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24.1 Foreword

The County of Santa Clara is concerned for the health and safety of all county employees. Employees in outdoor environments face the risk of heat illnesses when working unprotected from environmental risk factors such as 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.

These conditions may result in serious 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.

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

This plan would require county departments to implement heat illness control measures in order to protect employees from these environmental and personal risk factors and to enable the employees to continue working without unreasonably jeopardizing their own health and safety.

24.2 Introduction

The plan applies to all outdoor places of employment.

24.2.1 Employees will have access to potable drinking water.

24.2.1.1 Water shall be fresh, pure, suitably cool, and provided to employees free of charge. The water shall be located as close as practicable to the areas where employees are working.

24.2.1.2 Where it is not plumbed or otherwise continuously supplied, it will be provided in sufficient quantity at the beginning of the work shift to

provide one quart per employee per hour for drinking for the entire shift.

24.2.1.3 Departments may begin the shift with smaller quantities of water if they have effective procedures for replenishment during the shift as needed to allow employees to drink one quart or more per hour. The frequent drinking of water will be encouraged.

24.2.2 Employees will have access to shade.

24.2.2.1 Shade shall be present when the temperature exceeds 80 degrees Fahrenheit.

24.2.2.2 When the outdoor temperature in the work area exceeds 80 degrees Fahrenheit, the employer shall have and maintain one or more areas with shade at all times while employees are present that are either open to the air or provided with ventilation or cooling. The amount of shade present shall be at least enough to accommodate the number of employees on recovery or rest periods, so that they can sit in a normal posture fully in the shade without having to be in physical contact with each other.

24.2.2.3 The shade shall be located as close as practicable to the areas where employees are working. Subject to the same specifications, the amount of shade present during meal periods shall be at least enough to accommodate the number of employees on the meal period who remain onsite.

24.2.2.4 Shade shall be available when the temperature does not exceed 80 degrees Fahrenheit. When the outdoor temperature in the work area does not exceed 80 degrees Fahrenheit employers shall either provide shade as per subsection (d)(1) or provide timely access to shade upon an employee's request.

24.2.2.5 Employees suffering from heat illness or believing a preventative recovery period is needed, will be provided access to an area with shade that is either open to the air or provided with ventilation or cooling for a period of no less than five minutes.

24.2.2.6 Such access to shade will be permitted at all times. Cooling measures other than shade (e.g., use of misting machines) may be provided in lieu of shade.

24.2.3 High Heat Procedures

24.2.3.1 Departments shall implement high-heat procedures when the temperature equals or exceeds 95 degrees Fahrenheit. These procedures shall include the following to the extent practicable:

24.2.3.1.1 Ensuring that effective communication by voice, observation, or electronic means is maintained so that employees at the work site can contact a supervisor when necessary. An electronic device, such as a cell phone or text messaging device, may be used for this purpose only if reception in the area is reliable.

24.2.3.1.2 Observing employees for alertness and signs or symptoms of heat illness. The employer shall ensure effective employee observation/monitoring by implementing one or more of the following:

- Supervisor or designee observation of 20 or fewer employees, or
- Mandatory buddy system, or
- Regular communication with sole employee such as by radio or cellular phone, or
- Other effective means of observation.
- Designating one or more employees on each worksite as authorized to call for emergency medical services, and allowing other employees to call for emergency services when no designated employee is available.

- Reminding employees throughout the work shift to drink plenty of water.
- Pre-shift meetings before the commencement of work to review the high heat procedures, encourage employees to drink plenty of water, and remind employees of their right to take a cool-down rest when necessary.

24.2.3.1.3 When temperatures reach 95 degrees or above, the employer shall ensure that the employee takes a minimum ten minute net preventative cool-down rest period every two hours. The preventative cool-down rest period required by this paragraph may be provided concurrently with any other meal or rest period required by Industrial Welfare Commission Order No. 14

24.2.3.1.4 If the workday will extend beyond eight hours, then an additional preventative cool-down rest period will be required at the conclusion of the eighth hour of work; and if the workday extends beyond ten hours, then another preventative cool-down rest period will be required at the conclusion of the tenth hour and so on.

24.2.4 Emergency Response Procedures.

24.2.4.1 Departments shall implement effective emergency response procedures including:

24.2.4.1.1 Ensuring that effective communication by voice, observation, or electronic means is maintained so that employees at the work site can contact a supervisor or emergency medical services when necessary. An electronic device, such as a cell phone or text messaging device, may be used for this purpose only if reception in the area is reliable. If an electronic device will not furnish reliable communication in the work area, the employer will ensure a means of summoning emergency medical services.

24.2.4.1.2 Responding to signs and symptoms of possible heat illness, including but not limited to first aid measures and how emergency medical services will be provided.

24.2.4.1.3 If a supervisor observes, or any employee reports, any signs or symptoms of heat illness in any employee, the supervisor shall take immediate action commensurate with the severity of the illness.

24.2.4.1.4 If the signs or symptoms are indicators of severe heat illness (such as, but not limited to, decreased level of consciousness, staggering, vomiting, disorientation, irrational behavior or convulsions), the employer must implement emergency response procedures.

24.2.4.1.5 An employee exhibiting signs or symptoms of heat illness shall be monitored and shall 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 employer's procedures.

24.2.4.1.6 Contacting emergency medical services and, if necessary, transporting employees to a place where they can be reached by an emergency medical provider.

24.2.4.1.7 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.

24.2.5 Acclimitization.

24.2.5.1 All employees shall be closely observed by a supervisor or designee during a heat wave. For purposes of this section only, “heat wave” means any day in which the predicted high temperature for the day will be at least 80 degrees Fahrenheit and at least ten degrees

Fahrenheit higher than the average high daily temperature in the preceding five days.

24.2.5.2 An employee who has been newly assigned to a high heat area shall be closely observed by a supervisor or designee for the first 14 days of the employee's employment.

24.2.6 Heat Illness Prevention Plan

24.2.6.1 Departments shall establish, implement, and maintain, an effective heat illness prevention plan. The plan shall be in writing in both English and the language understood by the majority of the employees and shall be made available at the worksite to employees. The plan shall be available to OSEC-ESA.

24.2.6.2 Each Heat Illness Prevention Plan shall include the following components:

- Procedures for the provision of water and access to shade.
- High heat procedures
- Emergency Response Procedures.
- Acclimatization methods and procedures.

24.2.7 Training.

24.2.7.1 **Employee training.**

Training in the following topics will be provided to all supervisory and non-supervisory employees.

24.2.7.1.1 The environmental and personal risk factors for heat illness;

24.2.7.1.2 The department’s procedures for complying with the requirements of this standard;

24.2.7.1.3 The importance of frequent consumption of small quantities of water, up to 4 cups per hour, when the work environment is hot

and employees are likely to be sweating more than usual in the performance of their duties;

24.2.7.1.4 The importance of acclimatization;

24.2.7.1.5 The different types of heat illness and the common signs and symptoms of heat illness;

24.2.7.1.6 The importance to employees of immediately reporting to the department, directly or through the employee's supervisor, symptoms or signs of heat illness in themselves, or in co-workers;

24.2.7.1.7 The department's procedures for responding to symptoms of possible heat illness, including how emergency medical services will be provided should they become necessary;

24.2.7.1.8 The department's procedures for contacting emergency medical services, and if necessary, for transporting employees to a point where they can be reached by an emergency medical service provider;

24.2.7.1.9 The department's procedures for ensuring that, in the event of an emergency, clear and precise direction to the work site can and will be provided as needed to emergency responders.

24.2.7.2 **Supervisor training.**

Prior to assignment to supervision of employees working in the heat, training on the following topics will be provided:

24.2.7.2.1 The training for all employees as described above.

24.2.7.2.2 The procedures the supervisor is to follow to implement the applicable provisions in this section.

24.2.7.2.3 The procedures the supervisor is to follow when an employee exhibits symptoms consistent with possible heat illness, including emergency response procedures.

24.3 The department's procedures will be in writing and made available to employees.

Roles and Responsibilities

24.3.1 Heat Illness Prevention Program Manager

The Countywide administration of the Heat Illness Prevention Program will be the responsibility of the Occupational Safety and Environmental Compliance Division (OSEC).

Responsibilities:

- Oversees the Countywide Heat Illness Prevention Program
- Maintains central records for the administration of the program. (i.e. training, annual reviews, OSHA Log 300).
- Acts as liaison with all affected Departments.

24.3.2 Agency/Department Heat Illness Prevention Coordinator

The Agency/Department Coordinator acts as liaison between his/her department and OSEC. The department head will appoint this position.

Responsibilities:

- Coordinates or delegates training for the agency or department.
- Confirms that personnel attend training classes.
- Confirms that adequate supply of water and shade providing structures are maintained.

24.3.3 Employees

Employees affected by this plan should be conscientious and follow necessary safe work practices.

Responsibilities:

- Attend all necessary training.
- Wear the prescribed personal protective equipment.
- Follow safe work practices.

24.4 Program Reviews.

Annual program reviews shall be performed by, or by the direction of, the Agency/Department Heat Illness Prevention. OSEC will maintain the program review records.

The following items need to be addressed by the designated person performing the program review:

- Ensure that written control procedures are in practice and accessible to affected employees.
- Ensure that affected employees receive the necessary initial training and annual refresher training.
- Ensure that affected employees have access to an adequate supply of water and shade while on the job.

24.5 Applicable Regulations

California Code of Regulations, Title 8, Division 1, Chapter 4, Subchapter 7, General Safety Orders Group 2, Safe Practices and Personal Protection Article 10, Personal Safety Devices and Safeguards, Section 3395, Heat Illness Prevention.

24.6 Appendices

24.6.2 Appendix A: 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.

"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.

"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.

"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.

"Preventative recovery period" means a period of time to recover from the heat in order to prevent heat illness.

"Shade" means blockage of direct sunlight. Canopies, umbrellas and other temporary structures or devices may be used to provide shade. 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.

“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.