting heat illness symptoms, and access to first aid. • How to adapt to working in a hot environment. • The main types of heat illnesses, signs, and symptoms. • Immediately reporting heat illness symptoms. • Frequent consumption of water, up to 32 oz. Per hour. • Ability to exercise heat illness rights without retaliation. • The most recent annual written or electronic training records, containing the name or identification of each employee trained, the training dates, and the instructor's name, must be maintained.

ACCLIMATIZATION SCHEDULE

Employee exposure time in hot environmental conditions should gradually increase over 7 to 14 days. The time required for non-physically fit individuals to develop acclimatization is about 50% greater than for physically fit individuals.

Day	New Workers	Existing Workers With Prior Heat Experience
1st Day	No more than 20% of the usual work duration in the hot environment	No more than 50% of the usual work duration in the hot environment
2nd Day	No more than 40% of the usual work duration in the hot environment	No more than 60% of the usual work duration in the hot environment
3rd Day	No more than 60% of the usual work duration in the hot environment	No more than 80% of the usual work duration in the hot environment
4th Day	No more than 80% of the usual work duration in the hot environment	No more than 100% of the usual work duration in the hot environment
5th Day	No more than 100% of the usual work duration in the hot environment	

EXEMPTIONS

The following workplaces/operations are exempt from the requirements of this standard: (1) Incidental heat exposures where an employee is not required to work for more than 15 minutes in any 60 minutes; (2) Exposures to heat generated from the work process; (3) All emergency operations that are directly involved in the protection of life or property when employees are engaged in those operations; and (4) Buildings that have a mechanical ventilation system that keeps the heat index below 80° F.

Employees who perform either “rest” or “light” workloads are exempt from the requirements of this standard only when the heat index is less than 90° F. Examples of rest workloads include sitting or thinking. Light workloads include sitting with minimal hand and arm work; sewing; writing or drawing; driving a car; occasional or slow walking; stooping, crouching, or kneeling; and standing watch.

Associated support activities for wildland firefighters, such as fire camp services and fire management, are only exempt from the acclimatization requirements.

Employees who work from home are subject only to the training and recordkeeping requirements.

STATE-SPECIFIC RESOURCES

The Company will reference the following to ensure a compliant approach.
Oregon OSHA Heat Stress Website

Fact Sheet Key Requirements: Oregon OSHA’s Permanent Rules for Heat Illness Prevention

Appendix C: Summary of Washington Heat Illness Prevention Requirements

Item	Washington Requirement
Measurement to Use	Dry Bulb/Air Temperature
When Heat Illness Prevention Measures In Effect	At any time throughout the year when employees are exposed to outdoor heat at or above the following applicable temperatures: • 52° F = employees wearing nonbreathable clothes/PPE • 80° F = employees wearing any other clothing type Washington's outdoor heat exposure standard does not apply to employees who are not required to work outdoors for more than 15 minutes in any 60-minute period.
Acclimatization	Required for the first 14 days for new employees and employees returning to work after a prolonged absence. During this period, employees will be observed by means of a mandatory buddy system or regular communication if working alone.
High Heat Procedures	Required when temperature equals or exceeds 90° F. • Provide mandatory cool-down rest periods, at least 10 minutes every 2 hours when temperatures are at or above 90º F. When temperatures exceed 100º F the mandatory cool-down period must be at least 15 minutes per hour. • Mandatory cool-down rest periods must be taken in an area that will allow the employee to cool their body temperature and must be paid unless it aligns with a mealtime that isn't required to be paid. • Ensure effective and regular communication methods by voice, observation, or electronic means so that employees can contact their supervisor. • Maintain regular communication with employees working alone or institute a buddy system where workers are teamed up and required to watch out for each other. • Ensure effective procedures for obtaining emergency medical services are defined and known to employees.
Access to Shade	• Provide and maintain at least 1 shade area available at all times while employees are working. • Ensure the shaded area is large enough to comfortably fit all employees in a rest or meal period. The employees should be able to rest in a normal body posture while still being fully covered by the shaded area. • Must be open to the air or have ventilation or cooling, and not adjoining a radiant heat source.
Access to Water	Provide enough cool drinking water for each employee to have at least 1 quart of water per hour.
System of Communicating	Must occur in language and vocabulary readily understood by all employees *before* they are exposed to high heat conditions. There must be regular communication with employees working alone, such as by radio or cell phone.

MONITORING TEMPERATURE — DRY BULB/AIR TEMPERATURE

Washington employers must monitor what's known as dry bulb/air temperature for employees who work outdoors. This is simply how cold or hot it is in your area. Generally, 80-100°+ temperatures are concerning for heat illnesses, but lower temperatures may also be problematic for employees, depending on the clothing they wear at work.

Appendix D: Summary of Minnesota Heat Stress Requirements

Item	Minnesota Requirement
Measurement to Use	Wet Bulb Globe Temperature (WBGT)
Permissible Heat Exposure Limits	Fully clothed, acclimatized workers shall not be exposed to indoor environmental heat conditions in excess of the following 2-hour time-weighted average permissible heat exposure limits: • Heavy work = 77° F WBGT • Moderate work = 80° F WBGT • Light work = 86° F WBGT Examples of heavy work include heavy lifting, pushing, and shovel work. Examples of moderate work include walking with moderate lifting and pushing. Examples of light work include sitting or standing and performing light hand or arm work.
Acclimatization	No state procedure. Refer to the Heat Illness Prevention Plan for guidance.
High Heat Procedures	No state procedure. Refer to the Heat Illness Prevention Plan for guidance.
Controls	Engineering, administrative, and/or PPE control measures shall be implemented to prevent employees from exceeding the 2-hour time-weighted average permissible heat exposure limits.
Access to Water	No state procedure. Refer to the Heat Illness Prevention Plan for guidance.
Training Requirements – Employees & Supervisors Employees must be trained before being exposed to the risk of heat illness, and training updates must be provided at least annually after that.	• Two-hour time-weighted average permissible heat exposure limits specific to the workload. • The effects of heat exposure. • The known symptoms of such effects. • Appropriate emergency protocols. • A written copy of the above information shall be readily accessible in the area or areas in which employees are exposed to the risk of heat illness. • Training records must be retained for three years and made available upon request for review by employees and representatives of the Occupational Safety and Health Division. Specifically, the records must include the following: (1) the dates of the training; (2) the name, title, and qualifications of the person who conducted the training; (3) the names and job titles of those who completed the training; and (4) a summary of the information included in the training session.

MONITORING TEMPERATURE — WET BULB GLOBE TEMPERATURE

Wet Bulb Globe Temperature (WBGT) is a perceived or apparent temperature. It evaluates heat-related stress on the body.

WBGT factors in temperature, humidity, wind speed, sun angle, cloud cover, heat, and the expected stress the body will experience. The three variables that are part of WBGT calculations are:

- T_{db} = Dry bulb thermometer measurement of air temperature in Celsius.
- T_g = Globe thermometer temperature (in Celsius). It's a measurement of heat from radiant energy sources, like the sun or a furnace, without the effects of the light or heat source itself. It's measured with a thermometer placed in a special black bulb apparatus.
- T_{nwb} = Wet bulb temperature (in Celsius). It accounts for humidity and air movement.

The formulas for calculating WBGT are as follows:

For outdoor use in sunshine: $(0.7 * T_{nwb}) + (0.2 * T_g) + (0.1 * T_{db})$

For indoor measurements or outdoor measurements in the shade: $(0.7 * T_{nwb}) + (0.3 * T_g)$

TIP: Since these formulas can get complicated, use a high-quality WBGT heat index monitor at the facility or site location. The monitor should be placed on a flat surface at about chest height. The chosen surface should be taken at approximately the same temperature as the air.

The higher the WBGT, the faster the body becomes heat stressed. If WBGT is between 80-89, the body will stress within 20-45 minutes of working in direct sunlight. At 90 or more, the body becomes stressed in only 15 minutes. The U.S. National Weather Service has a nationwide WBGT forecast map.

STATE-SPECIFIC RESOURCES

The Company will reference the following to ensure a compliant approach.

MNOSHA Compliance: Heat Stress