



## Proof of Training

Print name: \_\_\_\_\_ Signature: \_\_\_\_\_ Date: \_\_\_\_\_

### Heat Illness Prevention Program

Revised September 2018

#### Purpose

The purpose of this program is to ensure the protection of Unger employees and subcontractors from the hazards associated with Heat Illness.

#### Scope

This policy will apply to all work performed by employees and subcontractors including, but not limited to the following activities: construction, installation, demolition, remodeling, relocation, refurbishment, testing, and servicing or maintenance of equipment or machines and at other times Heat Illness Prevention is required.

#### Introduction

When employees work in hot conditions Unger Construction takes special precautions in order to prevent heat illness. Heat illness means a group of serious medical conditions resulting from the body's inability to cope with a particular heat load and can include heat cramps, heat exhaustion, heat syncope, and heat stroke. Heat illness can progress to heat stroke and be fatal, especially when emergency treatment is delayed.

Heat illness can occur year round, not just during the summer months. Working indoors in facilities that don't have a functioning HVAC system can produce temperatures that exceed levels of concern for heat stress. Wearing protective clothing like Tyveks suits or respirators can produce stresses on the body that are likely to cause concerns for heat stress regardless of the time of year.

There is no absolute cut-off below which work in heat is not a risk. With strenuous work at high relative humidity even work at an air temperature of 70 degrees Fahrenheit (F) can present a risk. In California employers need to take some actions to effectively reduce heat illness risk when temperatures approach 80 degrees F. At temperatures above 95 degrees F, especially with strenuous work, high heat risk reduction needs to be a major concern.

The heat illness prevention program shall be available to employees at the jobsite, via posting in the assembly area, the project supervisor's office or the safety shared drive.

### **Responsibilities**

#### Management (Board of Directors and Project Managers)

Management is responsible for ensuring that the materials (e.g., tools, equipment, personal protective equipment) and other resources (i.e., worker training materials) required to fully implement and maintain this program are readily available where and when they are required. Additionally,

management will monitor the effectiveness of the program, provide technical assistance as needed, and review the program bi-annually.

#### Program Manager

Dave Simpson is responsible for the development, documentation, training and administration of the program. This position carries the responsibility of insuring this program is adhered to and that proper reporting is executed.

#### Supervisors (Superintendents and Foreman)

Supervisors are responsible for ensuring that a task specific job hazard analysis (JHA), also known as a safe work plan, is developed. The JHA will select, implement and document the appropriate site-specific control measures as defined within this policy. Supervisors will direct the work in a manner that ensures the risk to workers is minimized, adequately controlled and that practices defined by this policy will be followed. Supervisors are responsible for ensuring Unger Construction employees and subcontractors are following expectations. Supervisors will be held accountable for enforcing the requirements of this program. Undesirable behavior will not resolve itself, therefore supervisors must be directly involved with modifying behaviors inconsistent with program expectations. Supervisors will be held accountable for enforcing Unger Construction's disciplinary program.

#### Workers (Employees and Subcontractors)

Unger Construction has high expectations and requires safety excellence for each employee, crew, project and for our entire company. Workers are required to follow the minimum procedures outlined in this program. Workers are responsible for knowing the hazards and the control measures established in the JHA. Workers are responsible for using the assigned PPE in an effective and safe manner. Workers are responsible for stopping unsafe acts and correcting unsafe conditions on the spot as soon as they are discovered. Any deviations from this program must be immediately brought to the attention of your supervisor. Workers that choose to conduct themselves in a manner that is inconsistent with these expectations will be held accountable for those decisions and may incur disciplinary actions.

#### Hazardous Material Survey

Unger Construction requires hazardous materials surveys before demolition or renovation work begins. The survey shall include all of the following: A visual inspection of a facility or a portion thereof for suspect materials, sampling and laboratory analysis of any suspect materials found for the presence of asbestos. The hazardous materials survey will also furnish a written report that includes: a description of the area(s) visually inspected, a detailed description of any suspect material sampled, the results of any laboratory analysis of suspect materials, the method of analysis, and the total amount of asbestos containing material. Typically a floor or roof plan is included with the report to reference the written information visually.

The person conducting the survey must be certified pursuant to OSHA and/or EPA regulations. The survey may be performed by a certified Site Surveillance Technician (SST) under the supervision of a licensed consultant. Note: The survey needs to be kept in a project file so that it can be accessed when working on future projects.

If lead or asbestos have been confirmed to be present employees and subcontractors must follow Unger Construction's Lead and/or Asbestos program. If hazards such as asbestos or lead will be disturbed during remediation, a properly licensed professional must perform the work and follow appropriate regulations.

### Job Hazard Assessment (Safe Work Plan)

Unger Construction utilizes JHA's as our means of hazard assessment and establishing a safe work plan. JHA's are performed by supervisors and/or workers. Our library of hazard assessments is maintained on the "S" drive. Before beginning a new task refer to the JHA library, generally speaking all scopes of our work are covered. For situations that have not yet been covered select one that is substantially similar and use it as a baseline. JHA's on the "S" drive are organized by work area and job description. JHA's include strategies for elimination, substitution, engineering and administrative controls. After applying all appropriate reduction and elimination technique, the remaining hazards will be analyzed and the proper PPE to reduce the hazards will be selected. PPE will be identified for hazards that are in the process of being reduced or eliminated and/or when hazard-reduction efforts are not 100% effective in eliminating the hazards.

For complex or moderate to high hazard tasks, tasks where an additional level of safety planning is needed, the safety director will perform the JHA with the supervisor and workers.

### Supervisor Training

Prior to supervising employees performing work that should reasonably be anticipated to result in exposure to the risk of heat illness effective training on the following topics shall be provided to the supervisor: The procedures the supervisor is to follow to implement the applicable provisions in this program. The procedures the supervisor is to follow when an employee exhibits symptoms consistent with possible heat illness, including emergency response procedures, How to monitor weather reports and how to respond to hot weather advisories.

### Training

Effective training in the following topics shall be provided to each worker before the worker begins work that should reasonably be anticipated to result in exposure to the risk of heat illness: The environmental and personal risk factors for heat illness, as well as the added burden of heat load on the body caused by exertion, clothing, and personal protective equipment, The procedures for complying with the requirements of this policy.

The importance of frequent consumption of small quantities of water, up to 8 ounces per hour, when the work environment is hot and workers are likely to be sweating more than usual in the performance of their duties, The importance of acclimatization, The different types of heat illness and the common signs and symptoms of heat illness, The importance to immediately reporting to the supervisor on site symptoms or signs of heat illness in themselves, or in co-workers. The procedures for responding to symptoms of possible heat illness, including how emergency medical services will be provided should they become necessary. Emergency medical services will be set up and the location together with a map posted for all workers to access should an emergency occur. Workers shall notify immediately their supervisor on site of any medical emergency, the procedures for contacting emergency medical services, and if necessary, for transporting workers to a point where they can be reached by an emergency

medical service provider. The procedures for ensuring that in the event of an emergency, clear and precise directions to the work site can and will be provided as needed to emergency responders. These procedures shall include designating a person to be available to ensure that emergency procedures are invoked when appropriate.

Before any worker is allowed to perform work in areas that have the potential for heat illness, they must first receive training. Each worker must demonstrate an understanding of the required training, and the ability to follow heat illness prevention measures.

Proof of training is available on the "S" drive. The training data base can be sorted by employee name or by subject. This ensures supervisors and employees are able to confirm they have the necessary training and if they don't which employees do. Employees that need training should contact their project manager or superintendent to make arrangements for them to be trained.

### Retraining

The need for retraining will be indicated when: An employee's work habits or knowledge indicate a lack of necessary understanding, motivation or skills, Changes in the workplace make previous training obsolete, Changes in the regulations or policy that make previous training obsolete or Upon a supervisor request.

### **Definitions**

*"Acclimatization"* means temporary adaptation of the body to work in the heat that occurs gradually when a person is exposed to it. Acclimatization peaks in most people within four to fourteen days of regular work for at least two hours per day in the heat.

*"Environmental risk factors for heat illness"* means working conditions that create the possibility that heat illness could occur, including air temperature, relative humidity, radiant heat from the sun and other sources, conductive heat sources such as the ground, air movement, workload severity and duration, protective clothing and personal protective equipment worn by employees.

*"Heat Illness"* means a serious medical condition 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 Wave"* means any day in which the predicted high temperature will be at least 80 degrees and at least 10 degrees higher than the average high temperature for the preceding 5 days. Heat waves can occur several times throughout the year.

*"Personal risk factors for heat illness"* means factors such as an individual's age, degree of acclimatization, health, water consumption, alcohol consumption, caffeine consumption, and use of prescription medications that affect the body's water retention or other physiological responses to heat.

*"Shade"* means blockage of direct sunlight. One indicator that blockage is sufficient is when objects do not cast a shadow in the area of blocked sunlight. Shade is not adequate 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 air conditioning.

Shade may be provided by any natural or artificial means that does not expose employees to unsafe or unhealthy conditions.

*“Temperature”* means the dry bulb temperature in degrees Fahrenheit obtainable by using a thermometer to measure the outdoor temperature in an area where there is no shade. While the temperature measurement must be taken in an area with full sunlight, the bulb or sensor of the thermometer should be shielded while taking the measurement, e.g., with the hand or some other object, from direct contact by sunlight.

## **Risk Factors**

### Environmental

Working conditions that affect the possibility that heat illness could occur include: Air temperature, Relative humidity, Radiant heat from the sun or other sources, Conductive heat sources such as the ground, Air movement, Workload severity and duration, Lack of protective clothing, Lack of personal protective equipment.

### Personal

Personal factors that affect the risk of heat illness include: Age, Weight, Physical fitness, Metabolism, Degree of acclimation, Prescription drugs, Water consumption, Caffeine consumption, workload severity, workload duration and other conditions that affect the body’s water retention.

### Handling a Heat Wave

During certain times of the year temperatures can fluctuate day-to-day with increases in temperatures in double digits. Seasonal high temperatures will be occurring weekly. Our bodies cannot acclimate as quickly as the temperature changes. Therefore changes need to be made in the work schedule to account for proper acclimatization, such as rotating workers tasks or rotating workers. During a heat wave or sudden spike in temperature the work day will be cut short or rescheduled. For example start times will be adjusted to cooler hours of the day, i.e. an earlier starting time.

Foreman and superintendents need to role model heat illness prevention and lead by example; by taking multiple water breaks in addition to normally scheduled cool down/rest breaks and rotating tasks during acclimatization.

Water consumption is critical during these times. Workers need to be drinking water before they are thirsty. Water consumption should be throughout the day and in sufficient quantities that workers are urinating no less than 3 times during an 8 hour shift.

### Reporting Incidents

All incidents of heat illness, regardless of the seriousness of the symptoms, must be reported to the supervisor immediately. No employee will be disciplined for reporting signs and symptoms of heat illness to his / her supervisor. After the supervisor has started appropriate cool down measures they should notify the Safety Manager for Unger Construction.

## **Provisions for Water**

An adequate supply of clean, fresh, pure and suitably cool, potable water will be provided as close as practical to where the work is being performed for each crew and each worker. All workers whether working individually or in crews will have ready access to drinking water. Workers at elevated heights such as scaffolding, scissorlifts or aerial booms shall have water placed near them. Unger Construction will provide water for their direct employees. Subcontractors are responsible for providing water for their own employees. Water will be staged near the work force activity, the cool down area and the break/lunch area. On smaller jobs these might all be the same location. Water could be available from three different sources; plumbed within the project or continuously supplied, drinking containers "igloo jugs" or individual servings of bottled water. Regardless of the means of supply the quantity of water on hand at all times shall not drop below 2 gallons per employee for an 8 hour shift. To ensure proper water supply the superintendent/foreman shall be responsible for conducting water inventories five (5) times per day. 1) at the start of the shift 2) first break, 3) lunch, 4) second break 5) and the end of the shift. If at any time the amount of on hand and readily available water drops below the required quantity work must stop and remain stopped until the water inventory has reached acceptable levels.

When igloo jugs are utilized drinking cups and waste containers for the used drinking cups will be staged near the igloo jug. The igloo jugs shall be cleaned every shift and whenever necessary after that to assure that the water is not unsanitary to drink. The foreman or superintendent is responsible to designate a person to clean the water containers prior to each shift.

Encourage employees and subcontractors to drink water frequently throughout the day. Remind them that if they are thirsty they are already experiencing signs of dehydration.

## **Provisions for Shade**

When the outdoor air temperature in the work area exceeds 80 degrees Fahrenheit, one or more areas with shade shall be maintained at all times while employees are present that are either open to the air or provided with ventilation or cooling. When the outdoor air temperature in the work area does not exceed 80 degrees Fahrenheit, Unger Construction shall either provide shade or provide timely access to shade upon an employee's request.

The amount of shade present shall be enough to accommodate 100% of the employees on the shift at any time. The shade shall be constructed so that the workers can sit in a normal posture fully in the shade without having to be in physical contact with each other. The shaded area shall be located as close as practicable to the areas where employees are working.

The direct heat of the sun can add as much as 15 degrees F to the heat index. If possible, work should be performed in the shade. If not, employers where possible, should provide a shaded area for breaks and when employees need relief from the sun. Wide brimmed hats can also decrease the impact of direct heat and will be made available to Unger employees.

When it is infeasible or unsafe to have a shade structure on a continuous basis Unger Construction may utilize alternative procedures that are equivalent to providing shade.

### Cool Down Provisions

Ensure that access to a shaded area and/or methods to rapidly cool a person are in place and available to any worker suffering from heat illness or needing shade and/or cool down to prevent the onset of illness.

Employees shall be allowed and encouraged to take a cool down/rest breaks in the shade for a period of no less than five minutes any time they feel the need to do so to protect themselves from overheating. Such access to shade shall be permitted at all times. Workers need to understand they will not be disciplined for feeling heat illness symptoms or stopping work to rest in a cool down station.

### Cool Down/Rest Breaks

Employees shall be encouraged to take all cool down/rest breaks. Cool down/rest breaks are important to reduce internal heat load and provide time for cooling. Heat illness occurs due to a combination of environmental and internal heat that cannot be adequately dissipated. Breaks should be taken in cooler, shaded areas. Employees shall be encouraged to drink water during their rest breaks as needed to reduce the chance of developing heat illness. Foreman and superintendents need to role model heat illness prevention and lead by example by taking multiple water breaks, in addition to normally scheduled breaks.

### Acclimatization

Workers need time for their bodies to adjust to working in heat. Acclimatization procedures activate when the temperature reaches 80 degrees. This “acclimatization” is particularly important for employees returning to work after (1) a prolonged absence, (2) recent illness, or (3) recently moving from a cool to a hot climate. Superintendents and foreman shall monitor workers closely for signs and symptoms of heat illness, particularly when they have not been working in heat for the last few days, and when a heat wave occurs.

New workers shall be asked about their past work history during their orientation. Close supervision of a new employee by a supervisor or designee for the first 14 days of the employee's employment by the employer, unless the employee indicates at the time of hire that he or she has been doing similar outdoor work for at least 10 of the past 30 days for 4 or more hours per day whenever high heat procedures are required to be implemented.

### Temperature

The Superintendent or a designated person on site in which work is being performed outdoors shall be trained to monitor weather reports using [www.noaa.gov](http://www.noaa.gov). The designated person on site shall print a copy of the national weather service report for the area in which the work is being performed prior to the work shift and post the report in a conspicuous place on site.

### High Heat Procedures (Temperature exceeds 95 degrees Fahrenheit)

When the air temperature equals or exceeds 95 degrees Fahrenheit, additional High Heat Procedures shall be implemented by the supervisor on site. These procedures shall include the following to the extent practicable: Pre-shift meetings to remind employees of high heat procedures, drink plenty of

water, take extra cool down breaks. Ensuring that effective communication by voice, observation, or electronic means is maintained so that all employees at the work site can contact a supervisor when necessary. An electronic device, such as a cell phone may be used for this purpose only if reception in the area is reliable. Designating one or more employees as authorized to call for emergency services if needed. Observe employees for alertness and signs or symptoms of heat illness. Remind employees throughout the work shift to drink plenty of water. During high heat conditions workers must be provided with 10 minutes cool down periods every two hours. Close supervision of a new employee by a supervisor or designee for the first 14 days of the employee's employment by the employer, unless the employee indicates at the time of hire that he or she has been doing similar outdoor work for at least 10 of the past 30 days for 4 or more hours per day. Print and post the national weather report showing the projected temperature in a conspicuous place on site.

### Signs/Symptoms of Heat Illness

When a worker is showing symptoms of possible heat illness, steps will be taken to keep the stricken worker cool and comfortable to reduce the progression towards more serious illness. Coworkers need to be on the lookout for others exhibiting symptoms of heat illness. If a colleague mentions they are cramping notify your foremen or superintendent immediately, don't wait until break.

Heat illness symptoms can change rapidly. Generally speaking heat illness progresses through three phases. Workers experiencing heat stroke or phase 3 symptoms are in serious jeopardy. This illness is life threatening take appropriate actions without delay, call for emergency medical services.

### Early Warning Signs/Symptoms – Phase 1

Early warning signs of heat illness include loss of appetite, weakness, headache, nausea, dizziness are all early warning signs/symptoms of heat illness. Heat cramps are painful spasms of the muscles. Cramps are an advanced symptom of heat illness and should be taken seriously. Heat cramps can rapidly progress into heat exhaustion.

Workers should never discount and discomfort or symptoms they have noticed or are experiencing. Progression to serious heat illness can be rapid. Workers need to understand that they will not be disciplined for feeling symptoms or stopping work to drink water or rest in a cool down station.

### Heat Exhaustion - Phase 2

Heat Exhaustion results from the loss of fluid through sweating and not drinking enough replacement fluids. The worker still sweats but experiences extreme weakness or fatigue, giddiness, nausea, or headache. The skin is clammy and moist, while the body temperatures are normal or slightly elevated.

### Heat Stroke – Phase 3

Heat Stroke is the most serious health problem for workers in a hot environment. It is caused by the body's failure to regulate its core temperature. Sweating stops and the body can no longer release excessive heat. Victims of heat stroke will usually die unless treated promptly. The signs of heat stroke include: Mental confusion, delirium, loss of consciousness, convulsions, or coma. The body temperature will rise to 106 degrees Fahrenheit or higher. The skin will be hot, dry, and may be red, mottled, or



bluish. Seek emergency medical attention (911) immediately. Send an escort to the jobsite entrance so they can escort 911 services immediately to the injured worker.

### **Emergency Response and First-Aid/Medical Treatment for Heat Stress**

Emergency –

If the victim is staggering, or vomiting, or seems disoriented, or has difficulty speaking, or is having convulsions, or loses consciousness call 911 immediately. Send an escort to the jobsite entrance to meet the arriving responders, then escort them directly to the injured worker.

First aid –

When workers exhibit or report symptoms of Heat Illness immediately call for medical assistance from the superintendent/foremen or the site emergency response team.

Move the victim to the coolest, shadiest spot available.

Have the victim lie down on his or her back on the coolest surface available.

It is vitally important to reduce the victim's core temperature. Remove excess layers of clothing. Fan the victim vigorously while soaking the victims remaining clothing gradually with cool water.

Place cold compresses under the arm pits, on the neck, on top of the head, and in the groin area. If ice is available place ice packs on the neck, top of the head and arm pits. Stop icing when the victim starts to shiver.

Victims exhibiting signs or symptoms of heat illness shall be constantly monitored, never left alone. Victims cannot leave the site (cannot go home) until they have fully recovered and have been released by the site emergency response team and their supervisor.

If there is no improvement in their symptoms, within 15 minutes, transport the victim to the nearest medical provider. Victims that are to be transported shall be driven by the foreman, or superintendent, or transported via 911. Directions and maps to the nearest medical provider are provided in the Grab-n-Go binder.