www.SBCounty.gov

SAN BERNARDINO COUNTY

San Bernardino County

Probation Department

HEAT ILLNESS PREVENTION PLAN

Prepared By:

San Bernardino County Probation Department

Heat Illness Prevention Plan

San Bernardino County Probation Department

TABLE OF CONTENTS ..... PAGE NO.

San Bernardino County Probation Department

Heat Illness Prevention Plan

I. Policy

This plan establishes the San Bernardino County Probation Department operating procedures for preventing employee illnesses associated with exposure to outdoor heat. It provides information and guidance on:

- Preventive measures and employee training requirements pertaining to the prevention of heat illness.
- Response procedures that should be followed in the event an employee exhibits signs or symptoms of possible heat illness. It is intended to meet the requirements of California Code of Regulations, Title 8 Section 3395, Heat and Illness Prevention.

II. Scope:

All employees who work outdoors are covered under this plan. This plan is meant to keep employees who work outdoors safe from heat illness. Outdoor work areas, activities and operations, such as outdoor inspections and field incident response are considered outdoor places of employment and those workers fall under the scope of this plan. This plan does not apply to indoor work.

Employees who fall under this plan include but are not limited to:

- Field Probation Officers I/II/III.
- Field Supervising Probation Officers.
- Probation Corrections Officers.
- Probation Corrections Supervisors I/II.
- Other Affected Personnel with duties indicated below.

Examples of outdoor duties include but are not limited to:

- Home visits/searches/surveillance/high risk warrant services.
- Outdoor Inspections.
- Field incidents.
- Outdoor work or recreational activity, on grounds, off grounds or at remote locations.

III. Responsibility:

Employees will be responsible for:

- Following this plan.
- Reporting heat illness symptoms to their supervisor.
- Observing co-workers for heat illness symptoms and/ or contacting applicable emergency personnel if needed.
- Maintaining personal protective equipment per manufacture recommendations.
- Following other safe practices listed within this document and taught during training.

Supervisors or Lead personnel will be responsible for:

- Implementing this plan.
- Monitoring employees under their supervision and contacting applicable emergency personnel if needed.
- May advise employees to initiate cool down measures as stipulated in this plan.
- Providing a means for water source/ hydration to employees.
- Prior to extreme heat conditions or days when this plan becomes activated, remind employees to follow protocols by staying hydrated and seeking sufficient shade for cool down measures.

The Safety and Security Unit with the assistance of the Risk Control Specialist will be responsible for:

- Reviewing this plan.
- Updating the plan with regulatory changes.
- Provide initial training in the requirements of the plan to supervisors and employees who are covered by this plan.

IV. Hazard Recognition:

Supervisors and employees shall maintain an awareness of working conditions when heat illness is likely to occur. Factors influencing heat illness include elevated air temperature, relative humidity, radiant heat from the sun and/or other sources, conductive heat sources (e.g., the ground), hot air movement, strenuous physical activity, personal risk factors (e.g. age, weight, diet, hydration levels, prior heat illness injuries, etc.) and the use of personal protective equipment (e.g., protective clothing, etc.).

V. Preventive Measures:

The following will apply whenever the temperature is expected to be 80 degrees Fahrenheit higher and /or whenever the supervisor feels an employee will be at risk for heat illness (i.e. heat waves or temps above 95 degrees Fahrenheit).

Climate Monitoring:

Weekly, the supervisor or designee of their respective station and/or work assignment unit, or should check the weather from a recognized source (National Weather Service) and remind employees to stay hydrated and utilize shade (e.g. air conditioned vehicle in between incident calls). A quick briefing or tailgate meeting prior to the start of shift is a recommended way to communicate this information.

Resources:

- National Oceanic and Atmospheric Administration at http://www.noaa.gov/

- National Weather Service Phone Numbers CALIFORNIA Dial-A-Forecast
    - Eureka 707-443-7062
    - Hanford 559-584-8047
    - Los Angeles 805-988-6610(#1)
    - San Diego 858-297-2107(#1)

- Internet on websites such as:
    - Nation Weather Service at www.weather.gov
    - The Weather Channel at www.weather.com
    - Weather Underground at www.wunderground.com

Observation:

Employees will watch for heat illness symptoms with their partner or work crew partners, as a person suffering from heat illness may not recognize the symptoms they are experiencing. Employees will also utilize breaks and recovery periods (minimum of five minutes) for cooling off measures. Employees will look for physical changes or behavior changes in their partners during the rest periods i.e. when employees are in an air-conditioned car, drinking water in between incident calls and/ or during utilizing shade breaks. Should the employee or their partner begin to show signs or symptoms indicative of heat illness, then they will report the information to a supervisor, and begin cool down measures.

Employees on medications that make them sensitive to heat illness should discuss the side effects/ corrective actions with their doctor and follow up with their supervisor prior to working in the heat.

Communication via a cell phone, text message, and/ or radio checks should be set up between the employee(s) and supervisor(s) or designee in the event of a medical emergency. Employees or crew Leads can provide any possible heat illness issues via the agreed upon communication method.

Limiting Exposure of Heat Illness to Employees:

Employees should try to mitigate exposure by covering exposed parts of their body, keeping hydrated and taking cooling breaks/ rest breaks. Employees may take a minimum of a five minute cooling rest break every hour if working in the outdoor heat. This can be accomplished by finding suitable shade i.e. shade tree, structure, or other shelter (Canopy/Tent/Patio Cover) if assigned to a work crew, and/ or in an air-conditioned vehicle if between incident calls/ outdoor inspections.

Employees are encouraged to work in teams of two when possible and not alone when in a hot environment and/ or performing strenuous outdoor activities. Employees may work alone when there is minimal physical labor and/or driving in air conditioning vehicles to and from incident calls / outdoor inspections.

Based on climate monitoring and when applicable to the activity, work may be rescheduled for another day, rotated in-between activities, scheduled for the morning or later in the day and/ or stopped for a brief period.

Acclimatization:

All employees need to be acclimatized before/ during work in the heat. Acclimatization means the temporary adaption of the body to work in the heat that occurs gradually when a person is exposed to it. Acclimatization peaks in most people within 4-14 days of regularly working in the heat for at least two hours per day. As such, supervisors will assist employees in acclimatizing to the weather.

Any 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 assignment.

Drinking Water:

Supervisors will ensure employees are taking enough water (1 quart per employee per 1 hour of outdoor work is required) or have access to an appropriate water source when in the field.

Water can be provided in two ways;

1. Employees may fill up their water bottles or jugs from their house or utilize their bottled water source.

2. Utilize the bottled water source located in each office and fire station facility.

Employees will take water bottles in quantities to meet the requirement utilizing the bottled water available in all area and office/ station locations prior to working outdoors.

During hot weather, the water must be cooler than the ambient temperature, but not so cool as to cause discomfort. OSHA recommends adding ice to the water when temperatures are over 95 degrees Fahrenheit because cool water adds the benefit of directly cooling the body upon consumption.

Five gallon water jugs can be used and filled with ice when working outdoors during activities such as, work crew locations, outdoor training events, or any other event held outdoors for a prolonged period of time.

Employees are encouraged to drink water every 15-20 minutes and to take their 5 minute cooling breaks as needed.

Supervisors will encourage employees to abstain from drinking other liquids such as coffee, alcohol (within 48 hours of work), sports drinks, or other sugary drinks in lieu of water.

Should the water run out during the shift, employees have the option to return to the office or training site to replenish their water source and/ or obtain water from the nearest Probation building.

Shade:

“Shade” means the blockage of direct sunlight. Shade may be provided by any natural or artificial means that does not expose employees to unsafe or unhealthful conditions. Shade is not adequate when heat in the area of shade defeats the purpose of shade. For example, a car exposed to the sun does not provide acceptable shade to a person inside of it, unless the car is running with the air conditioning turned on.

The amount of shade present shall be enough to accommodate 25% of the employees on physical work outdoors, outside training grounds, or other outdoor event, wherein employees are able to sit in a normal posture in the shade without having physical contact with each other. All employees must have access to shade at all times when temperatures are above 80 degrees Fahrenheit.

Three methods that can be used to shade employees:

1. **Trees and Vegetation** in the open air and/ or with cross winds is the preferred method of cooling an employee. The trees/ vegetation must be sufficient enough to provide shade- flecks of sunlight are acceptable as long as the overall shade provides substantial blockage of the sunlight.

2. **Vehicles** may be used for heat illness prevention. Vehicles may be idled with the air conditioning running for a period of time to prevent heat illness.

3. **"Pop-ups", "Shade ups", canopies or umbrellas** ("Shading Device") may be used only for stationary activities (i.e. physical work locations, emergency incidents, outdoor training events, or work crew areas) where access to trees/vegetation or usage of a vehicle is limited or non-existent.

Personal Protective Equipment:

Clothing worn by employees should be lightweight, preferably light colored. If light colored clothing is not part of the uniform attire, breathable fabric that allows airflow and air movement is recommended. Long sleeves shirts can be worn to cover the body and protect against sunburn, but they also slightly affect the body's ability to cool itself.

Employees wearing personal protective equipment, gloves, hats, should be aware of the added heat load while worn in high heat conditions. Access to shade and hydration, as well as cooling breaks, may need to be taken more often than the minimum five minute recovery break per hour.

VI. General Responses to Heat Illnesses:

Response to symptoms:

The following will provide some guidance information on responding to the various heat illness illnesses and injuries:

Transient Heat Fatigue: temporary state of discomfort and mental strain arising from prolonged heat exposure.

a. Symptoms: general feeling of tiredness or fatigue and usually results in a decline in task performance, coordination, alertness, and vigilance.
b. Response: replace fluids, rest and gradual acclimatization.

Heat rash: occurs when the sweat glands become plugged on areas of the skin that are kept wet, such as the armpits and the groin area. It is usually a minor injury unless the area becomes infected.

a. Symptoms: itchy red bumpy rash.

b. Response: rest in the shade and dry off affected skin.

Heat Cramps: occur as a result of salt and potassium (electrolyte) depletion. Usually a minor illness which leaves no long term effects if treated properly.

a. Symptoms: muscle pain, cramps or spasms.
b. Response: rest in the shade, replenish with fluids and apply a moist cloth to cramps muscles (do not rub or massage).

Heat related fainting, otherwise known as syncope: occurs as a result of insufficient blood to the brain, caused by blood vessels on the skin drawing blood away from the brain and heart.

a. Symptoms: dizziness, lightheadedness and/or fainting.
b. Response: move to a shaded area and lie down with legs elevated until symptoms subside, remove any excess clothing or personal protective equipment, and replenish fluids gradually (slowly sip water or other non-caffeinated liquid).

Heat exhaustion: occurs when the body becomes overheated from the loss of fluids and salts. Heat exhaustion is the most common type of heat illness and is not life threatening if adequately recognized and responded to.

a. Symptoms: headache, dizziness, weakness/fatigue, nausea or vomiting, pale appearance, reduced sweating, weak rapid pulse, dry mouth, thirst, possible chest pain, and moderately raised body temperature (101-104 degrees Fahrenheit).
b. Response: Move to a shaded area to cool and rest, remove any excess clothing or personal protective equipment replenish fluids gradually (slowly sip water or other non-caffeinated liquid) and place ice behind the head to facilitate cooling.

Heatstroke: occurs when symptoms of heat exhaustion are not treated and the body continues to become overheated until the body's cooling system shuts down. Heat Stroke is the most serious heat illness and should not be taken lightly. It can be fatal if not properly treated.

a. Symptoms: Dry, hot, reddish skin (no sweating) , swollen tongue, strong rapid pulse, abnormal blood pressure, unsteadiness, dizziness/fainting, vomiting, headache, chills, seizures, irritability/confusion, loss of consciousness, shock, rapid and shallow breathing, and/ or excessively high temperature.
b. Response: Immediately call 911 and give emergency personnel pertinent information and the location, move the victim to the shade, remove any excess clothing and personal protective equipment, lightly spray the person with cool water and/or fan the victim with direct air, elevate their feet six to eight inches remove any

nearby objects that could cause injury if the victim is suffering from seizures and do not have the victim drink water (they may aspirate).

Employees who are showing signs of heat illness should stop and contact their supervisor or designee immediately. Employees should contact medical emergency services immediately if necessary.

VI. Emergency Medical Services:

Employees shall be trained in First Aid and CPR and the basic responses to heat illness so they may act as first responders when a heat illness injury occurs.

The following process will occur when an employee has been impacted with a heat related illness:

1. When an employee appears to be suffering from a heat illness, notify a supervisor and begin cool down/ first aid measures. If employee is unresponsive and cool down measures are not working contact 9-1-1 immediately. Use a public telephone, work cellular telephone, or a private cellular telephone, or mobile/ hand talkie radio. All 9-1-1 calls for emergency service (including most cellular telephone calls) are received by Dispatch. Advise Dispatch that an employee is suffering from a heat stroke emergency. Do not hang up; Dispatch will require further information from the calling party. Notify your chain of command after calling 911.

2. If the affected employee is able to walk, get them out of the sun, begin active cooling/ first aid measures for heat illness, and advise Dispatch of the employee's location. Be as precise as possible. If the dispatcher requests that the employee be moved to a location that is easier for emergency services (Police and Fire/EMS responders) to access, advise the dispatcher if you think that can be done without further injury.

If the employee cannot be re-located, provide Dispatch with the precise location. If other employees are available, direct them to the nearest cross streets or areas to assist in directing emergency services to the patient.

VII. Training:

All employees whose positions and titles are identified in this plan will undergo initial training on the following topics:

1. The Heat Illness Prevention Plan (HIPP) and Fact Sheet.

2. The environmental and personal risk factors influencing heat illness (*Appendix A-Risk Factors*).
3. The preventive measures mandated by this program.
4. The various types, signs, and symptoms of heat illness (*Appendix B-Heat Illnesses*).
5. How to read/understand the heat index (*Attachment A of HIPP*).
6. The importance of frequent consumption of water (*Appendix C*).
7. The importance of acclimatization.
8. The importance of PPE and how to use it properly.
9. The importance of reporting heat illness symptoms immediately.
10. Emergency responses to heat illness injuries (First Aid/CPR training provided in separate training).
11. High Heat Procedures (*Appendix D*).
12. A group review of the quiz (*Appendix E*).

Employees will complete the initial Heat Illness Training available through PERC.

Supervisors of employees who work in conditions that pose a risk of heat illness shall be additionally trained on the following topics:

1. How to anticipate the risk of heat illness.
2. The procedure that shall be followed to implement the requirements of this program.
3. The procedures that shall be followed when an employee exhibits signs or symptoms of heat illness, including emergency response procedures.
4. Importance of cooling rest breaks.

Periodic tailgate briefings covering key aspects (e.g. hydration, water/ shade breaks, modified work schedules, etc.) of this plan will be conducted by the Unit Supervisor(s) or Lead personnel when heat illness is possible. Similarly, a daily tailgate briefing will be conducted when high heat procedures are initiated (see Appendix D).

VIII. Recordkeeping:

All training records prepared in association with the Heat Illness Prevention Program (e.g., training sign-in sheets, safety meeting minutes, quizzes etc.) will be retained per the department retention schedule in the employee's file.

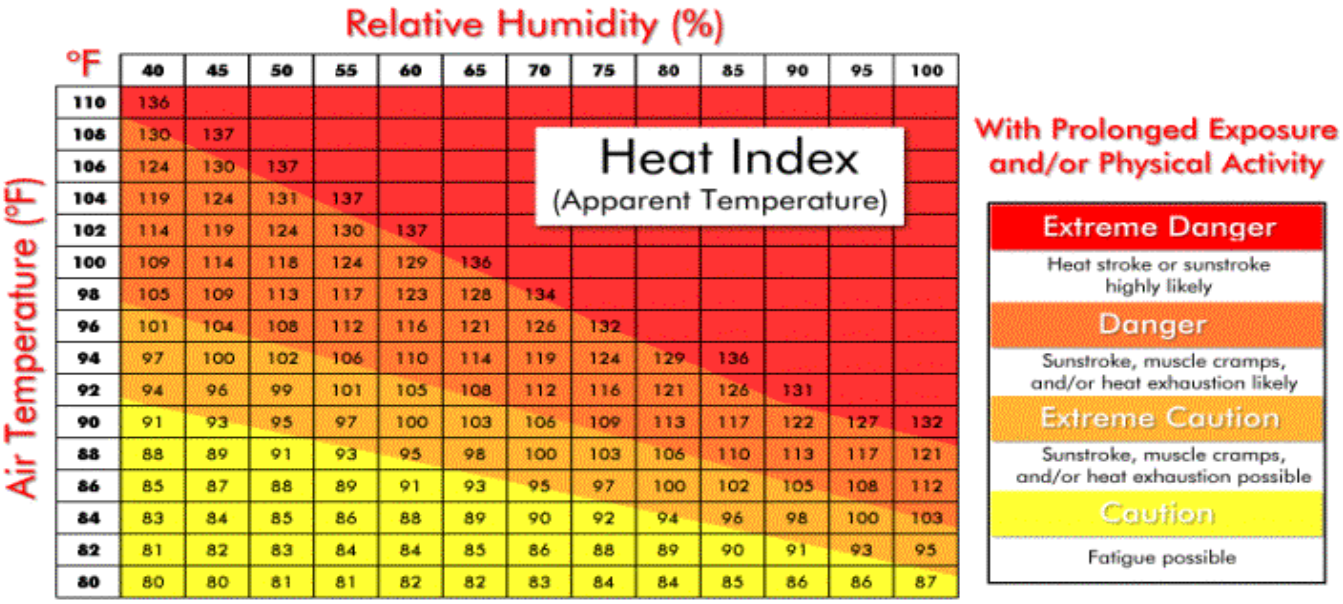
A copy of the acknowledgement form in Attachment B shall be signed by the employees after training has occurred and placed in the personnel file maintained by the respective Supervisor or Manager.

VIII. References/Resource Materials:

- Heat Illness Prevention (HIP) Fact Sheet
- Appendix A – Heat Stress Risk Factors
- Appendix B – Heat Related Illnesses
- Appendix C – Heat Stress Hydration
- Appendix D– High Heat Procedures
- Appendix E- Heat Illness Prevention Quiz
- CAL/OSHA Heat Illness page: http://www.dir.ca.gov/dosh/heatillnessinfo.html

Attachment A

Heat Reference Chart



- **Caution Range**: Fatigue possible with prolonged exposure and/ or physical activity.
- **Extreme Caution Range**: Heatstroke, heat cramps and heat exhaustion are possible with prolonged exposure.
- **Danger Range**: heatstroke heat cramps and heat exhaustion with prolonged exposure.
- **Extreme Danger Range**: Heatstroke is highly likely within 30 minutes of continued exposure.

Note: Staff exposed to direct sunlight may experience an additional 8-15 degrees to the employees' heat load.

Attachment B

RESPONSIBILITY:
This acknowledgment form shall be signed by the employees after training has occurred and placed in the personnel file maintained by the respective Supervisor or Manager.

By my signature below, I acknowledge that I have read, understand, and have been trained on this plan.

PRINT NAME and Employee Number **Signature**

DATE _____

Department/Program _____