

## Heat Illness Prevention Plan Maintenance & Utilities Field Operations

### I. PURPOSE

The purpose is to establish a Heat Illness Prevention Plan in accordance with CCR Title 8: Section 3395, to ensure the health and safety of agency employees working outside in hot conditions.

### II. LOCATION

**Site/Location:** This Heat Illness Prevention Plan applies to the Maintenance & Utilities division field operations.

### III. DESIGNATION OF RESPONSIBILITY

The following designated person(s) have the authority and responsibility for implementing the provisions of this program at this worksite.

#### Name/Title/Phone Number

1. Dave Fortune, Superintendent (831) 899-6829; 760-2318
2. Lee Murray, Field Supervisor (831) 899-6834; 402-9152
3. Mark Parker, Parks Crew Chief (831) 899-6835; 901-4430
4. Mario Alcaraz, Public Works Specialist (831) 901-5067
5. Roy Tilly, Public Works Specialist (831) 901-4612
6. Humberto Saucedo, Irrigation Specialist (831) 760-2153

### Supervisors Quick Checklist Table

Use this table as a quick reference for requirements contained in this Plan

At 75°+ F	At 80°+ F (Previous + these items)	At 90°+ F (Previous + these items)	At 95° F (Previous + these items)
<ul style="list-style-type: none"> <li>Check weather forecast</li> <li>Remind employees to drink water</li> <li>Be on look-out for signs/symptoms of heat illness</li> </ul>	<ul style="list-style-type: none"> <li>Provide/erect shade structures</li> <li>Allow for 5 minute cool-down periods</li> <li>Ensure 1 quart water per hour per employee</li> </ul>	<ul style="list-style-type: none"> <li>Check water level every hour</li> <li>Add water/ice to coolers throughout the day</li> <li>Conduct "Tailgate" meetings at the start of each shift</li> </ul>	<ul style="list-style-type: none"> <li>Increase cool-down breaks to 10 min every 2 hours</li> <li>Closely monitor workers</li> <li>Closely monitor new workers for acclimation</li> </ul>

#### A. Procedures for Provision of Water (include but are not limited to the following):

1. Drinking water containers (of 5 gallons each) will be brought to the site, so that at least two quarts per employee are available at the start of the shift. All workers whether working individually or in

## **Heat Illness Prevention Plan Maintenance & Utilities Field Operations**

smaller crews, will have access to “fresh, pure and suitably cool” drinking water. “Suitably cool” means that during hot weather, the water must be cooler than the ambient temperature, but not so cool to cause discomfort. Sufficient drinking water shall always be available for every employee to drink at least 1 quart per hour.

2. Paper cone rims or bags of disposable cups and the necessary cup dispensers will be made available to workers and will be kept clean until used.
3. As part of the Effective Replenishment Procedures, employees shall have access to fresh, pure and suitably cool, free of charge water located as close as practicable to where the employees are working. The water level of all containers will be checked periodically (e.g. every hour, every 30 min), and more frequently when the temperature rises. Water containers will be refilled with cool water, when the water level within a container drops below 50 percent. Additional water containers (e.g. five gallon bottles) will be provided, to replace water as needed.
4. Ice will be provided in separate containers, so that when necessary, it will be added to the drinking water to keep it cool.
5. Water containers will be placed reasonably close to the workers (given the working conditions and layout of the worksite), to encourage the frequent drinking of water. If field terrain prevents the water from being placed reasonably close to the workers, personal water containers will be made available, so that workers can have drinking water readily accessible.
6. Water containers will be relocated to follow along with the crew, so drinking water will remain readily accessible.
7. Water containers will be kept in sanitary condition.
8. Daily, workers will be reminded of the location of the water coolers and of the importance of drinking water frequently. When the temperature exceeds or is expected to exceed 90 degrees Fahrenheit, brief ‘tailgate’ meetings will be held each morning to review with employees the importance of drinking water, the number and schedule of water and rest breaks and the signs and symptoms of heat illness. Employees are to set up a reminder to themselves to drink plenty of water throughout the day.

## **Heat Illness Prevention Plan Maintenance & Utilities Field Operations**

9. When the temperature equals or exceeds 95 degrees Fahrenheit or during a heat wave, the number of water breaks will be increased, and workers will be reminded throughout the work shift to drink water.
10. During employee training and tailgate meetings, the importance of frequent drinking of water will be stressed.

**B. Procedures for Access to Shade** (include but are not limited to the following):

1. Shade structures will be opened and placed as close as practical to the workers, when the temperature equals or exceeds 80 degrees Fahrenheit. When the temperature is below 80 degrees Fahrenheit, access to shade will be provided promptly, when requested by an employee. Note: The interior of a vehicle may not be used to provide shade unless the vehicle is air-conditioned and the air conditioner is on.
2. Shade structures will accommodate all employees on recovery periods, rest periods, and meal periods.
3. Daily, workers will be informed of the location of the shade structures and will be allowed and encouraged to take a preventative cool-down break in the shade when they feel the need to do so to protect themselves from overheating. Such access to shade shall be permitted at all times.
4. The supervisor or senior worker at each work site shall monitor all employees taking a cool-down break by asking each employee if they are experiencing symptoms of heat illness. If the employee is experiencing such symptoms, the supervisor shall require the employee to remain in the shade and shall provide, or cause to be provided, first aid or emergency response. Employees shall not be ordered to return to work until signs and symptoms of heat illness have abated.
5. Shade structures will be relocated to follow along with the crew and they will be placed as close as practical to the employees, so that access to shade is provided at all times.
6. In situations where trees or other vegetation are used to provide shade (such as in orchards), the thickness and shape of the shaded area will be evaluated, before assuming that sufficient shadow is being cast to protect employees.

## **Heat Illness Prevention Plan Maintenance & Utilities Field Operations**

7. In situations where it is not safe or feasible to provide access to shade (e.g., during high winds), a note will be made of these unsafe or unfeasible conditions, and of the steps that will be taken to provide shade upon request.

### **C. Procedures for Monitoring the Weather** (include but are not limited to):

1. The Parks Crew Chief will be trained and instructed to check in advance the extended weather forecast. Weather forecasts can be checked with the aid of the internet (<http://www.nws.noaa.gov/>), by calling the *National Weather Service* phone numbers (see CA numbers below), or by checking a local or national television news network. OSHA has made available a Heat Safety Tool app that may be downloaded to a smart phone or tablet. While this app is a good additional resource, it shall not be solely relied upon to meet the requirements of this Heat Illness Prevention Plan. The work schedule will be planned in advance, taking into consideration whether high temperatures or a heat wave is expected. This type of advance planning should take place all summer long.

#### **CALIFORNIA Dial-A-Forecast**

Eureka 707-443-7062

Hanford 559-584-8047

Los Angeles 805-988-6610 (#1)

Sacramento 916-979-3051

San Diego 858-675-8706 (#1)

San Francisco 831-656-1725 (#1)

For more information on the OSHA Heat Tool or to download the app, visit:

[https://www.osha.gov/SLTC/heatillness/heat\\_index/heat\\_app.html](https://www.osha.gov/SLTC/heatillness/heat_index/heat_app.html).

2. Prior to each workday, the forecasted temperature and humidity for the worksite will be reviewed and will be compared against the National Weather Service Heat Index to evaluate the risk level for heat illness. Determination will be made of whether or not workers will be exposed at a temperature and humidity characterized as either “extreme caution” or “extreme danger” for heat illnesses. It is important to note that the temperature at which these warnings occur must be lowered as much as 15 degrees if the workers under consideration are in direct sunlight.
3. Prior to each workday, the Parks Crew Chief will monitor the weather (using <http://www.nws.noaa.gov/> or with the aid of a simple

## **Heat Illness Prevention Plan Maintenance & Utilities Field Operations**

thermometer, available at most hardware stores) at the worksite. This critical weather information will be taken into consideration, to determine, when it will be necessary to make modifications to the work schedule (such as stopping work early, rescheduling the job, working at night or during the cooler hours of the day, increasing the number of water and rest breaks).

4. A thermometer will be used at the jobsite to monitor for sudden increases in temperature, and to ensure that once the temperature exceeds 80 degrees Fahrenheit, shade structures will be opened and made available to the workers. In addition, when the temperature equals or exceeds 95 degrees Fahrenheit, additional preventive measures such as the High Heat Procedures will be implemented.

### **D. Handling a Heat Wave:**

1. During a heat wave or heat spike, work projects will be assigned in such a way to try to minimize heat exposure.
2. During a heat wave or heat spike, and before starting work, tailgate meetings will be held, to review the agency heat illness prevention procedures, the weather forecast and emergency response. In addition, if schedule modifications are not possible, workers will be provided with an increased number of water and rest breaks and will be observed closely for signs and symptoms of heat illness.
3. Each employee will be assigned a “buddy” to be on the lookout for signs and symptoms of heat illness and to ensure that emergency procedures are initiated when someone displays possible signs or symptoms of heat illness.

### **E. High Heat Procedures (include but are not limited to):**

*High Heat Procedures are additional preventive measures that the City will use when the temperature equals or exceeds 95 degrees Fahrenheit.*

1. Effective communication by voice, observation, or electronic means will be maintained, so that employees at the worksite can contact a supervisor when necessary. If the supervisor is unable to be near the workers (to observe them or communicate with them), then an electronic device, such as a cell phone or text messaging device, may be used for this purpose if reception in the area is reliable.

## **Heat Illness Prevention Plan Maintenance & Utilities Field Operations**

2. Frequent communication will be maintained with employees working by themselves or in smaller groups (keep tabs on them via phone), to be on the lookout for possible symptoms of heat illness.
3. Employees who ask for a cool-down break will be monitored for symptoms of heat illness. If an employee exhibits signs or reports symptoms of heat illness during a cool-down break, the supervisor shall provide or cause to be provided appropriate first aid or emergency response. Employees shall not be ordered to return to work until signs or symptoms of heat illness have abated.
4. Employees will be observed for alertness and signs and symptoms of heat illness. When the supervisor is not available, an alternate responsible person may be assigned, to look for signs and symptoms of heat illness. Such a designated observer will be trained and know what steps to take if heat illness occurs.
5. Employees will be reminded throughout the work shift to drink plenty of water.
6. A “buddy” system will be implemented and in use at all times during high heat conditions. Each employee will be required to monitor their buddy for signs and symptoms of heat illness, and to immediately report any signs or symptoms to the supervisor.
7. New employees will be closely supervised, or assigned a “buddy” or more experienced coworker for the first 14 days of the employment (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 four or more hours per day).

- F. Procedures for Acclimatization** (include but are not limited to):  
Acclimatization is the temporary and gradual physiological change in the body that occurs when the environmentally induced heat load to which the body is accustomed is significantly and suddenly exceeded by sudden environmental changes. In more common terms, 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 hasn’t yet adjusted.

Inadequate acclimatization can be significantly more perilous in conditions of high heat and physical stress. Employers are responsible for the working conditions of their employees, and they must act effectively when

## **Heat Illness Prevention Plan Maintenance & Utilities Field Operations**

conditions result in sudden exposure to heat their employees are not used to.

1. The weather will be monitored daily. The supervisor will be on the lookout for sudden heatwave(s), or increases in temperatures to which employees haven't been exposed to for several weeks or longer.
2. During a heat wave or heat spike, the work assignment will be structured to minimize heat exposure.
3. For new employees, the intensity of the work will be lessened during a two-week break-in period (such as scheduling slower paced, less physically demanding work during the hot parts of the day and the heaviest work activities during the cooler parts of the day (early-morning or evening). Steps taken to lessen the intensity of the workload for new employees will be documented.
4. The supervisor will be extra-vigilant with new employees and stay alert to the presence of heat related symptoms.
5. New employees will be assigned a "buddy" or experienced coworker to watch each other closely for discomfort or symptoms of heat illness.
6. During a heat wave (80 degrees or above), or anytime the temperature is 10 degrees higher than the average high daily temperature in the preceding five days, all employees will be observed closely (or maintain frequent communication via phone or radio), to be on the lookout for possible symptoms of heat illness.
7. Employees and supervisors will be trained on the importance of acclimatization, how it is developed and how the agency procedures address it.

### **G. Procedures for Emergency Response** (include but are not limited to):

1. Prior to assigning a crew to an unfamiliar worksite, workers and the supervisor will be provided a map of the site, along with clear and precise directions (such as streets or road names, distinguishing features and distances to major roads), to avoid a delay of emergency medical services.
2. Prior to assigning a crew to a particular worksite, efforts will be made to ensure that a qualified and appropriately trained and

## **Heat Illness Prevention Plan Maintenance & Utilities Field Operations**

equipped person is available at the site to render first aid if necessary.

3. Prior to the start of the shift, a determination will be made of whether or not a language barrier is present at the site and steps will be taken (such as assigning the responsibility to call emergency medical services to the supervisor or an English speaking worker) to ensure that emergency medical services can be immediately called in the event of an emergency.
4. All supervisors will carry cell phones to ensure that emergency medical services can be called. Checks will be made to ensure that these electronic devices are functional prior to each shift.
5. When an employee is showing symptoms of possible heat illness, steps will be taken immediately to keep the stricken employee cool and comfortable once emergency service responders have been called (to reduce the progression to more serious illness).
6. At remote locations such as lots or undeveloped areas, the supervisor will designate an employee or employees to physically go to the nearest road or highway where emergency responders can see them. If daylight is diminished, the designated employee(s) shall be given reflective vests or flashlights in order to direct emergency personnel to the location of the worksite, which may not be visible from the road or highway.
7. During a heat wave or hot temperatures, workers will be reminded and encouraged to immediately report to their supervisor any signs or symptoms of heat illness they or their buddy are experiencing.
8. Employee and supervisor training will include every detail of these written emergency procedures.

### **H. Handling a Sick Employee:**

1. When an employee displays possible signs or symptoms of heat illness, a trained first aid worker or supervisor will check the sick employee and determine whether resting in the shade and drinking cool water will suffice or if emergency service providers will need to be called. A stricken employee will not be left alone in the shade, or sent home without being offered first aid and/or being provided with emergency medical services.

## **Heat Illness Prevention Plan Maintenance & Utilities Field Operations**

2. When an employee displays possible signs or symptoms of heat illness and no trained first aid worker or supervisor is available at the site, emergency service providers will be called.
3. Emergency service providers will be called immediately if an employee displays signs or symptoms of heat illness including but not limited to decreased level of consciousness, incoherent speech, convulsions, red and hot face, staggering, vomiting, disorientation, or irrational behavior, does not look okay or does not get better after drinking cool water and resting in the shade. While the ambulance is in route, first aid will be initiated (cool the worker: place the worker in the shade, remove excess layers of clothing, place ice pack in the armpits and groin area and fan the victim). Do not let a sick worker leave the site, as they can get lost or die before reaching a hospital!
4. If an employee does not look okay and displays signs or symptoms of severe heat illness (see number 3 above), and the worksite is located more than 20 minutes away from a hospital, call emergency service providers, communicate the signs and symptoms of the victim and request an Air Ambulance.

**I. Procedures for Employee and Supervisory Training** (include but are not limited to):

**Effective training in the topics described below shall be provided to each supervisor and non-supervisory employee before the employee begins work that is reasonably anticipated to result in exposure to the risk of heat illness.**

1. Supervisors will be trained prior to being assigned to supervise other workers. Training will include the City's written procedures and the steps supervisors will follow when employees' exhibit symptoms consistent with heat illness.
2. Supervisors will be trained on how to track the weather at the job site (by monitoring predicted temperature highs and periodically using a thermometer). Supervisors will be instructed on how weather information will be used to modify work schedules, to increase the number of water and rest breaks or cease work early if necessary.
3. All employees and supervisors will be trained prior to working outside. Training will include the City's written prevention procedures.

## **Heat Illness Prevention Plan Maintenance & Utilities Field Operations**

4. Employees will be trained on the steps that will be followed for contacting emergency medical services, including how they are to proceed when there are non-English speaking workers, how clear and precise directions to the site will be provided and the importance of making visual contact with emergency responders at the nearest road or landmark to direct them to their worksite. Employees will also be trained on the City's responsibility to provide water, shade and cool-down breaks, first aid and emergency response procedures, acclimatization concepts and methods; that include exercising their rights under the California Heat Illness Prevention Standard without fear of retaliation.
5. When the temperature equals or exceeds 90 degrees Fahrenheit, short "tailgate" meetings will be held to review the weather report, to reinforce heat illness prevention with all workers, to provide reminders to drink water frequently, to inform them that shade can be made available upon request and to remind them to be on the lookout for signs and symptoms of heat illness.
6. New employees will be assigned a "buddy" or experienced coworker to ensure that they understand the training and follow agency procedures.
7. Employees will be trained on the importance of applying and reapplying sunscreen to exposed areas of the body to avoid sunburn.