

Note: Terms in *bold and italics* throughout this policy are defined below.

PURPOSE:

To reduce the risk of heat-related illnesses resulting from exposure to high temperatures in the work environment and to ensure compliance with Oregon Occupational Safety and Health Administration (OSHA) regulations.

SCOPE:

This regulation applies to employees who may be required to work in outdoor environments with elevated temperatures.

It does not apply when employees are engaged in emergency operations directly involving the protection of life or property or the restoration of essential services, such as evacuation, rescue, medical response, structural firefighting, law enforcement, utilities, and communications

POLICY:

The City complies with OAR 437-002-0156 (Heat Illness Prevention Standard), which requires employers to implement measures to prevent heat-related illnesses when employees perform work for more than 15 minutes in any 60-minute period where the *heat index* equals or exceeds 80°F.

Employees will be trained to recognize the signs and symptoms of heat illness in themselves and in others. Leadership will implement procedures to prevent heat-related illnesses. Employees experiencing symptoms must notify leadership and seek medical care. The Risk Manager will perform an annual review to evaluate the effectiveness of this Policy.

PROCEDURE:

- 1. <u>Responsibilities</u>
 - 1.1. Managers and Supervisors:
 - 1.1.1. Identify jobs with potential heat stress risks and develop job-specific safe work procedures.
 - 1.1.2. Inform workers and supervisors when work involves potential heat stress risk.

- 1.1.3. Develop a process to ensure supervisors and workers are advised of:
 - 1.1.3.1. Factors that can increase susceptibility to heat stress.
 - 1.1.3.2. Warning signs and symptoms of heat stress conditions.
 - 1.1.3.3. Measures to protect against heat stress.
- 1.1.4. Post heat stress information in employee break rooms, locker rooms, and other shared areas.
- 1.1.5. Implement safe work procedures, including:
 - 1.1.5.1. Allowing a gradual acclimatization period for new or non-acclimatized workers.
 - 1.1.5.2. Determining whether additional rest breaks are needed based on workload and conditions.
 - 1.1.5.3. Rescheduling work to cooler times of day when feasible.
 - 1.1.5.4. Stopping work if control measures are inadequate and the risk of heat illness is high.
 - 1.1.5.5. Having and communicating an emergency response plan.
 - 1.1.5.6. Implementing additional administrative and engineering controls where feasible.
- 1.2. Employees:
 - 1.2.1. Attend heat hazard training.
 - 1.2.2. Be familiar with heat hazards, predisposing factors, and preventive measures.
 - 1.2.3. Follow safe work practices to prevent heat-related illness.
 - 1.2.4. Follow supervisor-advised rest break schedules.
 - 1.2.5. Inform their supervisor if changing conditions.
 - 1.2.6. Notify their supervisor if they or coworkers exhibit symptoms.
 - 1.2.7. Seek medical treatment if needed.

2. Heat Illness Prevention Plan

- 2.1. <u>Heat Index Monitoring:</u>
 - 2.1.1. Before and periodically during each shift, leadership will determine the heat index level using one of the following methods and communicate potential exposure risks:
- 2.2. <u>NIOSH Heat Index Apps:</u>

2.2.1. Apple: NOISH Heat Safety Tool - Apple

2.2.2. Android: NOISH Heat Safety Tool - Android

2.3. *Direct Testing:*

- 2.3.1. Departments may use direct-reading instruments if:
 - 2.3.1.1. The device does not underestimate exposures, or the department accounts for known error margins.
 - 2.3.1.2. The monitor is calibrated, maintained, and used per the manufacturer's instructions.

2.4. <u>Weather Service Forecasts:</u>

2.4.1. Departments may review a weather service that provide heat index forecast for the location.

3. <u>Heat Index ≥ 80°F – Exposure Control and Response</u>

3.1. Shade:

- 3.1.1. Provide natural or artificial shade with mechanical ventilation (if enclosed).
- 3.1.2. Ensure shade accommodates all employees on break.
- 3.1.3. Locate shade as close as possible to the worksite.
- 3.1.4. Shade must prevent direct sunlight penetration and be cool enough to have a noticeable cooling effect.
- 3.1.5. Vehicles with operational air conditioning may qualify as shade.
- 3.1.6. If shade cannot be provided (e.g., windstorms), alternative cooling measures will be implemented.
- 3.2. <u>Drinking Water:</u>
 - 3.2.1. Supply cool/cold water (35–77°F) at no cost.
 - 3.2.2. Provide sufficient water for employees to consume up to 32 oz. per hour.
 - 3.2.3. Electrolyte-replenishing drinks are allowed but must be caffeine-free.
 - 3.2.4. Allow employees ample time to drink.
- 3.3. <u>Acclimatization Plan:</u>

- 3.3.1. Acclimatization is the process in which the body adjusts to increased heat exposure and this takes place over time. According to federal OSHA, most workplace-related heat-related fatalities occur within the first three days of employment.
- 3.3.2. The City will by default implement the acclimatization plan below.

3.3.4. Acclimatization Plan for New Employees.

- 3.3.3. Departments may elect to develop and implement more detailed plans as long as they comply with OR-OSHA's heat rule.
 - Percent of Maximum Hours (8-hr Day) Day Time in Heat 1st 20% 1.6 hours 2nd 40% 3.2 hours 3rd 60% 5 hours 4th 80% 6.5 hours 5th 100% 8 hours
- 3.3.5. For Previously Exposed Employees (worked within the last 7 days or absence \leq 3 days):

Day	Percent of Time in Heat (8-hr day)
1st	50%
2nd	60%
3rd	80%
4th	100%

3.4. Emergency Medical Plan:

- 3.4.1. Apply first aid per the Heat Illnesses and Injuries section.
- 3.4.2. Call 911 for severe symptoms (heat exhaustion/heat stroke).
- 3.4.3. Transport affected employees to a location accessible by emergency services if needed.

4. <u>Heat Index ≥ 90°F – Additional Controls</u>

- 4.1. <u>Cool Down/Rest Periods:</u>
 - 4.1.1. The City will require that each employee take mandatory cool down/rest periods in the shade per the schedule below, regardless of length of shift. A department

Heat index (°F)	Rest Break Durations
90+	10 mins every 2 hours
95+	20 mins every hour
100+	30 minutes every hour
105+	40 minutes every hour

may alternately elect one of the other sample rest break schedules as proposed by OR-OSHA.

4.2. Active Heat Illness Monitoring

- 4.2.1. Observe employees for alertness and symptoms using:
 - 4.2.1.1. Buddy System
 - 4.2.1.2. Direct observation
 - 4.2.1.3. Regular communication (radio/cellphone) when employees are alone.

4.3. Communication

- 4.3.1. Maintain effective communication so leadership or EMS can be contacted.
- 4.3.2. Designate at least one employee per worksite to call EMS.
- 4.3.3. All employees may call EMS if the designated person is unavailable.

5. <u>Heat-related Illnesses and Emergencies</u>

5.1. If an employee shows signs of a heat-related illness:

- 5.1.1. Stop work immediately.
- 5.1.2. Heatstroke is a medical emergency call 911
- 5.1.3. Follow the treatment guidelines in the table below.
- 5.1.4. Report all incidents using the Incident Analysis Form (IAF) on Springboard.

Heat Illness	Causes	Symptoms	Treatment	Prevention
Heat rash	Hot, humid environments Plugged sweat glands	Red, bumpy and itchy rash Usually appears on the neck, upper chest, groin, under the breasts and in elbow creases	Change into dry clothes Avoid hot, humid environments Do not use ointments and creams	Wash skin regularly to keep it clean and dry
Heat cramps	Heavy sweating from strenuous activity that drains a person's body of fluid and salt	Painful cramps in commonly worked muscles, like the arms, legs or stomach	Move to a cool, shaded area Loosen clothing and stretch affected	Reduce activity levels Avoid heat Drink fluids

Heat Illness	Causes	Symptoms	Treatment	Prevention
		Cramps come on suddenly, either at work or later in the day Muscle spasms or pain Note: Heat cramps can be a symptom of more serious heat- induced illnesses	muscles Drink cool, salted water or an electrolyte- replacement beverage Seek medical aid if cramps are severe or don't go away after fluid replenishment	regularly Use the buddy system to help spot signs of heat illnesses
Heat exhaustion	Fluid loss and inadequate salt and water intake The body's cooling system begins to break down	Heavy sweating Cool, moist skin with body temperatures over 100.4 F Weak or fast pulse and normal or low blood pressure Weakness, nausea and vomiting Thirst alongside panting or rapid breathing Blurred vision Headache, light headedness or dizziness Irritability	Seek medical attention immediately Move the person to a cool, shaded area Loosen or remove clothing Provide cool water, and never leave the person alone Cool the person with cold compresses, ice and ice packs	Reduce activity levels Avoid heat Drink fluids regularly Use the buddy system to help spot signs of heat illnesses
Heatstroke	A classic heatstroke occurs in older adults and in persons with chronic illnesses; it occurs when a person's body has used up its water and salt reserves Exertion heatstroke generally occurs when a person engages in strenuous activity for long periods of time in the	Body temperatures increase over 104 F Weakness Confusion Hot, dry and red skin Profuse sweating Fast pulse Headache or dizziness Fainting or convulsions	Call an ambulance, as heatstroke can kill quickly Place worker in shady, cool area Remove excess clothing Fan the victim Spray the victim with cool water, apply ice packs, cool compresses or ice if available Provide cool water	Reduce activity levels Avoid heat Drink fluids regularly Use the buddy system to help spot signs of heat illnesses

Heat Illness	Causes	Symptoms	Treatment	Prevention
	heat; the body's cooling system is exhausted and		and never leave the person alone	
	excess heat			

6. <u>Training</u>

6.1. <u>Required Training Topics:</u>

- 6.1.1. Types and symptoms of heat illness.
- 6.1.2. Personal risk factors and exposure controls.
- 6.1.3. Protective clothing and equipment use.
- 6.1.4. Environmental risk factor control.
- 6.1.5. City procedures for managing heat risks.
- 6.1.6. First aid and emergency response.
- 6.1.7. Reporting procedures for heat illness incidents.
- 6.2. Leadership must document employee training

DEFINITIONS:

- 1. "*Heat Index*" is the perceived temperature based on air temperature and humidity.
- 2. *"NIOSH"* is the National Institute for Occupational Safety and Health of the U.S. Centers for Disease Control and Prevention.
- 3. "Sensitive Groups" are Individuals more vulnerable to heat stress, including:
 - 3.1. Physical fitness and obesity.
 - 3.2. Age over 40 years
 - 3.3. Pre-existing medical conditions such as: heart problems, diabetes, kidney problems, and pregnancy.
 - 3.4. Medications such as: antihistamines, beta blockers, diuretics, calcium channel blockers.
 - 3.5. Alcohol or illegal drug use
 - 3.6. Previous heatstroke

RESOURCES:

- 1. OAR 437-002-0156 Heat Illness Prevention Standard
- 2. NIOSH Heat Index App
 - 2.1. Apple: <u>https://apps.apple.com/us/app/osha-niosh-heat-safety-tool/id1239425102</u>
 - 2.2. Android: <u>https://play.google.com/store/apps/details?id=erg.com.nioshheatindex</u>
- 3. OR-OSHA Heat Stress Page and associated trainings, sample plans and other resources.