

Policies



Metro

600 NE Grand Ave.
Portland, OR 97232-2736

Subject	Heat illness prevention
Section	Emergency Management, Capital Asset Management
Approved by	Marissa Madrigal, Chief Operating Officer
Approved on	Dec. 8, 2022
Replaces	Heat illness prevention policy, approved June. 24, 2022

POLICY PURPOSE

This policy provides standards and guidance for protecting employee safety and health when the indoor or outdoor heat index equals or exceeds 80 degrees F. This policy meets or exceeds requirements outlined in OAR 437-002-0156, Heat Illness Prevention.

APPLICABLE TO

All Metro employees, volunteers and interns working indoors or outdoors at a Metro facility or site. Where the provisions of an applicable collective bargaining agreement directly conflict with this policy, the provisions of that agreement will prevail.

Exemptions

- Incidental heat exposures where an employee is not required to perform work activities for more than 15 minutes in any sixty-minute period.
- Exposures to heat generated from the work process – such as what occurs in bakeries - are not subject to this policy.
- Emergency operations that are directly involved in the protection of life or property, or the restoration of essential services when individuals are engaged in those operations.
- Buildings and structures that have mechanical ventilation systems that keep the heat index below 80 degrees F.

Partial exemptions

- Employees who work from home are subject only to the training requirements of this policy.

DEFINITIONS

Acclimatization: short-term, temporary adaptation or adjustment of the body in response to a change in its working environment, including changes in temperature such as heat or cold.

Drinking water: Potable water that is suitable to drink and that is cool (66°F - 77°F) or cold (35°F - 65°F).

Heat illnesses: medical conditions resulting from the body's inability to cope with a particular heat load, and includes heat cramps, heat exhaustion, heat syncope and heat stroke.

Heat index (or apparent temperature): what the temperature feels like to the human body when relative humidity is combined with the air temperature. The heat index is calculated using equations published by the National Oceanic and Atmospheric Administration's National Weather Service.

Heat wave: a prolonged period of abnormally hot weather.

Relative humidity: the amount of water vapor present in air expressed as a percentage of the amount needed for saturation at the same temperature.

Shade: blockage of direct sunlight is shade. One indicator that blockage is sufficient is when objects do not cast a shadow in the area of blocked sunlight. Shade is not sufficient when heat in the area of shade defeats the purpose of shade, which is to allow the body to cool. For example, a car sitting in the sun does not provide acceptable shade to a person inside it, unless the car is running with working air conditioning.

Workload during extreme heat is defined as:

- Light workload: regularly sitting or standing, very little lifting or physical labor.
- Medium workload: regular walking, light lifting or other physical labor.
- Heavy workload: Fast paced walking, heavy lifting and other physical labor.

PROCEDURES

Metro facility and venue supervisors and managers must ensure the implementation of the following procedures at their worksite(s):

1. Monitoring the weather

Each day Supervisors will review weather forecasts for the following workday to allow for adjustments to schedules and assure the ability to implement the requirements of this policy if needed.

Prior to the start of each shift/regularly scheduled workday, forecasted temperatures and humidity should be compared to the Heat Index and precautions adjusted accordingly.

During each work shift, supervisors must designate personnel to monitor the temperature and humidity for changes that may require work adjustments. Personnel can utilize the OSHA-NIOSH Heat Safety Tool App to obtain conditions for their geographical area (See Appendix A).

Personnel designated to monitor heat and humidity must report to the Director any significant changes in temperature or humidity that would impact employees working in the heat.

2. Emergency medical plan

Metro locations are required to develop an emergency medical plan to ensure the rapid provision of medical services to employees with major illnesses and injuries, and ensure services will be available in an emergency. Personnel working at locations with an existing emergency plan should follow the emergency notification guidelines established for that site.

Emergency medical services

If it is determined that medical services are required, locations with designated 911 services and access to emergency response services with Emergency Medical Technicians (EMT) or physicians, should use those 911 services. Sites outside of 911 service areas must post the telephone number for the specific ambulance service at the work location.

If the work location is not in proximity to emergency medical services, or if site personnel will respond to workplace emergencies, the emergency medical plan shall consist of arrangements for:

- a. Communication: Two-way radio, telephone, or provision for emergency communication to contact the emergency medical services.
- b. Transportation: Availability of transportation to a point where an ambulance can be met or to the nearest suitable medical facility. Vehicles provided for this purpose must be available at all times, must have right-of-way over all Metro vehicles or equipment, and must be equipped so that due consideration can be given to the proper care and comfort of the injured employee.
- c. Qualified medical personnel at destination.
- d. All employees must be knowledgeable concerning the qualified first aid person(s), the first aid requirements, and emergency medical plan.

Heat emergency response actions

Supervisors must take immediate action appropriate to the severity of the illness. If a supervisor observes signs or an employee reports symptoms of heat illness, the employee must be relieved from duty and provided with a sufficient means to reduce body temperature. Examples include, but are not limited to: Cooling blankets, cooling vests, and fans.

Severe heat illness symptoms and response

The supervisor must immediately implement emergency response procedures if the signs or symptoms are indicators of severe heat illness, such as:

- decreased level of consciousness;
- staggering;
- vomiting;
- disorientation; and
- irrational behavior or convulsions.

An employee exhibiting signs or symptoms of heat illness must be monitored and must not be left alone or sent home without being offered onsite first aid and/or being provided with emergency medical services in accordance with the emergency response plan.

3. Heat preparedness

During a hot weather event, heat wave or heat spike, Supervisors should consider implementing the following corrective options including:

- Rescheduling heavy work to time of day or night with cooler temperatures;
- Providing extra breaks;
- Providing shade near where work is being performed;
- Providing drinking water; and
- Stopping work for the day where feasible.

Acclimatization: Adjust work tasks and/or workload

The body needs time to adapt when temperatures rise suddenly, and an employee risks heat illness by not taking it easy when a heat wave strikes or when starting a new job that exposes the employee to heat to which the employee's body has not yet adjusted.

Note: Acclimatization peaks in most people within seven to fourteen days of regular work for at least two hours per day in the heat. This time frame applies to fit individuals with no underlying medical conditions.

4. Required Actions

- a. Regardless of temperature, employees must have access to shade on request to prevent overheating.
- b. Metro facilities should utilize available mechanical ventilation and air filtration systems.
- c. Metro will take the following actions at its facilities when ambient temperatures meet or exceed Heat Index 80 degrees F for four (4) hours or more.
- d. Heat Index will be determined by the National Oceanic and Atmospheric Administration (NOAA) National Weather Service published Heat Index and communicated to facilities by emergency management. Heat Index will be determined by the closest government sensor to the Metro facility as measured by NOAA Heat Risk.

Heat Index 80 – 85 degrees

The following measures must be implemented at each worksite:

- a. Basic heat safety and planning are implemented, but operations may proceed as normal.

- b. Shade areas must be provided for workers regardless of workload. Shade must meet the following requirements:
- Consist of natural (trees) or artificial (structures such as tents/ umbrellas)
 - Not expose individuals to unsafe or unhealthy conditions
 - Does not deter or discourage access or use
 - Open air or have mechanical ventilation for cooling
 - Large enough to accommodate the number of employees on recovery or meal and rest periods
 - Located as close as practical to the work area
 - If available, indoor, air-conditioned spaces should be used instead of shaded areas for breaks and meals.
- c. Employees are encouraged to take at least 5-minute cool down breaks as they need them and at least once every 2 hours.
- d. Supervisors must ensure employees are provided an adequate supply of drinking water (32oz per employee/per hour).
- The supervisors or their designees will act as Water Monitor.
 - During a heat event, the Water Monitor will assess once an hour to see that all workers have access to drinking water.
 - Note: Drinking water packaged as a consumer product and electrolyte-replenishing beverages that do not contain caffeine (for example, sports drinks) are acceptable substitutes, but should not completely replace the required water supplies.

Heat Index 85 – 90 degrees

All the above precautions will be implemented, plus the following:

- a. Heavy workloads will be adjusted to 25% break time to 75% work time every hour.
- b. Supervisors must ensure that all employees take a minimum of 10-minute rest breaks in the shade or other air-conditioned space every 2 hours regardless of workload.
- c. Other cooling products such as misters, cooling scarves, ice packs, etc. should be available by worksite.
- d. Supervisors will review signs and symptoms of heat related illness and be prepared to act.
- e. Communication methods for reporting and monitoring signs and symptoms of heat illness will be activated. Monitoring and communication methods for employees can include:
- Radio or cell phone
 - Implementation of a mandatory buddy system
 - Other equally effective means of observation or communication
- f. Equip and designate one or more personnel to call for emergency services as part of their normal duties and will service this function during a heat event. See Heat Emergency Response Actions and Severe Heat Illness Symptoms below.

Heat Index 90 – 100 degrees

All the above precautions will be implemented, plus the following:

- a. Workers may take rest breaks in the shade or cooling areas as needed to avoid overheating in addition to the workload adjustments below.
 - Medium workload: 25% break time to 75% work time every hour
 - High workload: 50% break time to 50% work time every hour
- b. 32 ounces of cool or cold water will be available to all workers regardless of workload at minimum of once per hour.
- c. Employees will be monitored cautiously by a supervisor or their designee for any signs or symptoms of heat related illness.

Heat Index 100 – 110 degrees

All the above precautions will be implemented, plus the following:

- a. Workloads will be adjusted as follows:
- b. Supervisors must ensure that each employee takes a minimum 15-minute rest break in the shade or air-conditioned space every hour regardless of workload.
 - Light workload: 25% break time to 75% work time every hour
 - Medium workload: 50% break time to 50% work time every hour
 - High workload: 75% break time to 25% work time every hour
- c. Electrolyte drinks or foods containing salt will be available on request throughout the shift.
- d. All employees should review signs and symptoms of heat related illness and be prepared to act. Employees should monitor each other closely, using the buddy system, for signs or symptoms of heat related illness and act as appropriate.

Heat Index Greater than 110

All the above precautions will be implemented, plus the following workload adjustments:

- Light workload: 75% break time to 25% work time every hour
- Medium workload: modified or cancelled
- High workload: modified or cancelled

5. Heat illness prevention training

All employees and supervisors will receive heat illness prevention training at least annually before reasonably anticipated work in conditions with Heat Index temperature equal or in excess of 80 degrees F. Training topics include:

- Risk factors for heat illness;
- Provisions of this Heat Illness Prevention Plan;
- Concept, importance and methods of acclimatization;
- Importance of and how to report signs and symptoms of heat illness;

- Effects of non-occupational factors (medications, alcohol, etc.);
- Common signs and symptoms of the different types of heat-related illness;
- The employee's right to exercise their rights under this standard without fear of retaliation.

RESPONSIBILITIES

Employees

- All employees are responsible for protecting themselves from heat illnesses by following these guidelines for prevention and immediately reporting any signs or symptoms to their supervisor.
- Employees are required to participate in training as outlined in this policy.

Supervisors

- Ensure there is an emergency plan specific to the work location
- Ensure the implementation of this policy in the workplace

Department directors

- Ensure resources are available to implement this policy.

Safety and Risk Management Division

- Develop and maintain this policy.
- Develop training and ensure personnel are trained in accordance with this policy
- Audit Metro worksite adherence to this policy

REFERENCES

OAR 437-002-0156 –Heat Illness Prevention

OAR 437-002-0161 – Medical Services and First Aid

APPENDICES

Appendix A

OSHA-NIOSH Heat Safety Tool

NOAA's National Weather Service Heat Index

Appendix B

Potential best practices: Heat related illness

APPENDIX A

OSHA-NIOSH Heat Safety Tool

Smartphone app available for iOS and Android devices. View tool guidance and download applications from the CDC: <https://www.cdc.gov/niosh/topics/heatstress/heatapp.html>



OSHA-NIOSH Heat Safety Tool 12+

Centers For Disease Control and Prevention

#46 in Weather

★ ★ ★ ★ 2.7 • 88 Ratings

Free

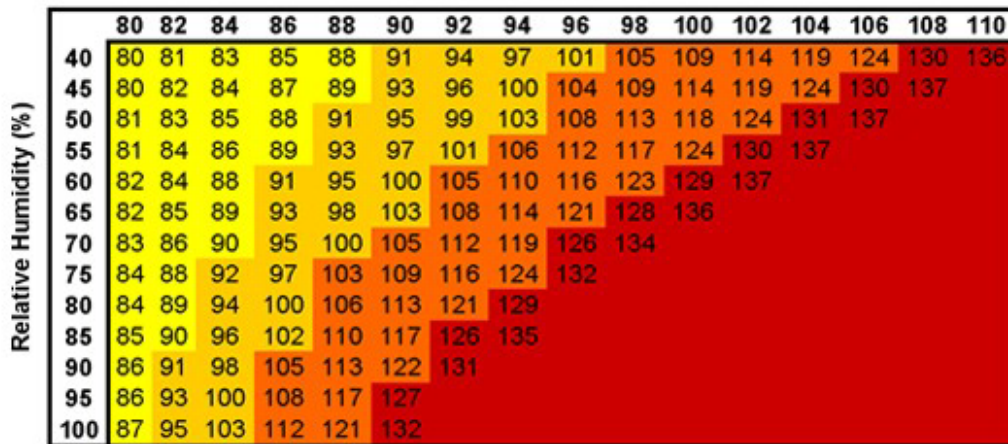
NOAA's National Weather Service Heat Index

Available at <https://www.weather.gov/safety/heat-index>

NOAA's National Weather Service

Heat Index

Temperature (°F)



Likelihood of Heat Disorders with Prolonged Exposure or Strenuous Activity

Caution
 Extreme Caution
 Danger
 Extreme Danger

APPENDIX B

Best practices: Preventing heat related illness

1. Containers that hold ice or otherwise keep drinking water and other beverages cold.
2. Chilled beverages such as electrolyte type sports drinks (discourage caffeine consumption).
3. Cold treats at break time such as popsicles, ice cream, or fruit with high water content (watermelon, grapes, oranges).
4. A cooling trailer with conditioned air and cold water to consume.
5. Cooling tents with mist, fan, and cold water to consume.
6. Heat-reflective work clothing such as light-colored, breathable uniforms.
7. Evaporative accessories (cooling neck wraps, head bands).
8. Cooling vests designed to safely use ice packs.
9. Ventilated PPE (high-visibility garments or powered air purifying respirators, if appropriate).
10. Cell phone text orders from supervisor to stop and rest in shade and drink.

*Source: Heat Illness Prevention Plan, Appendix A. Oregon OSHA
<https://osha.oregon.gov/OSHAPubs/pubform/heat-sample-program>.*

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