SPRINGFIELD OREGON	*Administrative Regulation* **Heat Illness Prevention**	Policy#	9.5
		Effective:	06/27/2022
		Revised:	N/A
		Owner:	Human Resources

Purpose:

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

Scope:

Applies to employees that may be required to work in outdoor environments with elevated temperatures. Does not apply when employees are engaged in emergency operations that are directly involved in the protection of life or property, or the restoration of essential services, such as evacuation, rescue, medical, structural firefighting, law enforcement, utilities, and communications.

Policy:

It is the policy of the City of Springfield to comply 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 a 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, as well as in other employees. Leadership will implement procedures to prevent heat-related illnesses. Employees experiencing symptoms must inform leadership and obtain medical care. The Risk manager will perform an annual review to monitor the effectiveness of this policy.

Procedure:

1. Responsibilities

1.1. *Managers and Supervisors:*

1.1.1. Identify jobs with a potential risk of heat stress and develop job-specific safe work procedures to manage this hazard.

1.1.2. Inform workers and their supervisors when their work involves potential risk of heat stress.

1.1.3. Develop a process to ensure supervisors and workers are advised of the following:

1.1.3.1. Factors that can predispose them to heat stress

1.1.3.2. Warning signs and symptoms of heat stress conditions

1.1.3.3. Measures to be taken to protect against heat stress

1.1.4. Post information on heat stress in the workplaces of employees potentially exposed to this hazard in breakroom, locker rooms and other shared areas.

1.1.5. Implement safe work procedures to prevent heat-induced illness including:

1.1.5.1. Allowing for a gradual period of acclimatization to work in hot environments for new and other non-acclimatized workers.

1.1.5.2. Determining if any additional rest breaks that may be required as a result of workload and local conditions.

1.1.5.3. Rescheduling work on hot days to cooler times of the day when feasible.

1.1.5.4. Stopping work if essential control methods are inadequate or unavailable when the risk of heat illness is very high.

1.1.5.5. Having an emergency plan in place and communicating it to both supervisors and employees.

1.1.5.6. Implementing additional administrative and engineering control measures where feasible.

1.2. *Employees:*

1.2.1. Attend training on heat hazards.

1.2.2. Be familiar with heat hazards, predisposing factors and preventative measures.

1.2.3. Follow safe work practices established to prevent heat-induced illness.

1.2.4. Follow recommended schedule of rest breaks, as advised by supervisors.

1.2.5. Inform their supervisor if conditions are changing.

1.2.6. Inform their supervisor if they or coworkers are suffering from any symptoms.

1.2.7. Seek medical treatment if needed.

2. Heat Illness Prevention Plan

2.1. Before, and periodically during each shift, leadership will use one of the following sources to determine the heat index level using one of the methods below and communicate employees' potential exposure to heat related illnesses:

2.1.1. NIOSH Heat Index Apps:

2.1.1.1. Apple: https://apps.apple.com/us/app/osha-niosh-heat-safety-tool/id1239425102

2.1.1.2. Android:https://play.google.com/store/apps/details?id=erg.com.nioshheatindex

2.1.2. Direct Testing: The department may elect to test heat index levels using a direct reading instrument if they comply with the following:

2.1.2.1. The monitor does not underestimate employee exposures to heat; or the department has obtained information on the possible error of the monitor from the manufacturer or other published literature and has accounted for the error of the monitor when determining heat index measurements.

2.1.2.2. The department shall ensure that the monitor it uses is calibrated, maintained, and used in accordance with the manufacturer's instructions.

2.1.3. Review a weather service that has a heat index forecast for the employee work location.

3. Heat Index 80 °F - Exposure Control and Response Plan

3.1. *Shade:*

3.1.1. The City will provide natural or artificial shade.

3.1.2. It must be in open air or include mechanical ventilation.

3.1.3. The amount of shade needs to accommodate the number of sitting employees on rest/break periods and meal periods.

3.1.4. Shade must be located as close as possible to the work site.

3.1.5. Shade must be sufficient enough that light does not penetrate the canopy where objects or people cast a shadow.

3.1.6. Shade is not adequate when temperatures are high enough that it no longer has a cooling effect.

3.1.6.1. Vehicles may provide sufficient shade as long as there is working air conditioning (AC).

3.1.6.2. When the City cannot provide shade due to safety (ex. during a windstorm), the City will implement alternative cooling measures.

3.2. *Drinking Water:*

3.2.1. The City will supply cool/cold drinking water (between 35-77 degrees) at no cost to employees.

3.2.2. The City will supply enough water for employees to consume up to 32 oz. per hour.

3.2.3. Water can be electrolyte replenishing; however it cannot contain caffeine.

3.2.4. Employees must be given ample time to drink water.

3.3. *Acclimatization Plan*:

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.

3.3.3. Departments may elect to develop and implement more detailed plans as long as they comply with OR-OSHA's heat rule.

3.3.4. Acclimatization Plan for New Employees.

Day of work	Percent of time working in the heat	Hour distribution based upon an 8-hr workday.
1st	20%	On the first day of work, employees will work no more than two hours in excessive heat (equal to or above a Heat Index of 80 °F). Employees are/may be allowed to break this into two, 1-hour periods.
2nd	40%	Employees will work no more than 3.2 hours in excessive heat.
3rd	60%	Employees will work no more than 5 hours in excessive heat
4th	80%	Employees will work no more than 6.5 hours in excessive heat
5th	100%	Employees may work the entire shift in excessive heat

3.3.5. Acclimatization Plan for employees with previous experience with the job. (i.e., have worked the past seven days or returning from an absence of three days or less).

Day of work	Percent of time working in the heat (Based upon an 8-hr work day)
1st	50
2nd	60
3rd	80
4th	100

3.4. *Emergency Medical Plan:*

3.4.1. If a supervisor observes or an employee reports a heat illness, employees are to apply first aid per the Heat related Illnesses and Injuries section below.

3.4.2. If symptoms are severe or match those of heat exhaustion or heat stroke, emergency medical services should be contacted by dialing 911.

3.4.3. Transport employees to a place where they can be reached by an emergency provider if necessary.

4. Heat Index 90 °F- Exposure Control and Response Plan

4.1. *Cool Down/Rest Periods:*

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

Heat index temperature (°F)	Rest break durations
90 or greater	10 minutes every two hours
95 or greater	20 minutes every hour
100 or greater	30 minutes every hour

105 or greater	40 minutes every hour

4.2. *Active Heat Illness Monitoring*

4.2.1. Employees must be observed for alertness and signs of heat illness using one of the following:

4.2.1.1. Buddy System,

4.2.1.2. Regular direct observation by leadership, or

4.2.1.3. Regular communication through radio/cellphone when employees are alone.

4.3. *Communication*

4.3.1. Effective communication must be maintained so department leadership and or EMS can be contacted.

4.3.2. At least one employee must be designated on each worksite as authorized to call emergency medical services.

4.3.3. Other employees are authorized to call if designated employee is unavailable.

5. Heat-related Illnesses and Emergencies

5.1. If an employee reports an illness or signs of a heat-related illness are observed in an employee, all work shall stop immediately. Heatstroke is a medical emergency. Emergency personnel should be contacted immediately if an employee is showing signs of heatstroke. If an employee is believed to be experiencing heat-related symptoms, The table below provides a list of recommended actions. These recommended actions should only be used as a guide to respond appropriately to known or reported symptoms. Employees should report all cases of heat-related symptoms noted in Table 1.1 to their supervisor and via the Incident Analysis Form (IAF) found 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 Illness	Causes	Symptoms	Treatment	Prevention
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 ◦ 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	◦ Move to a cool, shaded area ◦ Loosen clothing and stretch affected 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	◦ Reduce activity levels ◦ Avoid heat ◦ Drink fluids 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 heat; the body's cooling system is exhausted and cannot get rid of excess heat	◦ 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 and never leave the person alone	◦ Reduce activity levels ◦ Avoid heat ◦ Drink fluids regularly ◦ Use the buddy system to help spot signs of heat illnesses

6. <u>Training</u>

6.1. All affected employees and supervisors of affected employees must receive training on the following topics:

6.1.1. The different types of heat illness and the common signs and symptoms of heat illness.

6.1.2. Procedures for identifying, evaluating and controlling exposure to personal risk factors for heat illness.

6.1.3. The use of protective clothing and equipment to prevent heat-induced illnesses.

6.1.4. Procedures for identifying, evaluating and controlling exposure to environmental risk factors for heat illness.

6.1.5. Measures the City may utilize to manage heat.

6.1.6. Emergency response and first-aid procedures for heat-induced incidents.

6.1.7. Reporting procedures for heat illness incidents.

6.2. Leadership will document which employees have received the training.

Definitions:

1. *"Heat Index"* (apparent temperature) is what the temperature feels like to the human body when relative humidity is combined with the ambient air temperature.

2. *"NIOSH"* is the National Institute for Occupational Safety and Health of the U.S. Centers for Disease Control and Prevention.

3. *"SENSITIVE GROUPS"* include people who may be more sensitive than others to heat stress and may require special precautions. These include:
    a. Physical fitness and obesity.
    b. Age over 40 years
    c. Pre-existing medical conditions such as: heart problems, diabetes, kidney problems, and pregnancy.
    d. Medications such as: antihistamines, beta blockers, diuretics, calcium channel blockers.
    e. Alcohol or illegal drug use
    f. Previous heatstroke

Resources:

1. OAR 437-002-0156 Heat Illness Prevention Standard

2. NIOSH Heat Index App
   - Apple: https://apps.apple.com/us/app/osha-niosh-heat-safety-tool/id1239425102
   - Android: https://play.google.com/store/apps/details?id=erg.com.nioshheatindex

3. OR-OSHA Heat Stress Page and associated trainings, sample plans and other resources.