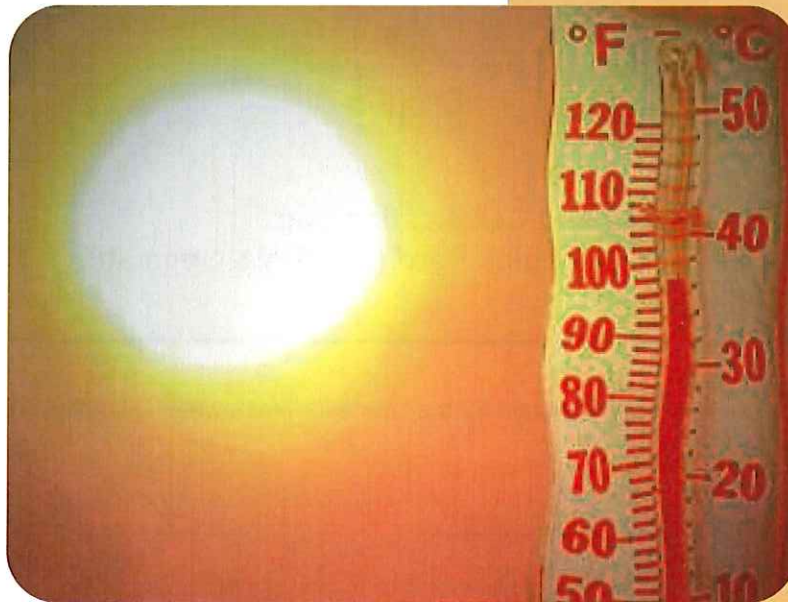


2018

Heat Illness Prevention Program



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4/3/2018

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- A Program Review and Certification Log
- B OSHA Heat Illness Quick Card (English & Spanish)
- C Heat Index Chart

I certify the Heat Illness Prevention Program for the Leucadia Wastewater District (LWD) has been reviewed and revised as necessary.



General Manager



Date Certified

1.0 PROGRAM REVIEW AND CERTIFICATION

The Heat Illness Prevention Program at the Leucadia Wastewater District (LWD) will be reviewed and revised as necessary to ensure the program is current. All revisions are documented on Attachment A: Program Review and Certification Log.

2.0 PURPOSE

The Heat Illness Prevention Program is designed to identify the procedures that will be used by LWD employees to reduce the risks of heat illness while working outdoors when environmental heat illness risk factors are present in accordance with California Code of Regulations, Title 8 (8 CCR), Section 3395.

3.0 APPLICABILITY

This Heat Illness Prevention Program applies to all LWD personnel (including temporary employees) who perform, or may perform, outdoor duties in locations where heat related environmental risk factors are present. Persons whose duties involve work activities at such locations are required to comply with the rules of operations and accepted safety practices outlined within this Program.

4.0 DEFINITIONS

Acclimatization. The body's temporary adaptation to hot environments occurs gradually when a person is exposed to such an environment. Acclimatization peaks in most people within four to fourteen days of regular work for at least two hours per day in the heat.

Affected Employees: At LWD, the following work groups perform, or may perform, outdoor work activities that have, or may have, environmental heat illness risk factors:

- Field Service Staff

Environmental Risk Factors for Heat Illness. Working conditions that create the possibility that heat illness could occur, including air temperature, relative humidity, and 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. A serious medical condition resulting from the body's inability to cope with a particular heat load, including heat stroke, heat exhaustion, heat cramps, fainting (heat syncope) and heat rash.

Heat Wave. Any day in which the predicted high temperatures for the day will be at least 80 degrees Fahrenheit and at least 10 degrees Fahrenheit higher than the average high daily temperature in the preceding 5 days.

High Heat Conditions. When outdoor temperatures equal or exceed 95 degrees Fahrenheit.

Personal Risk Factors for Heat Illness. An individual's age, degree of acclimatization, health, water consumption, alcohol consumption, caffeine consumption, and prescription/non-prescription medication use affect the body's water retention and other physiological responses to heat.

Preventative Recovery Period. A period of time to recover from the heat in order to prevent heat illness.

Shade. Direct sunlight blockage. 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 that 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 and that does not deter or discourage access or its use.

Temperature. Means the dry bulb temperature in degrees Fahrenheit that is obtained by using a thermometer to measure the outdoor temperature in an area where there is no shade (i.e. in full sunlight).

5.0 TRAINING

5.1 Employees

Employees working outdoors where environmental risk factors for heat illness could be present will receive heat illness awareness and prevention training. New employees will receive this training as part of New Employee Safety Orientation. Training shall include but not be limited to the following:

- 5.1.1 The environmental and personal heat illness risk factors and prevention methods including:

- Procedures for identifying, evaluating, and controlling exposure to environmental risk factors for heat illness;
- The concept, importance, and methods of acclimatization;
- Different heat illness types and associated symptoms, and the appropriate first aid and emergency response procedures to different types of heat illness.
- How heat illness progresses quickly from mild symptoms to life threatening illness must be stressed as part of this training.
- The importance of frequent water consumption, up to 4 cups per hour, in hot work environments and when employees are likely to be sweating more than usual;
- LWD's responsibilities under this Program to provide water, shade, cool-down rests, access to first aid and the employees right to exercise their rights of this Program without retaliation.
- The importance for employees to immediately report symptoms or signs of heat illness in themselves, or in co-workers, to their supervisor.
- Training on emergency response procedures found in section 6.3

5.1.2 The importance of immediately reporting symptoms or signs of heat illness in themselves or in co-workers;

5.1.3 The employer's heat illness response procedures, including how to access advanced emergency medical services and, if necessary, transporting the victim to a point better reached by emergency medical services;

5.1.4 How to provide clear and precise directions to the work site to emergency responders.

5.2 Supervisors

Supervisors with affected employees shall receive training on heat illness prevention and care prior to being assigned to supervise outdoor employees. Supervisors must be competent in the following:

5.2.1 The procedures to implement the applicable provisions in this program;

5.2.2 The procedures to follow when an employee exhibits symptoms consistent with possible heat illness, including access to advanced emergency care;

5.2.3 Implementing high heat procedures found in section 6.6.

5.2.3 Conducting refresher training to personnel at a frequency necessary for personnel to remain competent and informed with these procedures. Supervisors may use Attachment B, "OSHA Heat Illness Quick Card" for this refresher training in addition to other available resources.

5.2.4 How to monitor weather reports and how to respond to hot weather advisories.

5.2.5 Additionally, supervisors shall watch for the following events and initiate retraining as needed:

- When personnel are not observed to be consuming enough fluids while working in hot environments;
- Changes in the workplace reduce protections from heat or increases in heat exposures (e.g. outdoor projects and hot weather).
- On hot days, especially during heat waves, supervisors will hold additional tailgate meetings to review heat illness procedures with exposed workers. Attachment B can be used for this tailgate briefing.

6.0 PROGRAM COMPONENTS

6.1 Provisions for Water

- 6.1.1 Personnel shall be provided at no cost, ready access to fresh, pure, suitably cool, potable drinking water.
- The water will be located as close as practical to the areas where employees are working.
 - Where water is not continuously supplied (e.g. plumbed), it shall be provided by LWD in sufficient quantity at the beginning of the work shift to provide one quart per person per hour throughout the entire shift, when the work environment is hot and are likely to be sweating more than usual;
 - Employers may begin the shift with smaller quantities of water provided effective replenishment procedures are in place and utilized throughout the shift as needed to allow personnel to drink one quart or more per hour;
 - LWD Supervisor and FST III's will provide frequent reminders to drink water, and shall provide additional water breaks as needed.
- 6.1.2 Maintaining drinking water supplies:
- At least two quarts per employee shall be available at the shift start;
 - Water containers shall be routinely monitored for level and cleanliness;
 - Employees are encouraged to report low levels or dirty water;
 - The water supply shall be replenished when drinking water levels drop to the point that allows adequate water during the time required for replenishment;
 - Disposable/single use drinking cups, reusable bottles, or other drinking containers will be provided to employees.
 - Water containers shall be placed as close as possible to the workers.

6.2 Access to Shade

- 6.2.1 When the outdoor temperature in the work area (i.e. outdoors work activities) exceeds 80 degrees Fahrenheit, shade will be provided or be immediately available at all times (e.g. air-conditioned truck or building). Shade will either be open to the air or provided with a ventilation or cooling system. The shade provided must accommodate the number of employees on recovery or rest periods, and provide enough room that they can sit in a normal posture, fully in the shade without physical contact with each other.
- The shade shall be located as close as practical to the areas where employees are working.
 - The amount of shade present during meal periods shall be at least enough to accommodate the number of employees on the meal period who taking their lunch onsite.
- 6.2.2 When outdoor temperature in the work area (i.e. outdoors work activities) does not exceed 80 degrees, shade will be provided or made available upon request.
- 6.2.3 Employees suffering from heat illness or believing a preventative recovery period is needed, shall be encouraged to take a preventative cool-down rest in the shade if they feel the need in order to protect themselves from overheating. Employees who take a preventive cool-down rest shall:
- Be monitored for symptoms of heat illness. This includes asking them if they are experiencing heat illness symptoms. If an employee exhibits signs or symptoms, or reports symptoms of heat illness, they shall receive appropriate first aid by trained coworkers, or as needed, by trained emergency responder in accordance with section 6.4.

- Not be directed back to work until any signs or symptoms of heat illness have abated.
- Remain in the shade for at least a minimum of 5 minutes after all signs and symptoms of heat illness have abated.

6.2.4 Portable shade: If necessary, portable shade devices (canopies, umbrellas, etc.) will be provided if work activities do not allow employees to go inside a cool building, go inside an air-conditioned vehicle, or access a similar cool shaded area.

6.3 Emergency Response Procedures

6.3.1 When the outdoor temperature in the work area (i.e. outdoors work activities) exceeds 80 degrees Fahrenheit, or whenever environmental risk factors of heat illness are present such as high humidity (see Attachment C), the following emergency response procedures shall be implemented:

6.3.1.1 Communication: Employees shall have an electronic device (radio or cell phone) or other effective means to contact their supervisor. If cell phone reception is unreliable, a radio or other device will be used to ensure that employees can communicate to their supervisor.

6.3.1.2 Supervisor and work crew lead person shall be prepared to provide first aid and/or contact emergency medical services as indicated:

- If an employee reports, or is observed to have signs and symptoms of heat illness, the supervisor or work crew lead person will take immediate action in accordance with the seriousness of the illness. This includes, but not limited to; directing the employee to take a preventative cool-down rest period, assigning a coworker trained in first aid to treat for heat illness, and ensuring the employee drinks plenty of water.
- If the signs or symptoms are indicators of severe heat illness, the Supervisor, or work crew lead person, shall immediately implement emergency response procedures and call emergency medical responders (e.g. 911). Clean and precise directions to the work site must be provided to emergency responders.
- Any employee exhibiting signs or symptoms of heat illness shall be constantly monitored and shall not be left alone at any time. Nor shall they be sent home without being given onsite first aid and/or provided with emergency medical care. If an employee chooses to go home, they shall be driven to their home by another District employee.
- If necessary, an employee exhibiting or reporting signs or symptoms of heat illness shall be transported to a place where they can be reached by an emergency medical provider.
- All reports or observations of heat illness shall be immediately reported to the Field Services Supervisor.

6.4 General Guidelines and Recommendations

6.4.1 Supervisors, whenever possible, shall:

- Schedule maintenance and repair jobs in remote areas and areas of elevated temperature due to geography or topography for cooler months;

- Schedule hot jobs for the cooler part of the day;
- Acclimatize workers by exposing them for progressively longer periods to hot work environments;
- Reduce the physical demands of workers when the temperature rises;
- Use relief workers or assign extra workers for physically demanding jobs;
- Provide cool areas for use during break periods;

6.4.2 Supervisors shall remind employees of the following risk reduction measures:

- Wear light-colored, loose-fitting, breathable clothing such as cotton and avoid non-breathing synthetic clothing;
- Take breaks in the shade or a cool area when possible;
- Drink water frequently and in sufficient quantities to avoid becoming dehydrated;
- Avoid drinks with caffeine and large amounts of sugar;
- Be aware that protective clothing or personal protective equipment may increase the risk of heat stress;
- Monitor personal physical condition and that of coworkers.

6.5 Acclimatization

6.5.1 New employees/new job assignments: An employee who has been newly assigned to a high heat work area or job task shall be closely monitored by a supervisor or designee for the first 14 days of the employee's employment.

6.5.2 During a heat wave (see definitions) all employees working outdoors shall be closely monitored by a supervisor or designee.

6.6 High-heat procedures

6.6.1 Whenever the temperature equals or exceeds 95 degrees Fahrenheit, LWD will implement the following high-heat procedures for employees working outdoors in high-heat conditions, to the extent practical:

- Supervisors will ensure that such employees have an electronic device (radio or cell phone) or other effective means to contact their supervisor. If cell phone reception is unreliable, a radio or other device will be used to ensure that employees can communicate to their supervisor;
- Supervisors will use one or more of the following techniques to effectively observe/monitor employees for signs and symptoms of heat illness:
 - ✓ Direct observations by Supervisor or designee of 20 or fewer employees
 - ✓ Establish a mandatory buddy system.
 - ✓ Have regular communications with a sole employee by radio or phone, or other device.
 - ✓ Use other effective means of observation as practical.
- Supervisors will designate one or more employees on each worksite as authorized to call for emergency medical services.
 - ✓ Other employees may call for emergency services when no designated employee is available.
- Supervisors will remind employees be alert for signs and symptoms of heat illness.
- Supervisors shall hold pre-shift meetings before the work shift to review these high heat procedures, to encourage employees to drink plenty of water, and to remind employees of their right to take a cool-down rest when needed.

7.0 RESPONSIBILITIES

- 7.1 **Field Services Superintendent:** The LWD Field Services Superintendent has the overall authority and responsibility for implementing the provisions of this Heat Prevention Program for the Leucadia Wastewater District. Specific responsibilities include, but are not limited to:
- A. Overall responsibility and authority for ensuring this program is fully implemented.
 - B. Ensuring that funding is provided to successfully implement the program requirements.
 - C. Ensuring that the Program and program requirements are enforced.
 - D. Implementing all other relevant responsibilities as identified in the Injury Illness Prevention Program (IIPP).
- 7.2 **Administrative Services Supervisor** is responsible for:
- A. Providing Managers and Supervisors guidance on the laws and regulations governing the Heat Illness Prevention Program, and conducting the necessary research to determine which requirements and standards apply.
 - B. Coordinating/scheduling training for affected Supervisors and crew lead persons in accordance with section 5.2.
 - C. Providing training resources to affected Supervisors and crew lead persons on heat illness prevention and ensuring that affected Supervisors train their respective employees in accordance with section 5.1
 - D. Ensures that the training records are maintained.
 - E. Monitoring the effectiveness of the Heat Illness Prevention program by performing a program review and completing the *Program Review and Certification Form* (Attachment A).
 - F. Implementing all relevant responsibilities as identified in the Injury Illness Prevention Program (IIPP).
- 7.3 **Supervisors:** Supervisors are responsible for:
- A. Identifying and maintaining records of all tasks and the employees who are required to work outdoors where potential heat illness could occur, and notifying the LWD Field Services Superintendent whenever significant operational changes or personnel changes occur.
 - B. Ensuring adequate water and shade are available at the job site in accordance with sections 6.1 and 6.2 when the environmental risk factors for heat illness are present;
 - C. Implementing emergency response procedures in accordance with section 6.3 and contacting 911 (land line) and a Manager to request emergency medical services in the event medical assistance is required;

- D. Ensuring employees who has been newly assigned to a high heat work area or job task, or who will be working outdoors in a heat wave, have been properly acclimatized in accordance with section 6.5.
- E. Implementing high heat procedures when the temperature equals or exceeds 95 degrees Fahrenheit in accordance with section 6.6.
- F. Promoting heat illness awareness to all personnel and ensuring personnel comply with all heat illness prevention Program provisions;
- G. Ensuring new and existing employees receive documented heat illness training as applicable to their job duties and seasonal temperature changes;
- H. Conducting periodic observations to verify Heat Illness Prevention Program compliance.
- I. Applying consistent, progressive disciplinary action as needed to maintain compliance with the Heat Illness Prevention Program.

7.5 **Employees** are responsible for:

- A. Participating in safety meetings and attending all relevant training;
- B. Immediately reporting any unsafe conditions or any heat illness onset indicators to their supervisor or other appropriate person;
- C. Taking a preventative cool-down rest in shade if they feel the need to do so in order to protect themselves from overheating;
- D. Awareness and compliance with all appropriate heat illness prevention procedures while performing assigned duties;
- E. Drinking hydrating fluids in adequate amounts when the environmental risk factors for heat illness are present;
- F. Informing their Supervisor if shade and/or water are inadequate;
- G. Contacting 911 (land line) and the Supervisor or a Manager, if the Supervisor is not present and emergency medical services are required.

8.0 Recordkeeping

- 8.1 Training records shall be maintained by LWD for a minimum of three years.
- 8.2 Such records shall be provided upon request to current LWD personnel, former employees, and employee representatives.

ATTACHMENT A
Program Review and Certification Log

<i>Heat Illness Prevention Program Review and Certification Log</i>		
Date	Identify the Sections/Attachments Revised	Initial

ATTACHMENT B-1
OSHA Heat Illness Quick Card (English)



Protect Yourself
Heat Stress



When the body is unable to cool itself by sweating, several heat-induced illnesses such as heat stress or heat exhaustion and the more severe heat stroke can occur, and can result in death.

Factors Leading to Heat Stress

High temperature and humidity; direct sun or heat; limited air movement; physical exertion; poor physical condition; some medicines; and inadequate tolerance for hot workplaces.

Symptoms of Heat Exhaustion

- Headaches, dizziness, lightheadedness or fainting.
- Weakness and moist skin.
- Mood changes such as irritability or confusion.
- Upset stomach or vomiting.

Symptoms of Heat Stroke

- Dry, hot skin with no sweating.
- Mental confusion or losing consciousness.
- Seizures or convulsions.

Preventing Heat Stress

- Know signs/symptoms of heat-related illnesses; monitor yourself and coworkers.
- Block out direct sun or other heat sources.
- Use cooling fans/air-conditioning; rest regularly.
- Drink lots of water; about 1 cup every 15 minutes.
- Wear lightweight, light colored, loose-fitting clothes.
- Avoid alcohol, caffeinated drinks, or heavy meals.

What to Do for Heat-Related Illness

- Call 911 (or local emergency number) at once.

While waiting for help to arrive:

- Move the worker to a cool, shaded area.
- Loosen or remove heavy clothing.
- Provide cool drinking water.
- Fan and mist the person with water.

For more complete information:

 **Occupational
Safety and Health
Administration**
U.S. Department of Labor
www.osha.gov (800) 321-OSHA

OSHA 3154-07R-06

ATTACHMENT B-2
OSHA Heat Illness Quick Card (Spanish)



**Protéjase del
Estrés por calor**



Quando el cuerpo no puede bajar su temperatura mediante el sudor, pueden ocurrir varias enfermedades debido al calor, tales como estrés o agotamiento por calor e insolación o golpe de calor, las cuales pueden resultar en la muerte.

Factores que llevan al estrés por calor

Alta temperatura y humedad, calor o sol directo, movimiento limitado de aire, esfuerzo físico, pobre condición física, algunas medicinas y tolerancia inadecuada para lugares de trabajo calurosos.

Síntomas de agotamiento por calor

- Dolores de cabeza, mareos, vértigo o desmayo.
- Debilidad y piel húmeda.
- Cambios de humor como irritabilidad o confusión.
- Náuseas o vómitos.

Síntomas de insolación

- Piel seca y caliente sin sudor.
- Confusión mental o pérdida de conocimiento.
- Convulsiones o ataques.

Evita el estrés por calor

- Conozca las señales y los síntomas de las enfermedades relacionadas al calor; obsérvese a sí mismo y a sus colegas.
- Bloquee el sol directo u otras fuentes de calor.
- Utilice ventiladores (abanicos) o aire acondicionado; descansen con regularidad.
- Beba mucha agua, como 1 taza cada 15 minutos.
- Vístase con ropa ligera, de colores claros y no ajustada.
- Evite el alcohol, bebidas con cafeína o comidas pesadas.

Qué hacer en caso de enfermedades relacionadas al calor

- Llame al 911 (u otro número local para emergencias) inmediatamente.

Mientras espera por ayuda:

- Mueva a la persona a un lugar fresco y sombreado.
- Suéltelo o quitele la ropa pesada.
- Ofrézcale agua fresca para beber.
- Abanique y rocíe con agua a la persona.

Para información más completa:



ATTACHMENT C

Heat Index Chart (Temperature & Relative Humidity)

RH (%)	Temperature (° F)															
	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105
90	119	123	128	132	137	141	146	152	157	163	168	174	180	186	193	199
85	115	119	123	127	132	136	141	145	150	155	161	166	172	178	184	190
80	112	115	119	123	127	131	135	140	144	149	154	159	164	169	175	180
75	109	112	115	119	122	126	130	134	138	143	147	152	156	161	166	171
70	106	109	112	115	118	122	125	129	133	137	141	145	149	154	158	163
65	103	106	108	111	114	117	121	124	127	131	135	139	143	147	151	155
60	100	103	105	108	111	114	116	120	123	126	129	133	136	140	144	148
55	98	100	103	105	107	110	113	115	118	121	124	127	131	134	137	141
50	96	98	100	102	104	107	109	112	114	117	119	122	125	128	131	135
45	94	96	98	100	102	104	106	108	110	113	115	118	120	123	126	129
40	92	94	96	97	99	101	103	105	107	109	111	113	116	118	121	123
35	91	92	94	95	97	98	100	102	104	106	107	109	112	114	116	118
30	89	90	92	93	95	96	98	99	101	102	104	106	108	110	112	114

Note: Exposure to full sunshine can increase HI values by up to 15° F

