CONTRACT SERVICES

Safety Training Course A2

ENVIRONMENTAL SAFETY

Presented by

Contract Services Administration Training Trust Fund

As part of the

Safety Pass Training Program for the Motion Picture and Television Industry

A2

Third Edition
September 2016

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English:
If you do not comprehend English, and you require Safety Pass training in a language other than English, please send notification in writing to 2710 Winona Avenue, Burbank, CA 91504. Please provide your name, along with contact information, and specify the language you comprehend. Thank you.

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Si usted no comprende inglés y requiere la capacitación Safety Pass en un idioma diferente al inglés, por favor envíe una notificación por escrito a 2710 Winona Avenue, Burbank, CA 91504. Por favor provea su nombre, junto con la información de contacto, y especifique el idioma que usted comprende. Gracias.

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영어를 이해하지 못하시고 영어가 아닌 다른 언어로 Safety Pass 훈련을 받으셔야 한다면, 서면 통지를 2710 Winona Avenue, Burbank, CA 91504로 보내주시기 바랍니다. 귀하의 성함과 연락처를 기재하시고 이해하실 수 있는 언어를 명시해주십시오. 감사합니다.

Armenian:
Եթե դուք անգլերեն չեք հասկանում և ձեզ հարկավոր է Safety Pass-ի մարզում անգլերենից տարբեր լեզվով, խնդրում ենք գրավոր ծանուցագիր ուղարկել հետևյալ հասցեով՝ 2710 Winona Avenue, Burbank, CA 91504: Խնդրում ենք ներկայացնել ձեր անունը, ինչպես նաև կապի տեղեկությունը, հատկապես նշելով ձեր հասկացած լեզուն: Շնորհակալություն:

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Burbank, CA 91504

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Safety Pass Training Program

The Entertainment Industry is committed to maintaining a safe and healthful working environment. To that end, all major studios have a safety representative on staff. In addition, all employers have a safety program in force. This Safety Pass Program has been designed to further promote safety and health and to prevent injuries, illnesses, and accidents on all productions, both on-lot and off-lot.

Studios and production companies may have more restrictive safety requirements than those mandated by local, state, or federal laws or regulations. They also may assign different duties or responsibilities to employees. Therefore, in addition to this Safety Pass training course, employees should refer to the safety manual and materials provided by their employers.

Employees must adhere to all safety rules and regulations. Failure of any employee to follow safety rules and regulations can lead to disciplinary action, up to and including discharge. However, no employee shall be discharged or otherwise disciplined for refusing to perform work that the individual reasonably believes is unsafe.

No safety training can comprehensively cover all possible unsafe work practices. Each production and its employees, therefore, should fully promote each employee's personal obligation to work safely in order to prevent accidents involving, and injuries to, the employee and to his/her fellow employees.

The Safety Pass Program derives from Federal and California Occupational Safety and Health Administration (OSHA) safety regulations. However, the material included in this workbook and its accompanying presentation should be used only as a general guideline. It is not intended as a legal interpretation of any federal, state, or local safety standard.

During the course of your employment, you may be acting as a supervisor or manager. In California, individuals with management authority and actual authority for the safety of a business practice could be convicted of a crime if they have actual knowledge of a serious concealed danger and fail to warn the affected employees and report the hazard. If a hazard exists, immediately notify the employer or studio safety department of the hazard and insure that potentially affected employees are informed of the danger and that steps are taken immediately to mitigate it.

Although the information contained in this training program has been compiled from sources believed to be reliable, the Alliance of Motion Picture and Television Producers, Contract Services Administration Trust Fund, Contract Services Administration Training Trust Fund, and the instructor make no guarantee nor warranty as to, and assume no responsibility for, the accuracy, sufficiency, or completeness of such information.

The Entertainment Industry is committed to maintaining a safe and healthful working environment.

Injury and Illness Prevention Program

This class is part of the employer's safety program.

Employers must provide workers a place of employment free from recognized hazards and must have a safety training program in place.

In the State of California, this is known as an Injury and Illness Prevention Program (IIPP). One of the key requirements of an IIPP is that every employee must be properly trained in safety.

The IIPP and Safety Pass training courses are part of the employer's safety program.

Contents

Scene 1
Introduction

Congratulations on the safety record of the motion picture and television industry. The rate of injury in this industry has dropped since the inception of the Safety Pass program.

This *A2-Environmental Safety* course is a follow-up to the *A-General Safety* course.

It covers other important topics:

- Studio lot and location safety
- Heat illness
- Severe weather conditions
- Disaster and emergency response
- Fire safety and prevention
- Environmental awareness
- Electrical safety
- Workplace cleanliness
- Bloodborne pathogens

The rate of injury in this industry has dropped since the inception of the Safety Pass program.

Safety Hotlines

Major studios have safety hotlines to address concerns and questions regarding safety or health issues. Studio safety hotlines can be reached by anonymously calling 888.7.SAFELY (888-772-3359). This is an automated system that connects with studio safety hotlines.

Studio safety hotline phone numbers can also be found at www.csatf.org using the Studio Safety Hotlines link.

Code of Safe Practices and Safety Bulletins

The Industry-Wide Labor-Management Safety Committee has written a Code of Safe Practices to be used as guidelines in the workplace. The committee has also developed Safety Bulletins that cover specific industry practices.

- The Code of Safe Practices and all Safety Bulletins may be viewed or downloaded at www.csatf.org (Figure 1.1).
- Construction Safety Orders require every employer to have and post a general set of Code of Safe Practices at each job site.

A review of Industry-Wide Labor-Management Safety Bulletins and Safety Pass training should be performed at the beginning of each new season, the start-up of a new project, or on a periodic basis.

Both employer and employee have general responsibilities that, when followed, become very effective in maintaining a safe and healthy work environment.

NO.	DESCRIPTION	DATE
1	Recommendations for Safety with Firearms and Use of "Blank Ammunition"	Revised 04/16/03
2	Special Use of "Live Ammunition"	Issued 04/16/03
3	Guidelines Regarding the Use of Helicopters in Motion Picture Productions	Issued 08/15/01
3A	Addendum "A" External Loads – Helicopter	Issued 08/15/01
4	Stunts	Revised 01/26/05
5	Safety Awareness	Issued 08/18/02
6	Animal Handling Rules for the Motion Picture Industry	Revised 01/21/98
7	Recommendations for Diving Operations	Revised 08/28/07
8	Guidelines for Traditional Camera Cars	Revised 07/19/06
8A	Addendum "A" – Process Trailer/Towed Vehicle	Revised 08/28/12
8B	Addendum "B" – Camera Boom Vehicles	Revised 08/28/12
8C	Addendum "C" – Power Line Distance Requirements	Revised 08/28/12
9	Safety Guidelines for Multiple Dressing Room Units	Revised 10/03/95
10	Guidelines Regarding the Use of Artificially Created Smokes, Fogs and Lighting Effects	Revised 10/20/09
11	Guidelines Regarding the Use of Fixed-Wing Aircraft in Motion	

Figure 1.1. Current safety bulletins can be downloaded from the CSATF website.

Employer Responsibilities

Employers must:

- Provide a safe work environment.
- Comply with all safety laws and regulations.
- Have a safety training program in place. In California, that safety program is known as an Injury and Illness Prevention Program (IIPP).
- Provide proper training on the equipment used.
- Make records of accidents, injuries, or chemical exposures available.
- Post required documents including notices and warnings.

Employee Responsibilities

Employee responsibilities, under Cal/OSHA guidelines:

- Know and obey all safety rules and regulations associated with the job.
- Use any safety equipment the employer provides.
- Follow all company safety policies.
- Report any unsafe acts or conditions to a supervisor, department head, or the Safety Hotline.

Remember, employees may not be fired or disciplined for refusing to perform work that the employee reasonably believes is unsafe. Employees may be fired or disciplined for endangering themselves or others.

No safety program or set of government regulations can cover all possible unsafe acts or working conditions. It is up to each employee to work safely, prevent accidents, and avoid injury to themselves or others.

Supervisors may have additional responsibilities including looking out for the safety of the crew.

Notes

Scene 2
Studio Lot and Location Safety

Whether working on a studio lot or at a location, be aware of the surroundings and look out for other workers. With so many different crafts working at one site, it is important that everyone works as a team.

Hazards might arise when a set becomes crowded with multiple crafts sharing the same space. Work in one area could lead to falling objects, trip hazards, chemical exposures, noise, debris, or other issues that could impact others working nearby. Wherever you're working and whatever your task, be aware of your surroundings and communicate with other workers. If you have questions, talk to your supervisor or safety representative.

Each studio has guidelines (Figure 2.1) for studio lot and location safety. This scene covers some of the safety practices that apply broadly to all work locations.

Figure 2.1. Each employer will have a site-specific safety plan.

Issues Common to Studio Lots and Locations

There are many situations that workers will encounter on studio lots *and* on locations. They are unique workplaces, with vehicles, pedestrians, and equipment, sometimes in congested conditions. Everyone needs to be aware of the surroundings.

Street and Traffic Signs

Avoid distractions, including the use of cell phones.

All street and traffic signs must be obeyed (Figure 2.2). Pay special attention to stop signs and speed limits.

Be aware of pedestrian and vehicular traffic.

Figure 2.2. Pay attention to all street and traffic regulations.

Pedestrian Safety

- Look both ways before crossing a street.
- Watch for trip hazards such as manhole covers, grates, uneven pavement, cable runs, trailer hitches, and liftgates.
- Watch out for bicycles, electric carts, small utility vehicles, and other moving vehicles.
- Be cautious around heavy equipment such as forklifts and aerial lifts. Never assume that the driver of heavy equipment can see people near the vehicle.
- Never be in a position where there is the risk of being pinned or crushed if the equipment moves in an unexpected manner.
- Do not stand in the middle of the street without traffic control present, whether on a studio lot or on location, including during shooting, a tech scout, set-up, or wrap.

Texting and walking do not mix.

Reflective, High-Visibility Vests

Federal, state, and local laws **require** reflective, high-visibility vests (Figure 2.3) to be worn and visible when working on or near active streets and roadways.

They must be worn:

- During set-up, rigging, filming, or striking activities performed on or near an active roadway, unless production has obtained full closure and control of the roadway.
- When directing traffic or responsible for lockup during partial lane closures where intermittent traffic control is used to control traffic.

Other situations may require high-visibility vests, depending on location and activity. For example, they may be required when working near railroads, in subways, at construction sites, at airports, or on docks, or productions may require them for safety even when there is a full closure of the road such as a night scene using multiple vehicles.

The color of the reflective, high-visibility vests must be either orange-red or yellow-green with reflective stripes that meet ANSI standards. The retro-reflective stripe material shall be orange, yellow, white, silver, yellow-green, or a fluorescent version of these colors.

Check with a supervisor, department head, or studio safety representative for issuance of sppropriate vests.

Alternative safety considerations should be made when wardrobe requirements prevent cast from wearing reflective, high-visibility vests.

Figure 2.3. Vests are required when working near traffic.

Driveways and Businesses

Consider pedestrian safety and maintain access to businesses. Do not block doorways or driveways.

Designated walkways should be provided to separate pedestrian traffic and other business traffic from work zones using control devices such as cones, caution tape, and signs.

Keep businesses accessible to their customers.

Vehicular Safety

- Do not block or cover traffic signs without permission from the authority having jurisdiction (AHJ).
- Use signals or spotters when parking or moving trucks and vehicles.
- Do not park in red zones or block fire hydrants.

Figure 2.4. Idling times may vary from state to state and from studio to studio. Check with each employer for any questions regarding a specific location.

Idling times may vary from state to state and from studio to studio. Check with each employer.

Idling Large Trucks

The idling limits of diesel commercial vehicles (Figure 2.4) vary based on the weight of the vehicle and the anti-idling regulations of the state, county, or municipality where the vehicle is being used. In some areas, these idling limits may also apply to gasoline powered vehicles.

California environmental regulations limit diesel vehicle idling time to no more than five minutes for commercial vehicles with a gross vehicle weight rating greater than 10,000 lb.—larger than a 5-ton truck.

This regulation applies to "dead idling," which is idling without a purpose. It does not apply when a truck is stuck in traffic, where the engine is necessary to operate some piece of equipment, like a liftgate, or when a truck is waiting in line to drop-off or pick up.

Operating Vehicles on Stage or Inside Buildings

Special permission must be obtained to use gasoline or diesel equipment indoors. Check studio policy about vehicles, including aerial lifts, forklifts, and picture cars on stage or inside a building.

Liftgates

General Liftgate Safety

Liftgates are used on a truck, trailer, or van to raise and lower items.

Follow these guidelines to ensure the safe use of the liftgates.

- Follow manufacturer's recommendations. Some manufacturers do not allow anyone to ride the lift.
- When not being used as a lifting device, the liftgate should be positioned flat on the ground or in the stowed and latched position (Figure 2.5). Do not leave the liftgate halfway up as a step to go in and out of a truck. The preferred method is to go in and out is by the stairs on the side of the vehicle.
- Close and lock the liftgate when not in use.
- Never ride the liftgate when the vehicle is in motion. Do not move the vehicle unless the liftgate is closed and in a latched position.
- Follow maintenance and service recommendations.

Figure 2.5. Liftgate positioned flat on the ground (left), partially elevated (middle), and stowed (right).

Readying the Liftgate

- Truck or trailer should be parked and as level as possible.
- Only people familiar with liftgate operation should be authorized to operate the equipment.
- Read manufacturer's instructions on how to operate the controls of the specific liftgate being used (Figure 2.6). It may be necessary to practice operating the controls without a load.
- Before use, inspect the liftgate for wear and tear, including cables, chains, and other components.
- Do not use the liftgate if any problems are discovered during the component check.

Read and follow the operator's instruction manual.

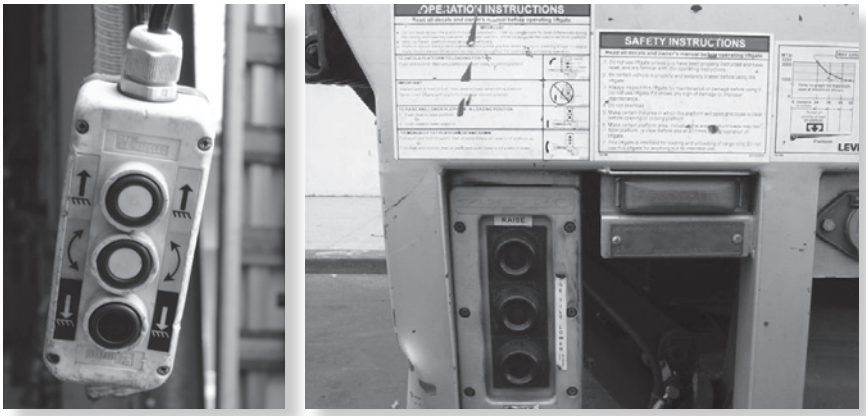


Figure 2.6. Be sure to understand what each of the controls does before operating a liftgate with a load and/or person on it.

Moving the Liftgate

- Call out to let people know anytime the liftgate is moving.
- Ensure the space below the liftgate and between the platform and truck body is clear.
- Keep hands and feet clear of all pinch points.
- Keep the working area clear of people.
- Stand to the side of the vehicle as the liftgate comes down.

Managing the Load

- Do not lift or lower loads greater than the rated capacity of the liftgate (Figure 2.7).
- Center the load on the gate, and control it with brakes, wheel chocks, sand bags, or wedges.
- If the manufacturer permits people to ride the liftgate, they should position themselves so a shifting load will not harm them or knock them off the liftgate.

Figure 2.7. The capacity of the liftgate is typically posted on the vehicle.

Additional Precautions

- Wear reflective, high-visibility vests when in traffic areas.
- Use safety cones, pylons, or stanchions to block lanes and create a safe working space.
- Use truck flashers, safety lights, or other means of illumination to mark off the edges of the liftgate.
- After dark, provide illumination for and around the liftgate if it is not equipped with safety lights.
- Be cautious during wet conditions as the liftgate may become slippery.

If the load comes loose and is going to fall from the liftgate, LET IT GO!

Stairs to Mobile Trailers

All stairways that have four or more steps must have stair rail(s) on all open sides to protect people from falls (Figure 2.8).

In California, the stair rails are to be between 34–38 in. above the tread of each step. Check with the employer for required stair rail heights outside of California.

Be cautious when coming down stairs.

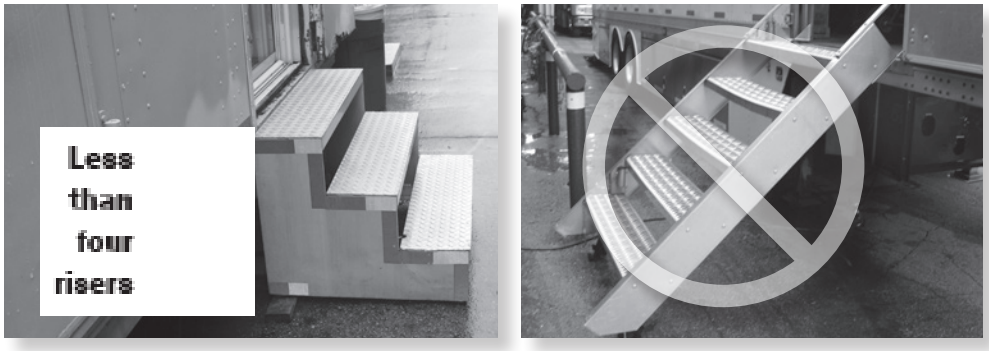


Figure 2.8. Stair rails are not required on stairs that have less than four risers (left). A stair rail is required (right).

Bicycles and Golf Carts

Many studios have rules governing the on-lot operation of bicycles and golf carts (Figure 2.9). Check with the employer or safety department for specific rules.

Figure 2.9. Follow studio guidelines for rules governing the on-lot operation of bicycles and golf carts.

Electric Carts and Small Utility Vehicles

Small utility vehicles, such as golf carts, ATVs, and Gators, are frequently used for production support to transport equipment and passengers (Figure 2.10).

- Horseplay, careless operation, and excessive speed will not be tolerated. Lot privileges can be taken away and permits to drive on the lot can be revoked.
- Inspect the vehicle before use, including brake lights, tires, and steering.
- Understand the vehicle controls. If needed, ask for instruction on how to operate the vehicle.
- Operators are responsible for the safe transportation of passengers and equipment.
- Operators should hold a valid driver's license, and if not held, should notify production.

Drivers of electric carts and utility vehicles must obey applicable vehicular regulations and traffic signs.

Figure 2.10. A variety of vehicles are used for lot operations, maintenance, and by productions.

- Each passenger must have their own seat. Multiple people sitting in seats designated for one or riding on parts of the vehicle that are not designated for that purpose, including bumpers and tailgates, are strictly prohibited.
- Wear a seat belt if provided.
- Keep arms and legs inside the vehicle at all times.
- If the vehicle is not equipped with a windshield, eye protection is recommended.
- A helmet may be necessary in certain situations.
- If the vehicle is equipped to carry loads, follow the manufacturer's recommendations. Loads should be secured in a manner that will not allow them to shift or fall from the vehicle. Balance the load appropriately. Do not exceed the manufacturer's load recommendations.
- Always use caution when driving near people and animals.
- Pedestrians always have the right of way.
- Use caution going around corners.
- Look for hazards and be familiar with the terrain.
- To reduce the risk of roll overs, avoid driving off curbs, driving from one level to another, and turning on inclines.
- Drive at speeds appropriate to the surface, road, and weather conditions, for example, driving in dirt or gravel, on a steep incline, on ice, in rain, etc.
- At night, or when visibility is poor, vehicles should not be operated unless equipped with headlights or sufficient lighting is provided.
- Towing should be performed only in the manner specified by the manufacturer.

Follow the manufacturer's load recommendations. Overloading can affect braking and control of the vehicle.

For more information, see Safety Bulletin #40, *Safety Guidelines for Non-Camera Utility Vehicles*, which is available online at www.csatf.org.

Figure 2.11. Hazards must be mitigated before filming.

Buildings and Structures

Even if they do not look old or run-down, buildings may have hazards such as structural deficiencies, protruding nails, loose or uneven flooring, or a lack of fire extinguishers (Figure 2.11).

Health hazards, such as mold, standing water, bird or rodent droppings, asbestos, or lead paint, may be present.

Do not disturb surfaces, such as floors, ceilings, and walls, or move walls without checking for hazards. Hazards identified during the scout must be mitigated before filming.

Some areas may be safe while other areas may be off-limits. The off-limits areas should be clearly marked using signs and caution tape. Work only in designated areas.

Do not wander into off-limits areas.

Figure 2.12. Workers must be protected from fall hazards at roof edges. Parapets must meet minimum height requirements to be considered adequate fall protection.

Rooftops

Rooftops present special hazards, such as slopes, obstructions, trip hazards, solar panels, weak spots, and the possibility of falling off an unguarded edge or through a skylight, that must be addressed before shooting.

Before working on a rooftop, careful planning is needed to mitigate the risks (Figure 2.12). This includes evaluating the capacity and structural integrity of the roof structure, the parapet minimum heights, and the need for fall protection. Contact the employer or safety department for assistance.

Elevated Areas

Elevated work areas require fall protection when greater than a certain height. The height that triggers the requirement for fall protection varies by the location of the work and the type of work being performed. Check with the employer or safety department to determine what form of fall protection is required at a specific location.

The most common form of fall protection is guardrails. Guardrails must conform to regulations, including requirements for top rails, midrails, and toe boards. If guardrails are not feasible, then other fall protection, such as a personal fall protection system, must be used.

For specific situations, such as working in an aerial lift or working outside the guardrails of a catwalk system, personal fall protection is required (Figure 2.13).

Each employer may have specific rules regarding fall protection.

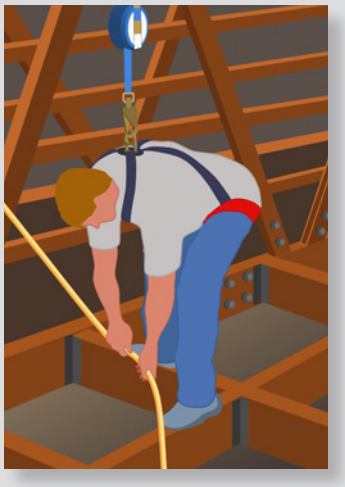


Figure 2.13. A fall arrest system in use.

Figure 2.14. Lighting and grip rigging in a soundstage.

Suspended/Overhead Items

- Be aware of people working overhead. Avoid standing below the work area.
- Be aware of suspended items (Figure 2.14). These can range from very small props to very large set pieces and special effects rigs.
- Items rigged overhead should be installed by qualified personnel and have a safety line attached.
- Approval from a registered structural engineer may be required before rigging heavy items overhead.
- Notify the appropriate department head if there is a safety concern with any suspended items.

Avoid standing below the work area when overhead work is being performed.

Floors, Pits, and Tanks

There are many different types of floors. Generally, soundstages have either raised wood or reinforced concrete floors.

Always know the weight capacity of the floor (Figure 2.15) before driving any heavy equipment, including lifts and vehicles, onto it. In some instances the floor may need to be reinforced before being loaded with heavy equipment.

Some pit or tank covers will be marked in yellow or red.

Some floors have pits and tanks beneath them. In many instances the weight capacity of the pit or tank cover is significantly less than the main floor. If the weight capacity of the floor is not known, contact a supervisor or the studio lot or location representative.

Never drive equipment, such as a forklift or an aerial lift, over a pit or tank cover without prior authorization.

Pits and tanks may be marked on the floor and identified on posted floor plans. Stay clear unless properly trained and authorized by the employer to work in those areas.

Figure 2.15. Never exceed the weight capacity of the floor.

Confined Spaces

Pits, tanks, and underground vaults may be considered confined spaces. A confined space is any space that can be entered but has limited or restricted access and is not designed for continuous occupancy. Confined spaces (Figure 2.16) may be oxygen deficient or have hazardous levels of other gases (Figure 2.17). Stay clear of these areas unless trained and authorized by the employer to work there.

Figure 2.16. Signifies a confined space.

Do not enter a confined space without following the employer's confined space requirements.

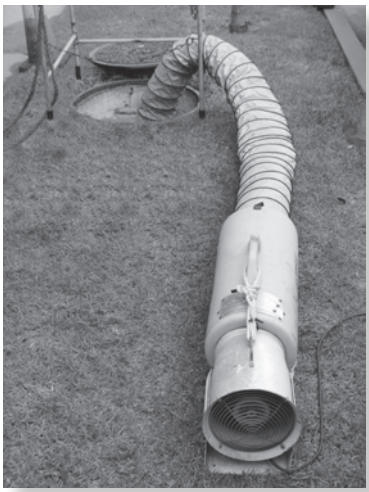


Figure 2.17. A manhole with a ventilator fan.

Storm Drains and Sewers

Whether on location or a studio lot, do not assume anything can be washed down any type of drain. This includes storm drains (Figure 2.18), sinks, and gutters. There are even restrictions on water and ice.

Check with the employer or safety department for guidelines.

Figure 2.18. Know the restrictions before putting anything into a storm drain.

Lockout/Tagout

Lockout/tagout (Figure 2.19) is a procedure used to isolate and control the release of hazardous energy. This is necessary to safely work on equipment during maintenance, repair, or inspection.

Lockout/tagout is not just for electrical energy. Other types of energy needing control include pneumatic, chemical, magnetic, and thermal.

- **NEVER** bypass or remove a lockout/tagout device that someone else has placed on a piece of equipment.
- If a tag is there, it means the other person is working on the equipment. Removing the tag could cause serious injury or death.
- If there is a possibility that the tag is incorrectly placed, contact the authorized person who placed the tag or a supervisor.

Lockout/tagout isolates and controls the release of energy.

Figure 2.19. Never bypass a lockout/tagout device that someone else has placed on a piece of equipment.

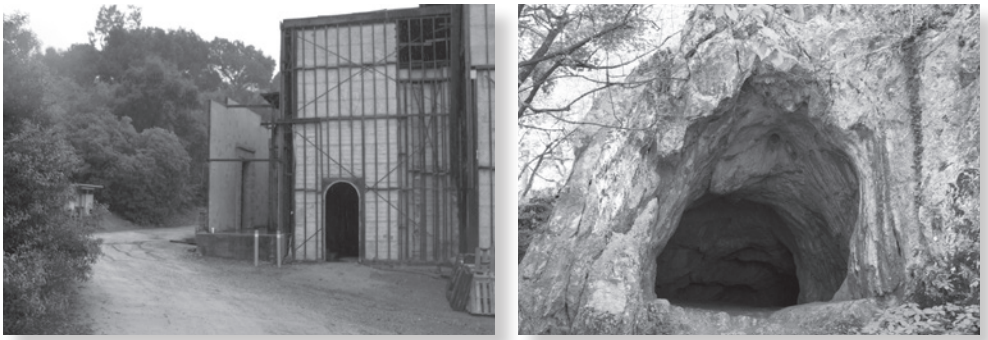


Figure 2.20. Working alone, even at a studio (left) may carry risk of not having readily available help. An isolated location (right) may be remote, have limited access in or out, or may be cut off from emergency communication.

Working Alone or At Remote Locations

Potentially hazardous situations can arise when working alone or when working at a remote or isolated area of the studio lot or location (Figure 2.20). Identify and establish a form of communication with others, and test it ahead of time, and again at the location.

In order to be prepared, employees should:

- Know the emergency plan for that location.
- Know where to be and when.
- Designate a contact person within the crew. Keep that person informed of the location of all individuals.
- Check-in when arriving and when leaving any location.
- Know the procedures to be followed if someone does not check-in as planned.

Job duties may require venturing into remote or isolated areas.

Before working alone at a remote location, run through the following checklist to help identify safe work practices to use:

- Has a thorough assessment of possible hazards of the location been performed?
- Is there an infirmary, clinic, or hospital in proximity?
- If the work involves remote or isolated locations, is a set medic needed?

Railroads

Strict rules govern rail work, whether on board trains or around railroad equipment.

Railroads are private property that require the railroad's authorization to enter. If authorization is given, the railroad's safety procedures must be followed. Never enter train tracks, a railroad right-of-way, or a rail yard without authorization from the designated railroad representative. Note that a railroad right-of-way extends beyond the tracks themselves and can range from 25 feet to over 100 feet wide (Figure 2.21).

Be aware that the train is significantly wider than the track's width. 15 feet from either side of the tracks is considered a safe distance. Closer distances need to be approved by the designated railroad representative.

Figure 2.21 A railroad right-of-way is property owned by a rail company that runs the length of their tracks. The width of the right-of-way (shown by the arrow) can range from 25 feet to over 100 feet.

Scene 3
Heat Illness

Heat illness information and training is important because employees in this industry often work outdoors in temperatures of 80°F or higher where heat illness is a concern.

This Cal/OSHA required heat illness training will help workers take some simple steps to protect themselves during hot weather. Each employer is required to provide training on site-specific procedures and to identify the designated person to invoke emergency procedures when appropriate, although anyone can report an emergency.

Check with production or the safety department for site-specific heat illness prevention procedures and for the identity of the designated person.

What is Heat Illness?

Heat illness is a medical condition that occurs when the body's temperature control system is overloaded, causing an increase in body temperature. This heat buildup can arise through physical exertion, as well as from hot and humid weather. It can place abnormal stress on the body that may result in one or more serious medical conditions.

There are several ways in which the body may react to excessive heat.

Heat rash (prickly heat). Skin irritation caused by excessive sweating.

Sunburn. Overexposure can cause immediate burns and blisters. Repeated or long-term exposure can potentially lead to skin cancer.

Heat cramps. Excessive sweating depletes the body's salt and fluids. Low salt levels in the muscles cause painful cramps.

Heat syncope (fainting). Caused by a lack of adequate blood supply to the brain, usually as the result of dehydration and lack of acclimatization.

Heat exhaustion. A severe form of heat stress that can lead to heat stroke if untreated. It is caused by a loss of salt and fluids through sweating.

Heat stroke. A life-threatening emergency that occurs when the body overheats to a point where its temperature control system shuts down and heat builds up internally.

Heat illness is not always progressive, and can move quickly from a mild condition to heat stroke.

Signs and Symptoms of Heat Illness

Early heat illness signs and symptoms may not always follow a progressive pattern from a mild condition, such as heat rash, up to the life-threatening condition of heat stroke. Also, remember that thirst alone is a poor indicator of how the body is reacting to heat.

Know the symptoms of heat illness to watch for:

- Discomfort
- Fatigue
- Poor concentration
- Muscle pain/cramps
- Dizziness
- Loss of coordination
- Vomiting
- Fast and weak pulse
- Lack of sweating
- Fainting
- Headache
- Irritability
- Excessive sweating
- Nausea
- Confusion
- Blurry vision
- Cold or clammy skin
- Rapid, shallow breathing
- Altered behavior
- Seizures

Watch out for fellow workers because they may not be aware that they are experiencing symptoms of heat illness.

When someone is exhibiting symptoms of heat illness:

- Stop work and get the person into a shaded area that is open to the air or ventilation as quickly as possible.
- If the person is conscious, encourage fluid intake.
- Seek medical attention immediately. Contact the set medic, studio first aid, or if necessary, call 911 for emergency medical services.
- Take immediate steps to reduce body temperature such as using cool moist towels or dousing the person with water.
- Never leave a person afflicted with heat illness unattended.

Heat Illness Susceptibility Factors

There are many risk factors that increase susceptibility to heat illness.

Environmental Working Conditions

Certain environmental working conditions can make people more susceptible to heat illness:

- Hot air temperature
- High relative humidity
- Lack of air movement
- Radiant heat from the sun or other source
- Physical activity
- Personal protective equipment (PPE) worn

Personal Conditions

Personal conditions also make people more susceptible to heat illness. They include:

- A history of heat illness
- Insufficient water consumption
- Lack of acclimatization
- Poor level of fitness
- Poor medical condition
- On a low-salt diet
- Advanced age or young age
- Use of prescription and over-the-counter medications and other drugs
- Consumption of alcohol, caffeine, carbonated drinks, or energy drinks

Consult with a doctor if personal conditions exist that might increase the risk for heat illness.

Figure 3.1. There are three important factors to preventing heat illness: acclimatization, hydration, and getting periodic relief from sun, heat, and exertion.

Heat Illness Prevention

Acclimatization

Acclimatization is the process of adjusting to changes in the environment. During the first few days of working in heat, the body needs time to adjust (Figure 3.1). This period of adjustment varies by individual and can take up to two weeks.

During this acclimatization period:

- Start work with shorter lengths of exposure and less strenuous work and increase the pace gradually. A sudden rise in temperature, like a heat wave*, increases the risk for heat illness even if previously acclimatized.
- Report to a supervisor if returning to work after an absence or illness, or when changing from a cool to a hot or humid climate.
- Supervisors and employees should be aware that acclimatization to heat can take several days, and work-and-rest cycles should be scheduled accordingly. Do not expect to keep pace with others who are used to the conditions.

During a heat wave there is still a risk for heat illness, even if previously acclimatized.

* For this section, heat wave is any day that the temperature will be at least 80°F *and* at least ten degrees Fahrenheit higher than the average daily temperature in the preceding five days.

Figure 3.2. Drink water, not soda. Eat light meals. Hot, heavy meals cause the body to generate more heat.

Hydration

Dehydration can occur quickly no matter how well a person is acclimatized to the heat.

The average person loses between 1 and 2 quarts of fluid an hour in perspiration during heavy exertion in hot weather. The only way to replace the fluid loss (and help the body continue to cool itself) is to drink water (Figure 3.2).

Drinking water needs to be available for all employees at all work locations.

- Drink plenty of water before, during, and after work.
- Do not wait until thirsty to drink water. Thirst is not a good signal for the need to hydrate.
- Frequently drink small quantities of water throughout the entire work shift. A minimum of 1 quart (four 8-oz cups) per hour is recommended.
- Know the location of the closest drinking water supply.

Coverings, Shade, and Protection

- Wear light-colored, loose fitting, long-sleeved shirt, light-colored pants, UV sunglasses, and if appropriate, other protective equipment.
- Wear a wide-brimmed hat (baseball caps do not cover the ears and neck).
- Use sunscreen or sun block and reapply as needed.
- Know the nearest cool resting place. In California, shade must be present if either forecast temperature or the actual temperature is 80°F or higher. It also needs to be available when the temperature is less than 80°F.
- If starting to overheat or needing to cool down, get out of the sun or away from the source of heat and find a cool, preferably well-ventilated resting place.
- Eat light meals because heavy meals make the body generate most heat.
- Seek medical attention immediately. Contact the set medic, studio first aid, or if necessary, call 911 for emergency medical services.
- Take immediate steps to reduce body temperature such as using cool moist towels or dousing the person with water.
- Never leave a person afflicted with heat illness unattended.

In California, shade must be present when the weather forecast or temperature reached is 80°F or higher.

Supervisor Responsibilities

In California, supervisors are responsible for following the employer's heat illness prevention plan and fulfilling the requirements of the heat safety daily checklist. They should:

- Ensure employees are trained before working outdoors in the heat and that they know and follow the company heat illness prevention plan.
- Monitor the weather at the site either online at www.weather.gov or by checking the on-site thermometer.
- Keep water accessible and remind workers to drink plenty of it.
- Maintain effective communication with the crew at all times.
- Observe employees for alertness and signs or symptoms of heat illness, especially during a heat wave and the first 14 days of acclimatization.
- Know the address, building, stage number, or mile marker to help direct medical personnel to the location. This information is often included with the call sheet or location map.
- Know what emergency response procedures to follow when a worker exhibits these signs and symptoms.
- Respond to heat illness without delay; follow company procedures for providing first aid and emergency services.

Tell a supervisor immediately if anyone might be getting sick from the heat.

Heat Safety Daily Checklist

Supervisors should use the Heat Safety Daily Checklist as a guide to help fulfill the requirements for heat illness prevention. In California, the employer must have a written heat illness prevention plan available at the work site upon request.

Heat Safety Daily Checklist

Water

- ☐ Fresh, cool drinking water should be located as close to workers as practical.
- ☐ Have a plan for refilling water coolers throughout the day.

Shade and Rest

- ☐ A plan should be in place for checking the weather forecast. Monitor weather reports and advisories to respond to hot conditions.
- ☐ In California, shade must be present when the weather forecast or temperature reached is 80°F or higher.
- ☐ Shade should be available at all times (regardless of the temperature) for workers to rest and cool down.

Training

- ☐ Workers should be trained to recognize and prevent heat illness before starting work outdoors.
- ☐ Workers should be trained to identify symptoms of heat illness.

Emergency Plan

- ☐ Everyone should know whom to notify in case of an emergency.
- ☐ Workers must know their exact location in case an ambulance is needed.
- ☐ A designated person shall be available to ensure that emergency procedures are invoked when appropriate.

Worker Reminders

- ☐ Drink water frequently.
- ☐ Rest in the shade for at least five minutes or longer as needed.
- ☐ Look out for one another and immediately report any symptoms of heat illness.

Summary

- Heat illness is preventable.
- Know the warning signs and take time to adjust to the heat.
- Above all, drink plenty of water and immediately report any signs of heat illness.

Safety Bulletin #35, *Safety Considerations for the Prevention of Heat Illness*, can be found in Appendix E of this book.

Notes

(Courtesy of NOAA/DOA, Jonathan Blaes, NOAA-NWS-ER-WFO Raleigh)

Scene 4
Severe Weather Conditions

When working in areas subject to severe weather conditions, planning can reduce many of the potential dangers and is essential for maintaining a safe workplace.

- Dress properly for the conditions.
- Identify and communicate any potential weather-related hazards.
- Monitor the local government weather service for announcements, warnings, and other information.
- Be prepared to evacuate to a designated safe area.
- When conditions warrant, portable radios, flashlights, and other emergency supplies should be readily available.
- If there is a possibility of severe weather, a safety meeting should be held to review the emergency plan for that location.

Monitor the local weather service for current information on severe conditions.

Figure 4.1. Even in the high desert, extreme, low temperatures exist.
(Courtesy of NOAA, Kristen Cole, NOAA NWS WR WFO Los Angeles Oxnard.)

If anyone is experiencing early symptoms of hypothermia, take action.

Cold Temperature Conditions

When working in cold conditions (Figure 4.1), the two most common and serious hazards are hypothermia and frostbite. With proper awareness and planning, these hazards can be eliminated.

Certain conditions increase the risk:

- Improper dress for the conditions
- Poor physical condition
- Fatigue
- Illness
- Poor diet
- Alcohol, tobacco, or drug use

Hypothermia

Hypothermia is a potentially deadly condition that results in an abnormally low body temperature. This drop in temperature occurs when the body loses heat faster than it is produced. At a body temperature of about 95°F, a person will begin to experience hypothermia.

Hypothermia is not something that happens only in freezing temperatures. A combination of cold, wet, and windy conditions can result in hypothermia for anyone who is inadequately prepared and protected.

Symptoms of Hypothermia

Early symptoms of hypothermia are often overlooked. They include:

- Intense shivering
- Muscle tension
- Fatigue
- Intense feeling of cold or numbness

Ignoring these early signs can be very dangerous. Take action right away if anyone starts to experience symptoms.

There are also behavioral signs to watch for. These include:

- Slurred speech
- Difficulty performing tasks
- Loss of coordination
- Lethargy
- Erratic behavior
- Irritability
- Slow breathing and heart rate

Hypothermia Prevention

Preventing hypothermia is not difficult. It is much easier to avoid hypothermia than to treat it after the fact.

Prevent hypothermia by knowing what conditions are expected and dressing accordingly.

Some clothing tips to remember:

- Wear clothing that will stay dry in rain and snow and protect against wind (Figure 4.2).
- Dress in layers.
- Avoid overheating and sweating by ventilating as needed.
- Synthetic and Wool and synthetic clothing is best; cotton and down must remain dry to be effective.
- Protect the extremities; head, hands, feet..

Do not diet; give the body appropriate nutrients. This will increase metabolism and help keep the body warm. Continue to drink fluids; water is best, not alcohol.

Take extra steps to stay warm and dry. If there is no need to be outside, stay inside. If unable to go inside, exercise, jog in place, and shake the extremities. These activities will increase circulation and body heat.

Figure 4.2. The outer layer of clothing should trap body heat as well as keep water or dampness out.
(Courtesy of NOAA, Mr. Fred Watson, NOAA.)

Do not overlook the early signs of hypothermia.

Figure 4.3. Exposure to cold temperatures and wind can quickly result in frostbite. (Courtesy of NOAA, Rear Admiral Harley D. Nygren, NOAA Corps, ret.).

Frostbite

Frostbite is a result of the freezing of the fluids in the skin, which can permanently damage the cells (Figure 4.3). Because skin cells contain water, they can freeze when the temperature reaches 32°F. Below freezing, blood vessels close to the skin start to constrict, which shunts blood away from the extremities. This helps the body preserve core body heat, but leaves the extremities with less circulation. Frostbite usually affects the fingertips, toes, ears, and nose, but other exposed areas can also be affected.

The most common cause of frostbite is exposure to cold-weather conditions, but it can also be caused by direct contact with ice, frozen metal, or very cold liquids.

Signs and Symptoms of Frostbite

Mild frostbite, called *frostnip*, affects the outer skin layers and appears as a blanching or whitening of the skin. At the onset, there may be itching or pain which later turns to numbness. This usually disappears as warming occurs, but the skin may appear red for several hours.

As the frostbite progresses deeper into the skin, it becomes more severe. The skin will appear waxy-looking with a white, gray-yellow, or gray-blue color. The affected parts will have no feeling and blisters may be present. The tissue will feel frozen or wooden. Other indicators are swelling, itching, burning, and deep pain as the area is warmed.

Frostbite Prevention

Like hypothermia, frostbite is much easier to prevent than it is to treat. All of the precautions for hypothermia also apply for frostbite.

- Wear proper clothing that insulates from the cold and provides protection from wind, rain, and snow.
- Cover the neck and head.
- Protect hands and feet. Mittens are warmer than gloves, but may limit activity.
- Keep clothing and shoes loose to ensure good circulation.
- Drink plenty of fluids.
- Keep moving; do not stand still.
- Take breaks to go inside and warm up.
- Never touch a cold metal object with bare hands.

Treatment of Hypothermia and Frostbite

At the first sign of hypothermia or frostbite, notify a supervisor and seek medical attention. Go inside and get warm.

- Remove any wet clothing and replace with dry clothing.
- Wrap the person in blankets and cover their head.
- No caffeine, alcohol, or tobacco should be used.
- If it is not possible to go inside, prevent further heat loss by sheltering from exposure to wind and water.

Additional guidelines for treating frostbite:

- Get to a place where it is possible to stay warm after thawing; do not allow the affected body area to refreeze or much greater damage will result.
- Do not rub or massage the area.
- If blisters are present, leave them intact.

At the first sign of frostbite or hypothermia, immediately seek medical attention.

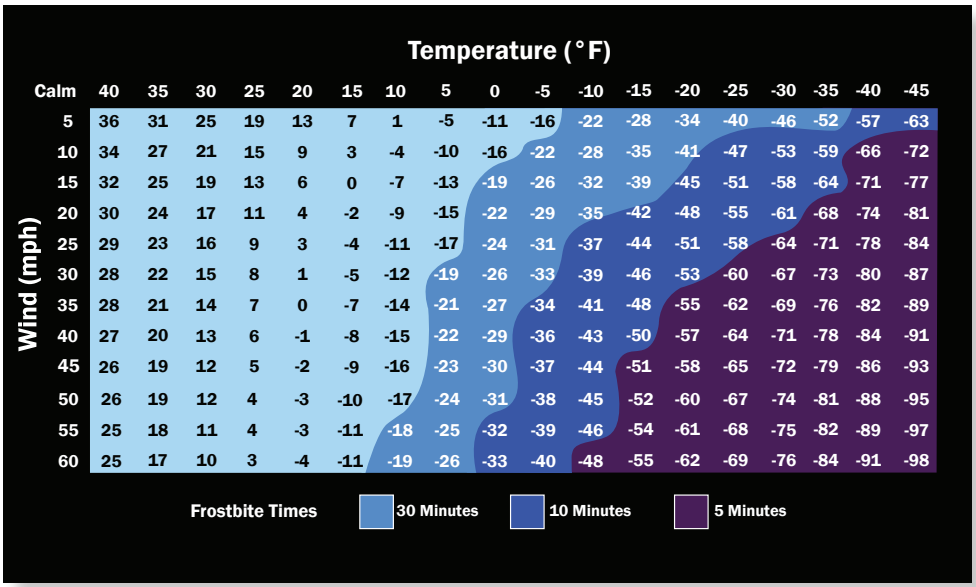


Figure 4.4. Wind chill charts are available to determine the effective temperature produced by the combined effect of air temperature and wind.

Additional Precautions

Refer to Safety Bulletin #34, *Guidelines for Working in Extreme Cold Temperature Conditions.*

To minimize the risks when working in extreme, cold-temperature conditions:

- Monitor local weather forecast information.
- Provide adequate, warm shelter for cast and crew.
- Use a suitable thermometer and anemometer (wind measuring device) to determine the equivalent wind chill factor (Figure 4.4).
- When visibility is restricted, establish safe areas and paths. This will reduce the risk of getting lost.

High Winds

High winds are often associated with extreme weather phenomenon, including thunderstorms, tornados, and hurricanes, but they can also accompany high- and low-pressure systems and clear weather.

Possible hazards from high winds include:

- Flying debris and dust
- The possibility of personnel being swept off their feet
- Equipment and sets being blown over or carried away (Figure 4.5)
- Eye injuries

Dry, gusty winds greatly increase the risk of brush fires.

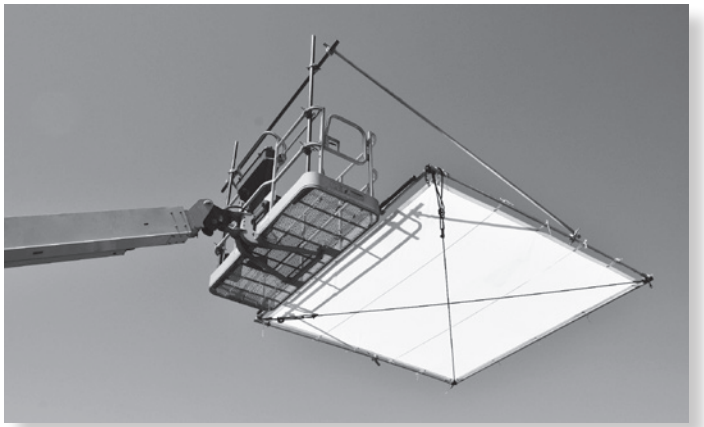


Figure 4.5. Equipment can be blown away during high winds.

When experiencing high winds, a production should:

- Remove all cast and crew from aerial lifts, elevated areas, sets, scaffolding, and other high objects.
- If safe to do so, lower any equipment that could be blown over such as aerial boom lifts, lights, diffusion equipment, camera boom equipment, and tents. No boom or scissor lift should be up in wind speeds exceeding the industry standard of 25 mph. When the equipment is up on cribbing or when materials are attached, the maximum wind speed allowed is even less.
- Protect eyes from potential injury with the use of safety goggles or other PPE.
- Tie down and secure all loose equipment.
- As directed, seek refuge from the winds at a safe assembly area. Do not attempt to return to the work area until an all-clear signal has been given.

Hurricanes

Hurricanes, also known as cyclones or typhoons, are another weather-related hazard. They are a slow developing tropical weather phenomenon that forms over the sea and generates winds over 74 mph. The greatest impact is felt near or on shorelines of land.

The potential hazards from hurricanes include:

- Severe winds, rainfall, storm surges, and high waves
- Extreme flooding and damage to structures, roads, utilities, vehicles, and boats
- Flying debris, which poses a risk of severe injury

In most cases, workers will have several days warning to activate the employer's emergency plan because hurricanes are tracked by the weather service. Additional warnings will be given 36 and 48 hours before the hurricane reaches land.

Listen for instructions from the employer or local officials. Pack and secure all equipment. Lower aerial lifts, camera booms, and other elevated items, such as rain towers or scaffolds, and move them to a safe area.

Figure 4.6. Comply with all evacuation orders. Hurricanes (left) can have severe winds and high waves which may cause extreme flooding and damage (right).
(Courtesy of NOAA, U.S. Department of Commerce (left) and Doug Helton, NOAA, NOS, ORR(right).)

If ordered to evacuate, leave the area immediately (Figure 4.6). Do not stay by the shoreline. Do not attempt to return to the area until an all-clear signal has been given by a regulatory authority or production management.

Tornadoes

In many areas of the country, tornadoes (Figure 4.7) are another hazard. Tornadoes are narrow, violently rotating columns of air that extend from the cloud base to the ground.

Tornadoes are unpredictable and may form without warning. The wind speed may exceed 200 mph, potentially causing severe damage to structures and putting people at risk for serious injury or loss of life. Tornadoes can occur anywhere, but are most prevalent in Midwestern states.

Figure 4.7. Tornadoes are a highly destructive atmospheric phenomena, also called cyclones or twisters. (Courtesy of NOAA, U.S. Department of Commerce.)

During thunderstorms when conditions are right for tornadoes, the weather service issues tornado watches and warnings.

- **Tornado Watch**. Tornadoes are possible in the area. Remain alert for approaching storms.
- **Tornado Warning**. A tornado has been sighted or indicated by weather radar and it is time to take cover.

If a watch or warning has been issued, the employer's emergency plan should be activated. Follow the plan and any instructions given, including securing equipment if there is time and it can be done safely. No one should be working on elevated equipment.

Seek shelter in a designated storm shelter or a basement or interior room of a permanent structure. If caught outdoors, lay flat and facedown on low ground, away from any trees or vehicles, and cover your head with your arms.

Evacuate the area immediately if instructed by a regulatory authority or your employer or supervisor. Do not attempt to return to the area until an all-clear signal has been given.

Figure 4.8. Potential hazards from lightning include electrocution, burns, fire, falling debris.
(Courtesy of NOAA Photo Library NOAA Central Library OAR-ERL National Severe Storms Laboratory)

Lightning

Lightning results from the buildup and discharge of electrical energy in clouds (Figure 4.8). Lightning may strike many miles from an associated thunderstorm and may strike when no rain or clouds are present.

Lightning is unpredictable and can strike many miles away from the storm cloud.

If exposed to a lightning storm:

- Remove all cast and crew from elevated positions such as aerial lifts, sets, and scaffolding.
- Then, if safe to do so, have a qualified person lower all unmanned equipment and shut down generators.
- When instructed, move to the designated safe assembly area.
- Do not return to the area until an all clear signal has been given.
- Seek shelter in a sturdy building, a hardtop automobile, or a truck with the windows rolled up. If such cover is not available, seek shelter in wooded areas with thick, small trees. Avoid isolated trees.
- Avoid high ground and keep clear of tall, grounded, or conductive objects near the ground such as towers, aerial lifts, camera booms, scaffolding, fences, grip stands, and other metal equipment.
- Avoid using electrical equipment or appliances, including corded telephones. Instead, use a cordless or cell phone.
- Stay out of bodies of water because water is conductive.

Estimating Proximity to Lightning

There are a variety of ways to gauge the distance of lightning strikes. Weather radar, which detects lightning strikes, is reported by government weather services and through the media. A lightning app shows real-time lightning-strike locations and sends alerts when lightning approaches a preselected location. A lightning meter gives an approximation of distance (some are significantly more accurate than others).

It is also possible to estimate the distance of lightning by the thunder. When lightning is seen, count the seconds until thunder is heard and then divide the seconds counted by five to obtain the approximate distance in miles to the lightning. Note: One second does not equal one mile.

Example:

There are 10 seconds between the flash and the thunderclap.

$$\frac{10 \text{ seconds}}{5} = 2 \text{ miles}$$

Using this example, the lightning occurred two miles away.

When lightning is seen or thunder is heard, it is time to stop work and seek shelter. Wait 30 minutes from the last thunderclap to establish an all clear.

Other Severe Weather Conditions

There are many other severe weather conditions such as blizzards or severe snow storms, flash flooding, and large hail.

Guidelines for these weather conditions can be found in Safety Bulletin #38, *Guidelines for Inclement or Severe Weather*, which is available online at www.csatf.org..

Notes

Scene 5

Disaster and Emergency Response

Emergencies often occur with little or no warning. Advance preparation and familiarity with the protocol for response are key.

This section provides general information that applies to many different events that require emergency response.

Figure 5.1. An emergency response plan helps to be prepared for unpredictable events like storms and forest fires.
(Courtesy of NOAA-NWS-WR-WFO Los Angeles-Oxnard (top) and Dan Borsum, NOAA-NWS-WR-WFO Billings Montana (bottom).

Know the employer's plan for emergencies.

Pre-Emergency Safety Planning

The only way to protect against disasters and emergencies is to plan ahead and be prepared (Figure 5.1).

- Be familiar with the work area. Identify all exits, stairways, and existing floor plans when beginning work at a new site.
- Know the emergency exits and escape routes. Always know the two exits closest to the work. Check every day to see if the emergency exits or escape routes have changed.
- Be sure all emergency phone numbers are clearly listed and are readily available next to telephones.
- Know the location of the nearest medic, first aid station, infirmary, clinic, or hospital.

Emergency Reporting

Know the employer's procedure for reporting an emergency, including a medical emergency or a hazardous material spill. This is especially important on location where workers may be less familiar with the available medical facilities.

Follow the employer's notification procedures, which may include calling the on-lot emergency number, 911, or notifying first aid.

When reporting any emergency, know:

- The street address or location to direct emergency personnel—it should be on the call sheet
- Safety department phone numbers
- Production chain of command notifications

Evacuation Procedures

Evacuation procedures should be established and reviewed.

- On a shooting set, the 1st AD will initiate the evacuation. On a non-shooting location it will be initiated by the supervisor or foreman.
- If evacuation is necessary, follow the established routes and procedures. Stay calm. Do not panic.
- Use stairs, not elevators.
- Establish a meeting point or safe assembly area away from the building and other hazards such as overhead power lines.
- Each department should assign someone, usually the department head, the responsibility of accounting for all workers in the event of an emergency.
- Report to the designated safe assembly area. Remain there until everyone has been accounted for or until directed otherwise.

Each department is responsible for accounting for their crews during an evacuation.

Medical Emergencies

- After emergency responders have been notified, have someone meet the responding personnel and assist by clearing the path and leading the responders to the victim (Figure 5.2).
- Try to keep the victim calm.
- If trained, administer first aid as needed.

Figure 5.2.
Emergency responders.
(Courtesy of Gary Lee and Dan Gordon, NOAA-NWS-WR-WFO Los Angeles-Oxnard.

Hazardous Materials

In the event of a hazardous material spill:

- If possible, stay upwind and uphill.
- A safety data sheet (SDS) should be readily available. It describes safe containment methods and required PPE. If information about the hazardous material is accessible, have it available for the responders.
- If possible and safe to do so, keep the material from entering a storm drain.

Check with the employer or the safety department for guidelines regarding hazardous material spills.

Figure 5.3. The magnitude 6.7 Northridge, California earthquake in 1994 illustrates the level of damage that could occur as a result of an earthquake, especially in urban areas. (Courtesy of NOAA, M. Celebi, U.S. Geological Survey.)

Earthquakes

Because earthquakes happen in California and in other parts of the country as well, it is important to know how to respond when the earthquake hits (Figure 5.3).

If an earthquake occurs while working inside a building:

- Duck under something sturdy, such as a desk or table, cover the head, and hold on during shaking.
- On stage, move to the interior, 4-ft. fire lane.
- Stay clear of windows, fireplaces, or anything that could shatter or topple over, including heavy furniture or appliances.
- Do not run downstairs or rush outside while the building is shaking, while there is a danger of injury from falling, or danger from being hit by falling glass or debris. Stay inside the building.
- Wait until the shaking has stopped before attempting to exit into a clear and unobstructed outside area.

If an earthquake occurs while outside:

- Stay in an open area that is clear from hazards, including trees and power lines.
- When the shaking stops, do not re-enter any building until it has been checked and cleared.

If an earthquake occurs while driving:

- Stop the car, but do so carefully.
- Move the car as far out of traffic as possible.
- Do not stop on or under a bridge or overpass, or under trees, light posts, power lines, or signs.
- Stay inside the car until the shaking stops.
- When it is safe, resume driving and watch for breaks in the pavement, fallen rocks, or bumps in the road at ramps and bridges (Figure 5.4).

After an earthquake, be prepared for aftershocks. Use the telephone for emergency calls only as circuits get overloaded.

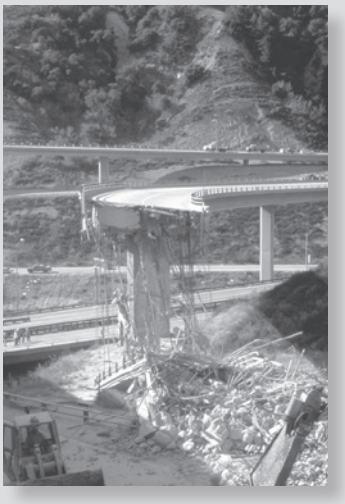


Figure 5.4. Earthquakes cannot be predicted. Preparation is essential. (Courtesy of NOAA, J. Dewey, U.S. Geological Survey.

Be prepared for aftershocks.

Be aware of the following potential risks:

- **Fire or fire hazards.**
- **Gas leaks.** If a leak is suspected or identified by the odor associated with natural gas, evacuate immediately and notify the gas company or other appropriate authority. Wait for the gas company to check for leaks and to turn the gas back on if it has been turned off.
- **Fallen items in storage units, cupboards, and closets.** Beware of objects tumbling from shelves when doors are opened. Open doors slowly and carefully.
- **Downed or damaged utility lines.** Do not approach or touch downed power lines or any objects touching them.
- **Damaged electrical wiring.** If safe to do so, shut off power at the source if any damage is noted.

If encountering any of the above hazards or if there are any safety concerns, evacuate the area immediately and notify a supervisor, the safety department, or the appropriate authority.

Tsunamis

A tsunami is one of the most powerful and destructive natural forces. It is a series of waves (not just one) caused by a large and sudden disturbance of the sea, most often an undersea earthquake. While a tsunami can happen on any coast, low-lying coastal areas along the Pacific and Caribbean coastlines are most vulnerable.

Even though tsunamis do not occur very often, and most are small and nondestructive, it is important to be prepared because, like earthquakes, tsunamis can happen at any time.

Tsunami warnings are broadcast through local radio and television, wireless emergency alerts, and NOAA Weather Radio. They may also come through outdoor sirens, local officials, text messages alerts, and phone notifications.

The National Weather Service issues four levels of tsunami alerts:

- **Tsunami Warning: Take Action.** Danger! A tsunami that may cause widespread flooding is expected or occurring. Dangerous coastal flooding and powerful currents are possible and may continue for several hours or days after initial arrival. Follow instructions from local officials. Evacuation is recommended. Move to high ground or inland (away from the water).
- **Tsunami Advisory: Take Action.** A tsunami with potential for strong currents or waves dangerous to those in or very near the water is expected or occurring. There may be flooding of beach and harbor areas.

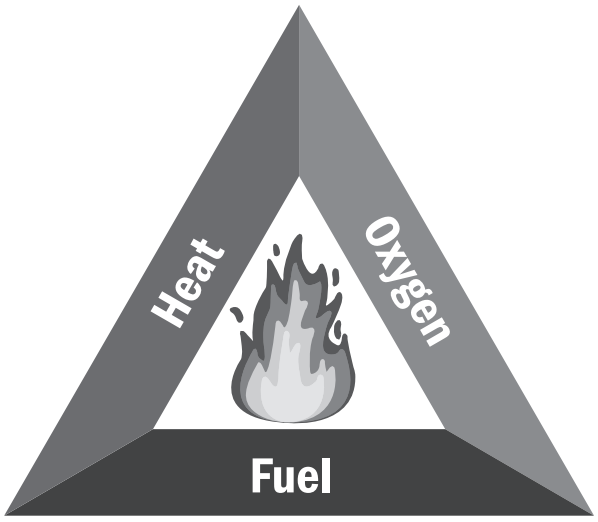
  Stay out of the water and away from beaches and waterways. Follow instructions from local officials.
- **Tsunami Watch: Be Aware.** A distant earthquake has occurred. A tsunami is possible. Stay tuned for more information. Be prepared to take action if necessary.
- **Tsunami Information Statement: Relax.** An earthquake has occurred, or a tsunami warning, advisory, or watch has been issued for another part of the ocean. Most information statements indicate there is no threat of a destructive tsunami.

Figure 5.5. Evacuation routes may already be designated to guide those in hazard zones to safe areas in the event of a tsunami.
(Courtesy of FEMA/Jason Lindesmith.)

There may not always be enough time for an official warning, so it is important to understand natural warnings. If you are at the coast and feel a strong or long earthquake, see a sudden rise or fall of the ocean, or hear a loud roar from the ocean, a tsunami may follow. This is the warning. Take action and move to a safe place. Do not wait for official instructions.

If working in an area that is within a tsunami hazard zone, the employer's emergency plan should identify evacuation routes to a safe assembly area on high ground or outside the hazard evacuation zone (Figure 5.5). If ordered to evacuate, do not attempt to return to the area until an all-clear has been given.

Notes



Scene 6
Fire Safety and Prevention

Fire Safety

Sources of Combustion

For a fire to take place, three primary elements must be present in the proper proportions and under the proper conditions:

- **Fuel.** Paper, plastics, wood, flammable solvents, etc.
- **Heat.** Open flame, burning cigarettes, electrical sparks, etc.
- **Oxygen.** Fire needs an atmosphere with at least 16% oxygen

Fire needs all three elements to exist. Take away any one of these elements and the fire cannot occur or, if already burning, will be extinguished.

Fire requires fuel, heat, and oxygen. Take away any one and the fire will be extinguished.

Sources of Ignition

Identify possible sources of ignition before work begins. Common sources of ignition include:

- **Smoking.** Improperly disposed smoking materials, smoking near flammable or combustible materials
- **Sparks and hot metal.** Shop operations such as metal grinding, welding, and flame cutting (hot work)
- **Electrical components.** Most frequently involving faulty or overloaded wiring or defective appliances
- **Hot surfaces and open flames**. Hot surfaces, such as pressing irons, lights, and space heaters, hot work with foam, open flames, and effects explosions
- **Spontaneous combustion.** Involving sawdust, linseed and other finishing oils, oily rags, or improperly mixed polyester resins

Fire Prevention Guidelines

All workers should adhere to the following guidelines to help prevent fires in the workplace.

Smoking

- Smoking is not permitted inside any building, including e-cigarettes.
- Smoke in designated areas only.
- Never throw matches or cigarette butts into waste containers. Do not empty ashtrays into wastebaskets without being sure contents are extinguished.
- Observe "No Smoking" signs wherever posted.

Hot Work

Follow hot work procedures. Shop, maintenance, and contractor personnel performing hot work, such as welding, cutting, or grinding (Figure 6.1), are required to follow the employer's hot work procedures. Failure to adhere to these procedures could result in the ignition of nearby combustible materials.

Electrical Fire Hazards

- Check for frayed or damaged electrical cords (Figure 6.2). Do not run electrical cords under carpets or chair pads. Report these situations to a supervisor.
- Do not overload electric outlets.
- Turn off or unplug appliances when not in use.
- Hot lights should be adequately separated from combustible materials and surfaces.
- If space heaters (Figure 6.3) are allowed by the employer, use only models with tip-over controls. Do not store combustible materials next to a heater.

On the lot or on location, check with the employer or safety department for the policy regarding space heater usage.

Figure 6.1. When performing hot work, such as welding, cutting, or grinding, follow the employer's hot work procedures.

Figure 6.2. Damaged insulation can expose people to injury from burns and electrical shock, and can lead to a short circuit, overheated wires, sparks, and fire.

Figure 6.3. Insufficient space around heaters is the leading cause of heating-related fires.

Proper Storage of Flammable Liquids, Gases, and Waste Rags

Propane and other pressure vessels should be stored outside and protected from the weather (Figure 6.4). The area must be marked with "No Smoking" signs.

Flammable liquids must:

- Be stored in approved containers and should be stored in safety cabinets (Figure 6.5).
- Not be allowed to accumulate
- Be kept at least 25 ft. away from heat sources, including generators.

Flammable liquids and gases, paints, adhesives, and many other chemicals can be fire hazards. Store them safely.

Figure 6.4. Outdoor storage for pressure vessels.

Figure 6.5. Be sure flammables are stored in an appropriate cabinet.

Waste rags contaminated with ignitable solvents:

- Should be disposed of safely in appropriate containers with proper ventilation. Containers should be equipped with a self-closing lid and bottom vents to disperse heat (Figure 6.6).
- Must be stored separately from other solid waste.
- Should be cleared from the set or stage at the end of the work day by transferring to the primary storage container located in the accumulation area.

Figure 6.6. Rags with ignitable solvents should be stored in a vented container, kept separate from other solid waste, and removed at the end of the work day.

Picture Cars

If a picture car is placed inside, the gas tank should be between 1/4 and 1/3 full. A permit from the AHJ may be required.

Fire/Rescue Equipment, Fire Lanes, and Access

Firefighters require unrestricted access to fire suppression equipment and clear fire lanes.

- Identify all fire extinguishers, fire alarms, and any other fire suppression equipment.
- Never block access to emergency equipment.
- Never restrict access to doors, stairways, ladders, or emergency exits.
- Inside the soundstage, the fire department requires that a 4-ft. wide, 7-ft. high fire lane be maintained on the interior perimeter at all times (Figure 6.7), including keeping the fire lane clear of wheeled items and stage braces.
- Outside the soundstage, never leave equipment or park vehicles, including golf carts and bicycles, in fire lanes or in a spot that will block access to exit doors, fire hydrants, signage, or electrical panels.

By keeping fire lanes open and accessible, others are able to escape and firefighters are able to get in and fight the fire.

Figure 6.7. Fire lanes, whether on the buildings exterior (top) or interior (bottom), must be kept clear.

Exits

Fire regulations require that people can find a clear exit in an emergency.

- All exits should be clear of obstructions.
- Do not use fire lanes for storage.
- Exit doors must remain unlocked while employees are working. If an exit door is chained shut, tell the locations department about it immediately.
- Do not block stairways, hallways, or passageways with equipment.
- Do not prop open stairwell, corridor, or fire doors.
- Make sure exits are clearly marked.
- Check lighting in corridors, stairwells, and exit signs (Figure 6.8), and report malfunctioning lights to a supervisor.

Figure 6.8. Do not block evacuation routes, including emergency exits and stairs.

Figure 6.9. It is unsafe to cover sprinkler heads.

Fire Protection Systems

Existing fire protection systems, such as fire sprinklers and alarm systems, need to be maintained on a regular basis.

- Do not disconnect any fire protection system without permission from the local fire department.
- Sprinkler heads should be clear of any obstruction and should not be used for other purposes such as hanging wardrobe items, cords, or lighting equipment.
- Never cover a sprinkler head with cups, foil, plastic, or other materials, unless approved by the AHJ or allowed by permit (Figure 6.9).

Construction

Follow fire safety precautions when constructing sets.

- Set construction should be performed away from hazardous brush. Maintain a minimum clearance of 20 ft. to reduce the possibility of sparks from construction tools.
- When practical or required, sets should be constructed using flame retardant materials.
- Frequently clean up and remove light combustibles such as sawdust and small pieces of wood.
- Safely dispose of paints, solvents, and rags using the proper containers.
- Dispose of any potential waste hazards by the end of the work day.

Generators

Generators are a potential source of ignition.

- Generators (Figure 6.10) should not be placed near combustible materials, including tents, wardrobe, and sets.
- Placement should not block fire-protection systems or exits.

Figure 6.10. Fire extinguishers should be taken out of generators before use so that they are available if needed.

Figure 6.11. Look for this symbol (left) on the tent fabric (right) to confirm that the tent has been treated with an approved flame retardant. A CPAI-84 tag or field test may satisfy this requirement.

Tents

Tents have specific safety requirements.

- Tents, including shade canopies, over a certain size may require a permit. For example, Los Angeles County requires a permit when tents are larger than 400 ft.^{2} and the city of Los Angeles requires one for tents larger than 450 ft.^{2}. Consult with the AHJ for specific requirements.
- All tents must be treated with a flame retardant, which should be marked on the tag or stenciled on the fabric (Figure 6.11).
- Proper exit signage and fire extinguishers must be provided.
- Smoking is not permitted inside any tent. "No Smoking" signs should be clearly posted inside.
- Liquid propane gas is prohibited inside tents unless approved by the AHJ or allowed by permit.

Figure 6.12. Catering truck.

Catering

- Catering vehicles (Figure 6.12) must have fully charged fire extinguishers readily available.
- Cooking with liquid propane gas inside buildings is prohibited unless approved by the AHJ or allowed by permit.

Fire Safety on Location

Take special precautions against fire danger when working on dry wilderness locales (Figure 6.13). As the wind increases and humidity drops, fire danger increases.

Figure 6.13. Keep base camp trailers clear of brush.

Maintain a minimum of 20 ft. of clearance from dry brush.

Maintain emergency access:

- All exterior base camp fire lanes must have an appropriate clearance for fire trucks or other emergency vehicles. In Los Angeles City and County, this is 20 ft.
- Do not use fire lanes for storage.
- Check with the employer or the local AHJ for specific requirements.
- All fire hydrants and standpipes should be clear of equipment, vehicles, or other obstructions.

Fire extinguishers should be available, must be in good working order, and should be appropriate to the types of materials found on the location.

Fire Safety Inspection Checklist

The fire departments for the city and county of Los Angeles have each developed a film location fire safety inspection checklist (Figure 6.14) to assist crew members during production. Other governmental jurisdictions may adopt similar measures.

- As a condition of the location filming permit, the appropriate checklist (city or county) must be completed daily. A checklist must be completed for each location used during the day. A copy of it must be made available upon demand to the fire inspector at the filming location. It must be kept with the film permit at all times.
- A crew member of each department should review all items on the checklist to identify which ones may be applicable to each trade or craft.
- Department heads or crew members may be called upon to assure compliance with the checklist items. Respond quickly and completely to any request for information. Everything on the checklist should be checked off before the fire safety inspector arrives.
- Failure to complete or meet all of the requirements on the appropriate checklist may result in cancellation of the filming permit, or the immediate assignment of a Fire Safety Officer to the production.

When filming on location, L.A. City and County require the fire inspection checklist to be completed daily.

A copy of each checklist is included in Appendix B of this book.

LOS ANGELES FIRE DEPARTMENT
Bureau of Fire Prevention & Public Safety
FILM UNIT
200 N. Main Street, Suite 1710
Los Angeles, CA 90012
lafcfilm@lacity.org

FILM LOCATION FIRE SAFETY INSPECTION CHECKLIST

FilmLA Permit #:		Date of Filming:	
Production Name:		Location Address:	

THIS CHECKLIST SHALL BE COMPLETED DAILY FOR EACH PERMITTED FILMING LOCATION AND A HARDCOPY SHALL BE AVAILABLE WITH A COPY OF THE FILM PERMIT. This checklist shall be provided to any Los Angeles Fire Department Inspector visiting the filming location.

*INSTRUCTIONS: **Indicate "YES", "NO" or "N/A" (i.e. Not Applicable) for every numbered item below.** For each "NO" answer, corrective actions must be noted and executed before filming can continue.*

	ACCESS / FIRE PROTECTION	YES	NO	N/A
1	**911 Reporting:** Methods of reporting an emergency are available (e.g. mobile phone, landline, etc.)			
2	**Clearance (Fire Equipment):** Fire hydrants, extinguishers, sprinklers & standpipe connections are readily accessible and clear of all equipment & vehicles (e.g. no parking in front of hydrants, nothing hung from sprinklers, etc.)			
3	**Clearance (Fire Lanes):** Fire lane access must be maintained (*20 feet wide*)			
4	**Extinguishers:** Extinguishers present (*2A-10BC min. rating*), serviced, ready for use and *within 75 ft. of travel*			
5	**Fire Equipment Bypass (e.g. alarm):** ***Fire alarm equipment shall not be disconnected without Fire Dept. approval***			

CORRECTIVE ACTION TO BE TAKEN:

Figure 6.14. Keep a copy of the daily fire inspection checklist with the film permit at all times.

General Fire Emergency Guidelines

In the event of a fire at the job site, personal safety is of primary importance. Stay calm, and do not panic. Alert others in the area and, if available, activate the fire alarm. Exit the building.

Call the local fire department, the on-lot emergency number, or dial 911. Be prepared to give the exact location and a description of the fire.

Only personnel trained and authorized to use a fire extinguisher should attempt to extinguish the fire. All others should evacuate to the designated safe assembly area. Do not use a fire extinguisher unless the fire is in the incipient stage (beginning stage). For electrical fires, if safe to do so, disconnect the power source.

If the fire cannot be extinguished, evacuate to the designated safe assembly area. Walk, do not run, and if there is smoke present, stay low. This may mean getting on hands and knees and crawling out underneath the smoke. Avoid inhaling smoke to prevent potential incapacitation.

Personal safety is of primary importance.

While exiting a building:

- Never open a closed door without feeling it first. The back of the hand should be used in order to prevent burns to the palm. If the door is hot, try another exit.
- If safe to do so, close doors. Doing so will help prevent the spread of the flames and smoke. Do not lock the doors.

Once outside, wait at the assembly area until everyone has been accounted for, or until directed otherwise.

Figure 6.15. After calling the emergency number, a portable fire extinguisher may be the next defense against a small fire.

Fire Extinguishers

Workers are not expected to use portable fire extinguishers (Figure 6.15) to fight fires that may occur at the workplace.

Only personnel who have been properly trained in the correct use of fire extinguishers *and* authorized by the employer should attempt to use them. Check with each employer for authorization policy.

Note: Sometimes the use of fire or flame is part of a planned event in the motion picture industry. For these events, a safety meeting will be held and all personnel will be informed of specific safety procedures and the plan for emergency response. For planned events, do not remove facility fire extinguishers for standby use. Production should arrange for sufficient extinguishers of the proper type for the circumstances.

General Principles of Fire Extinguisher Use

Fires and fire extinguishers are classified into five basic groups according to the materials involved.

Fire extinguishers are required to be clearly labeled or marked to designate the type of fire they can be used on. Unmarked fire extinguishers should not be used.

Class A For fires involving ordinary combustible materials such as wood, cloth, paper, rubber, and some plastics. Any kind of fire that can be extinguished with water can be put out with a fire extinguisher marked Class A. Extinguishes by removing heat using the quenching and cooling effects of water or other chemicals.

Class B For fires involving flammable or combustible liquids such as gasoline, oil, solvent, or paint. Do not use water on this type of fire. Extinguishes by depriving the fire of oxygen, blanketing, or smothering it.

Class C For fires involving energized electrical equipment, appliances, or wiring. Do not use water to fight it or you could receive a shock. Extinguishes by smothering with non-conductive agents, depriving it of oxygen.

Class D For fires involving certain combustible metals such as magnesium, titanium, sodium, and potassium. Extinguishes using special powder agents because of the intensity of the fire generated. These agents cool the metal and deprive it of oxygen. These metals may also react violently with water or other chemicals and must be handled with care.

Class K For fires involving vegetable oil, animal oil, or fat. These extinguishers are generally found in kitchens used by restaurants, cafeterias, and catering trucks. Extinguishes using a chemical reaction that renders oil non-flammable.

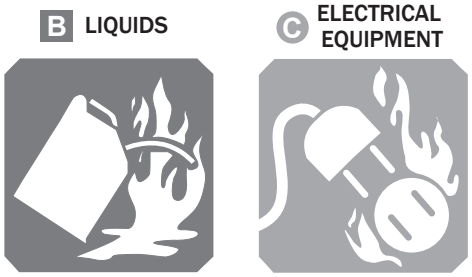
Never use water on a Class B, C, D, or K fire. Use water only on Class A fires.

Only approved, portable fire extinguishers shall be used. Older-style extinguishers, including self-generating foam or gas cartridge water type portable extinguishers, may not be used in the workplace.

Typically fire extinguishers are multipurpose such as ABC and BC extinguishers.

ABC A combination fire extinguisher used for fires involving ordinary combustible materials, flammable liquids, or electrical equipment.

The most common type of fire extinguisher found in buildings.



BC A combination fire extinguisher used for fires involving flammable liquids and electrical equipment.

The most common type of extinguisher found in gasoline or diesel-fueled trucks and generators.

The most common extinguishers found in an office or shop environment are ABC or BC.

Hazards Associated with Fighting Incipient-Stage Fires

Personal safety is of primary importance; putting out the fire is secondary.

A portable fire extinguisher has maximum effectiveness when used during the very first stages of the fire, normally within the first two minutes after ignition. Depending on the size of the extinguisher, the discharge may last only ten to fifteen seconds before it is depleted. If the fire is too large, the extinguisher may not be effective, and the spread of the fire could cause the operator to become trapped by the flames or overcome by the smoke.

Before fighting a fire, make sure these conditions have been met:

- The fire is small, confined, and not spreading.
- Everyone not designated to use extinguishers is leaving the area.
- A designated person has sounded the alarm and called the fire department.
- It is best not to attempt to extinguish a fire alone. Have someone there to ensure the escape route remains available. Be sure there is an unobstructed escape route.
- The substance burning is known, and the extinguisher is right for that type of fire. Using the wrong type puts the operator at greater risk and could make the fire worse.

If the fire does not go out, get to a safe area.

Hazards involved with incipient-stage fire fighting include:

- The fire is too large to fight with a fire extinguisher.
- An individual can be overcome by smoke or trapped by flames.
- Responders may be delayed because a 911 call is not made or an alarm is not sounded.
- An individual is working alone and others are unaware of the fire.
- Unknown substances are burning.
- The wrong type of extinguisher is used.

Check the location and type of fire extinguishers in the work area.

Figure 6.16. The PASS method (top to bottom) for using a fire extinguisher.

Use the PASS method (Figure 6.16) to remember the steps for operating a fire extinguisher.

P **Pull the pin.**

Some extinguishers require releasing a lock latch, pressing a puncture lever, or another first step. Extinguishers are stored with a pin that prevents the extinguisher from being activated accidentally. Grab it and pull it out.

A **Aim low.**

Do not aim the fire extinguisher at the flames themselves. Point the extinguisher nozzle or hose at the base of the fire where the fuel is actually burning.

S **Squeeze the handle.**

This discharges the extinguishing agent. To stop the discharge, release the handle.

S **Sweep from side to side.**

Start at one side of the fire and sweep across a narrow base until that part is out. If necessary, repeat the process.

Remember, most fire extinguishers empty within ten to fifteen seconds. Take partially discharged extinguishers out of service and have them recharged.

Have the fire department inspect the fire site, even if it appears that the fire has been extinguished.

Fire Hoses

In addition to portable fire extinguishers, a location might be equipped with fire hoses. In a building, the fire hose may be housed in a wall-mounted cabinet, usually near a stairwell. On a sound stage, fire hoses are mounted on interior walls.

Taking this training does not authorize the use of a fire hose on the job. They may only be used by personnel that have been specifically trained in their proper use and operation *and* have been authorized by the employer to use them.

Scene 7
Environmental Awareness

Universal Waste

Universal waste, when not properly disposed of, poses great risks to the environment and can cause contamination to the air and water supply.

It is unlawful to dispose of universal waste with ordinary trash.

Common examples of universal waste found on productions include batteries, fluorescent lamps, and electronic waste (E-waste). E-waste is the term for electronic products that have exceeded their usefulness such as:

- Televisions
- Computers
- Computer monitors
- Electronic devices
- Cell phones
- DVD players
- Tape decks
- MP3 players
- Electric motors

Contact the employer, supervisor, or safety department for specific information regarding safe practices and guidelines for proper disposal of universal waste.

Only properly trained and authorized personnel should sign a manifest for shipping of universal waste.

Recycling

The goal of recycling is to divert as much waste material as possible away from landfills (Figure 7.1) and back into useful applications.

Every studio has a comprehensive recycling program for waste generated on set.

Examples of waste products that can be reused or recycled are:

- Aluminum cans
- Plastic and glass bottles
- Construction wastes such as wood, metals, greens, and other building materials
- Paper products such as call sheets, scripts, cardboard, newspapers, and magazines

Figure 7.1. Most studios provide recycling containers for common waste.

Hazardous Waste

Handling and disposal of hazardous waste is regulated by state and federal laws with specific guidelines for the containers, labeling, permit expiration dates, storage, transportation, and disposal.

Waste is considered hazardous if it demonstrates one or more of the following characteristics:

- **Ignitable.** Examples include paints and solvents.
- **Corrosive.** Examples include rust removers, drain cleaners, battery electrolytes, and paint removers.
- **Reactive.** Examples include caustic cleaners, pyrotechnics, mixing of strong acid and bases, and mixing of cleaners containing chlorine and ammonia.
- **Toxic.** Examples include wastes containing heavy metals such as cadmium, lead, or mercury, and solvents.

It is a violation of federal law to dispose of hazardous waste into trash containers, sewers, or sinks.

Storing Hazardous Waste

Productions are responsible for properly storing hazardous waste in a designated accumulation area (Figure 7.2), in an appropriate container with spill containment, and under the supervision of a person trained and authorized to handle these kinds of materials.

Figure 7.2. Designated accumulation area.

Each primary container must be labeled (Figure 7.3) indicating:

- Type of waste being stored in that container
- Name of the production
- Address or stage number the waste originated from
- Collection start date (date the container was first filled with that waste)

Figure 7.3. Containers of hazardous waste must be labeled.

Figure 7.4. Hazardous waste can only accumulate for up to 90 days.

Only properly trained and authorized personnel should sign a manifest for shipping hazardous waste.

Other guidelines for hazardous waste:

- Each category of waste shall be segregated. For example, water-based paint waste must be kept separate from oil-based paint waste. Liquid waste and aerosol cans must be kept separate from solid waste.
- Metal lids must be kept on each primary container when it is not being filled so contents do not evaporate or spill out.
- Secondary containers of hazardous waste will be placed into the larger primary container located in the accumulation area. The contents of secondary containers, when placed in a common primary container, must be compatible.
- All primary waste containers must be disposed of properly within 90 days of the waste accumulation start date (Figure 7.4) and must be removed by a licensed waste disposal hauler.

Check with production or the studio for proper accumulation and storage procedures.

Transporting Dangerous Goods

It is unlawful to transport or ship dangerous goods, such as hazardous materials and waste, without specific training and certification. These restrictions apply to both business and personal goods.

Specific guidelines are set by the Federal Aviation Administration (FAA) and Department of Transportation (DOT) for shipping and transporting dangerous goods (Figure 7.5). These are all enforceable by law. Most training and regulation information can be obtained through the studio safety or transportation departments.

Figure 7.5. Vehicles transporting hazardous goods may require hazardous warning placards (A). Shipping carriers (B and C) are staffed with personnel trained and certified to pack, label, and process hazardous goods properly. Carriers may have their own restrictions on what they ship. Information is available on their websites.

Common examples of dangerous goods unlawful to ship or transport without proper authorization include:

- Pyrotechnic materials such as explosives and blank ammunition
- Aerosol canisters such as hair spray, canned air, spray lubricants, and adhesives
- Flammable or combustible liquids, gases, and solvents such as acetone, lacquers, and rubber cement
- Camera batteries
- Paint, sludge, and chemical waste

These restrictions apply to shipping by carrier, and they also apply to items shipped in personal luggage.

Before shipping, check with a supervisor, the production office, or a studio safety representative for guidelines and assistance.

Notes

Scene 8
Electrical Safety

Everyone uses electricity, which makes it necessary to understand its inherent dangers.

Electricity is used in all areas of our industry, including office space, dressing rooms, and on the set. Electricity can be of varying voltages with equipment that is unique to our industry.

Lack of training and improper or careless use can cause serious shock and burn injuries and property damage. These hazards can be reduced with proper training.

Immediately notify the electrical or set lighting department if there is a potential safety concern associated with any production or stage electrical equipment.

Additional electrical safety guidelines can be found in Safety Bulletin #23, *Guidelines for Working with Portable Power Distribution Systems and Other Electrical Equipment*.

Electrical Shock

Electrical shock occurs when a person's body provides an alternate path for electricity to complete a circuit. Electrical shock injuries include burns, irreversible damage to nerves, tissues, and muscle, and ventricular fibrillation which can cause death. The amount of electricity required to power a 25-watt household bulb is sufficient to interrupt normal heartbeat.

During ventricular fibrillation:

- The rhythmic pumping action of the heart ceases.
- Muscular contraction and nerve damage occur.
- The lack of oxygen to the brain quickly leads to death.

To avoid electrical shock, do not use, touch, or place any object on electrical equipment unless properly trained.

OSHA Regulations

The purpose of the OSHA Electrical Safety Orders is to provide minimum safety requirements and reduce the frequency of electrical accidents and incidents.

- Only qualified persons shall work on electrical equipment or systems.
- Do not tie into house power unless a licensed electrician performs the service with a proper permit.
- When performing any function in proximity to energized overhead power lines, maintain the minimum required clearance distances listed in Safety Bulletin #23A, *Addendum "A" Power Line Distance Requirements.*
- All electrical panels must have a 3-ft. unobstructed clearance around them.
- Suitable temporary barriers or barricades must be installed any time there is an open electrical enclosure or when a maintenance electrician is performing work.
- Conductive (metal) measuring tapes, wire ropes, or similar conductive devices are not permitted to be used when working on or near exposed energized conductors or parts of equipment.

Cable and Power Cord Safety

An important element of electrical safety in the workplace is the safe use of power and extension cords.

Cables, power cords, and extension cords are subject to overloading (Figure 8.1) and physical damage which may lead to fire and shock hazards.

- Cables should be protected from foot and vehicle traffic and located away from exits and doorways. If cables need to be in walkways, aisles, or doorways, keep them as clear as possible and properly covered with ramps, crossovers, or mats. Report any cables that are not properly protected.
- Do not stand on or place equipment on cables.
- Handle all cord-connected tools and appliances with care (hair dryer, toaster, coffee pot, etc.).
- Never carry a power tool or appliance by the cord, as this can cause damage to the insulation. It also puts undue strain on the wires and terminals, which damages them and leads to overheating, short circuits, and equipment failure.
- Always grasp the plug, not the cord, when unplugging electrical equipment.
- Dropped, damaged, or wet power tools and appliances may have weakened insulation and present the possibility of shock hazard.
- Do not plug one extension cord into another, also known as daisy chaining, unless the cords are rated and approved for such use.
- When additional outlets are needed, use a listed power strip (Figure 8.2). Then use individual extension cords of sufficient rating and length to reach the electrical equipment. Do not string cords so that they could pose a trip hazard. This is known as a "clothesline" cable.
- Do not overload extension cords or cables by plugging in equipment or appliances that draw a total of more watts than the rating of the cord. Listed extension cords now must be constructed with #16 gauge or larger wire, or be equipped with integral fuses. The #16 gauge wire is rated to carry 13 amperes (up to 1,560 watts), as compared to the formerly-used #18 gauge cords that were rated for 10 amperes (up to 1,200 watts).
- Use a special angle extension cord where office furniture or other equipment may be pushed against a cord that is inserted into a wall receptacle.

Figure 8.1. Plugging too many devices into one outlet can overload the circuit. When too many devices are connected to a small-gauge extension cord, excessive current overheats the wires.

Figure 8.2. Power strip.

Additional Shock Precautions

- Do not operate electrical equipment while barefoot.
- Never operate electrical equipment while standing in water.
- When operating an electrical device while elevated (scaffold, aerial lift, ladders, etc.) use extra caution as even a mild shock could cause the muscles to involuntarily contract, resulting in a fall.
- Be aware of and report any exposed parts as they could pose a shock or fire hazard. This includes frayed cords and exposed wiring.

Figure 8.3. Do not bypass grounding.

Inspecting Equipment

- Inspect and test electrical equipment every time it is used.
- Check that power switches or triggers work properly by turning the device on and off.
- Report, and do not use, equipment with loose or frayed cords, worn insulation, faulty switches, broken connectors, or visible base copper.
- Immediately remove any faulty equipment from service and have it repaired or replaced.
- Do not use a tool or appliance that has a modified connector (Figure 8.3) used to defeat the ground or polarity.
- Electrical devices that have a third prong on the connector require a grounded outlet (Figure 8.4).

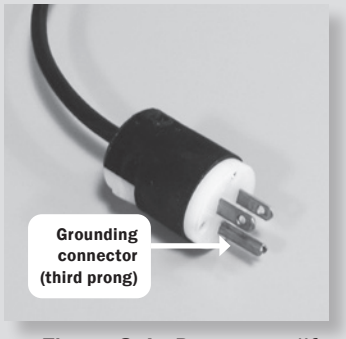


Figure 8.4. Do not modify or remove the grounding pin (third prong).

Wet Conditions

Use extreme caution when using electrically powered devices in the rain or other wet locations. Protect the equipment from rain and moisture by covering with mats, elevating from the ground, or using other appropriate means.

A ground fault circuit interrupter (GFCI) is a device designed to protect people against electrocution (Figure 8.5). GFCIs limit dangerous leakage current by tripping if it senses a dangerous amount of current is finding an alternative path.

GFCIs provide faster response to a ground fault than a regular circuit breaker or fuse and must be used in areas subject to moisture or water. When using power tools during construction, GFCI protection is required.

Proper grounding and use of GFCIs may not completely prevent the user from getting shocked.

Figure 8.5. Examples of different types of GFCIs.

The GFCI should not be considered a substitute for proper grounding.

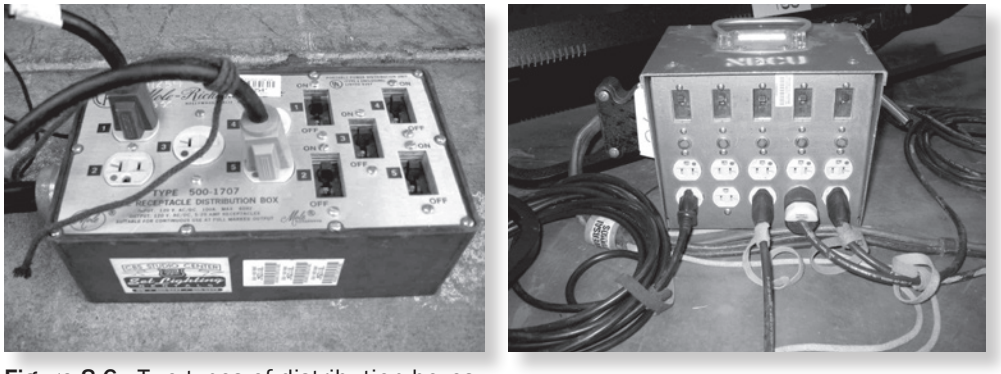


Figure 8.6. Two types of distribution boxes.

Portable Distribution Systems

A portable distribution system includes the cables and distribution boxes that power set lighting and base camp. The use of portable distribution equipment, dimmer rooms, fuses, circuit breakers, and generators is restricted to individuals who are trained and authorized.

Do not plug into a power box unless properly trained and authorized.

Distribution Boxes

- Do not stand, sit, or place anything on any power box.
- Do not plug into, move, tamper with, or disconnect a power box (Figure 8.6) unless properly trained and authorized by the employer.
- If power is needed, ask a lighting technician for help.
- Do not cover noise-producing electrical devices, such as transformers, ballasts, or dimmers, unless using a properly installed, non-combustible baffle.
- Distribution boxes and cable connector points should be elevated if there is a possibility of exposure to water.

Dimmer Rooms

Dimmer rooms are separate rooms, generally located on or near a shooting stage, used to house dimmer racks and associated distribution equipment. They are typically packed with high-power electrical equipment and cabling. Only authorized employees should enter and work in dimmer rooms.

Fuses and Circuit Breakers

- All circuits on set must be protected from overload and short circuit by a safety device (fuse or circuit breaker) (Figure 8.7 and Figure 8.8).
- Only properly trained personnel should replace fuses.
- Do not use a circuit breaker as a switch to turn equipment on and off unless properly trained and the circuit breaker is rated for switch use.

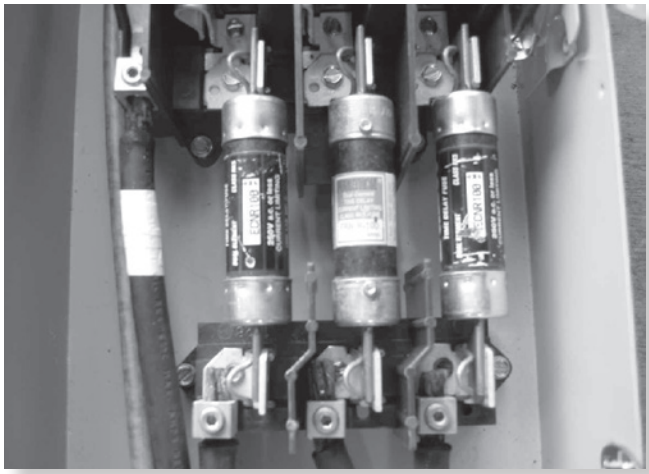


Figure 8.7. The conductive parts of distribution equipment (such as these fuse holders) should never be exposed unless the equipment is completely disconnected and removed from the power supply, or lockout/tagout is performed.

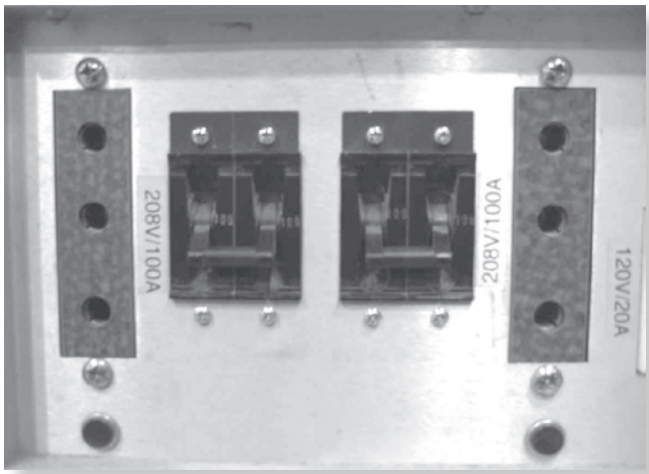


Figure 8.8. When a circuit breaker trips, determine the cause of the trip before resetting. Repeated resetting is potentially dangerous.

A circuit breaker should not be used as an on/off switch unless rated for switch use.

Figure 8.9. Trailer-mounted generator.

Generators

- Only authorized and qualified personnel should operate a generator (Figure 8.9).
- Contact qualified personnel before plugging into the distribution system powered by a generator.
- Generators must be grounded or isolated according to the requirements of the AHJ.
- All non-essential personnel must remain clear prior to energizing a distribution system. If someone yells "going hot" get clear of any electrical equipment being handled.

Prior to generator use, remove the fire extinguisher from its stored location and keep it in proximity.

480-Volt Systems

480-volt systems (Figure 8.10) are becoming more common on production.

Employees working with these systems should be aware of the potential hazards, which are greater than 120-volt systems. Such hazards include, but are not limited to:

- Greater arc flash (Figure 8.11) (an extremely dangerous discharge of heat caused by an arcing fault)
- Potential for electrical explosions (arc blast)
- Greater arcing ability between conductive surfaces
- Greater shock hazard

Only qualified employees who have been properly trained and authorized by the employer should connect, disconnect, or operate 480-volt systems or equipment.

More information can be found in Safety Bulletin #23C, *Addendum "C" Working With 480 Volt Systems*.

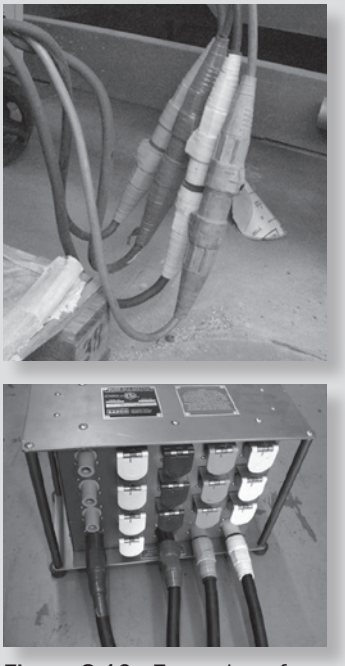


Figure 8.10. Examples of 480-volt systems.

Figure 8.11. Permanently installed electrical panels may have an arc flash warning label. Do not use such equipment unless qualified and protected.

Notes

Scene 9
Workplace Cleanliness

Personal and Workplace Hygiene

Good hygiene is an effective way to prevent the spread of infectious disease and illness. Keeping hands clean reduces the transmission of germs and viruses.

There are a wide variety of illnesses, such as seasonal influenza, novel influenza including H1N1, and other flu-like illnesses, that can impact the workplace. Germs and viruses are spread from person to person mainly through coughing, sneezing, or touching. People may infect themselves by touching contaminated surfaces and then touching their eyes, nose, or mouth. People infected with influenza may infect others before symptoms develop *and* after becoming sick.

Preventative measures can help to avoid catching or spreading germs or viruses.

- Thoroughly wash hands often with soap and water for at least 20 seconds. Use hand sanitizer if soap and water are not available.
- Wash hands every time before eating, drinking, or smoking, after going to the bathroom, sneezing or coughing into hands, and touching a sick person, garbage, or animals.
- Cover the mouth and nose when coughing or sneezing.
- Keep tools and work surfaces clean.

See Safety & Health Awareness Sheet, *Guidelines for Reducing the Spread of Influenza-Like Illness*, which is in Appendix G of this book.

The CDC recommends staying home for at least 24 hours after a fever is gone.

Personal Protective Equipment

Inspect all equipment and material for cleanliness prior to use (Figure 9.1). Items may require sanitization or replacement.

- Sharing PPE should be kept to a minimum.
- Safety devices shall not be interchanged among employees until properly sanitized. This includes protective clothing worn by employees, especially those items that come in contact with the skin.

Safety Bulletin #21, *Guidelines for Appropriate Clothing and Personal Protective Equipment*, can be found in Appendix B.

Some PPE, such as disposable ear plugs, cannot be cleaned and should be discarded after use.

Figure 9.1. Sanitize protective clothing and equipment before sharing with other employees. This is especially important for PPE that comes in contact with the skin.

Workplace Conditions

Report to the employer or safety department standing water, evidence of water intrusion, rodent or bird droppings, or other animal infestation.

Locations should be maintained in a clean, dry, orderly, and sanitary condition.

Water Supply

An adequate supply of potable water shall be provided in all places of employment for drinking and washing (Figure 9.2).

- All sources of drinking water shall be maintained in a clean and sanitary condition.
- Drinking water dispensers must be clearly marked with their contents.
- The use of a community cup, glass, or other vessel for drinking purposes is prohibited.
- Non-potable water is unsafe for consumption and shall not be used for drinking, washing, cooking, or other personal service purposes.

Figure 9.2. Watercoolers must be labeled with their contents.

Food and Beverage Consumption

All food serving areas should be kept clean, healthful, and free from debris, pests, and other unsanitary conditions.

- Food should be stored and served at proper temperatures.
- Receptacles for food waste are to be provided and emptied not less than once each working day.
- Use recycling containers when provided.
- Wash hands before eating or drinking.
- Do not eat or drink in areas where chemicals or hazardous materials are being used, or stored, or where dust is being generated during construction.

For additional information see Safety Bulletin #32, *Food Handling Guidelines for Production*, and Safety Bulletin #32A, *Addendum "A" Los Angeles County Approved Film Production Food Services*, which outline the requirements for food service on a production in Los Angeles County.

Drinking water must be available at all work locations.

Notes

Scene 10
Bloodborne Pathogens

OSHA's Bloodborne Pathogen Standard is a series of regulations to protect workers with occupational exposure from contracting disease through direct contact with contaminated blood and other potentially infectious materials.

This also applies to accidental cuts and wounds from common tools such as sewing needles, saw blades, carpet cutters, and utility knives (Figure 10.1).

This standard requires employers to protect those employees reasonably at risk from exposure to bloodborne pathogens.

Figure 10.1. Take precautions to prevent accidental contact with another person's blood.

Universal precautions means treating any bodily fluids as if they are known to be infectious. This is the first rule for dealing with bloodborne pathogens. The following universal precautions should be taken to avoid contamination:

- Use appropriate PPE as required including gloves, face masks, and eye shields.
- Wash hands immediately, or as soon as possible, after removal of gloves or other PPE.
- All needles and sharp implements that cause an injury should be treated as if they are known to be contaminated with infectious material.
- Be sure that all biohazardous waste, including contaminated PPE and sharps, are disposed of properly and safely. Biohazardous waste must be disposed of by a qualified person using established procedures. Do not put these items in the trash.
- Report the exposure to medical personnel immediately.

After accidental contact with blood or bodily fluids:

- Immediately wash or flush the exposed area with soap and water.
- **Skin.** Flood the affected area with water, and clean with soap and water or a skin disinfectant.
- **Eyes.** Flood eyes with warm water.
- **Nose.** Blow and clean inside of nose.
- **Mouth.** Rinse mouth with water and spit it out.
- **Clothes.** Change clothes if fabric is soaked with blood to prevent prolonged skin contact with blood and avoid transfer of pathogens to another area.

Only authorized and properly trained personnel should clean up blood and other potentially infectious materials.

Seek medical attention as soon as possible after any accidental contact. Be sure to inform medical personnel that the injury is an exposure to bloodborne pathogens or a needle stick. If possible, needles and other sharps should be placed in a puncture resistant container and given to the medical provider at the treatment facility.

Safety Bulletin #24, *California OSHA Safety Requirements for Handling of Blood and Other Potentially Infectious Materials*, can be viewed and downloaded at www.csatf.org.

Remember

Maintaining a safe and healthy work environment and preventing accidents and injuries requires teamwork and communication between you, your employer, and your fellow employees.

Your safe attitude impacts how you act and react to workplace conditions and challenges. Speak up about safety issues. Ask questions. Look out for your coworkers and for yourself. Remember, safety starts with you.

Thank you and congratulations.

Notes

LOS ANGELES FIRE DEPARTMENT
Bureau of Fire Prevention & Public Safety
FILM UNIT
200 N. Main Street, Suite 1710
Los Angeles, CA 90012
lafdfilm@lacity.org

FILM LOCATION FIRE SAFETY INSPECTION CHECKLIST

FilmLA Permit #:	Date of Filming:
Production Name:	Location Address:

THIS CHECKLIST SHALL BE COMPLETED DAILY FOR EACH PERMITTED FILMING LOCATION AND A HARDCOPY SHALL BE AVAILABLE WITH A COPY OF THE FILM PERMIT. This checklist shall be provided to any Los Angeles Fire Department Inspector visiting the filming location.

*INSTRUCTIONS: **Indicate "YES", "NO" or "N/A" (i.e. Not Applicable) for every numbered item below.** For each "NO" answer, corrective actions must be noted and executed before filming can continue.*

	ACCESS / FIRE PROTECTION	YES	NO	N/A
1	**911 Reporting:** Methods of reporting an emergency are available (e.g. mobile phone, landline, etc.)			
2	**Clearance (Fire Equipment):** Fire hydrants, extinguishers, sprinklers & standpipe connections are readily accessible and clear of all equipment & vehicles (e.g. no parking in front of hydrants, nothing hung from sprinklers, etc.)			
3	**Clearance (Fire Lanes):** Fire lane access must be maintained (*20 feet wide*)			
4	**Extinguishers:** Extinguishers present (*2A-10BC min. rating*), serviced, ready for use and ***within 75 ft. of travel***			
5	**Fire Equipment Bypass (e.g. alarm):** ***Fire alarm equipment shall not be disconnected without Fire Dept. approval***			
	CORRECTIVE ACTION TO BE TAKEN:			

	BASECAMP / CATERING / TENTS	YES	NO	N/A
6	**Extinguisher(s):** Catering trucks and cooking services provided with fire extinguishers (*2A-10BC minimum rating*)			
7	**Location (Cooking/Vehicles):** Catering located in safe area to operate; **Catering vehicles prohibited from cooking inside buildings, tents or other enclosures**			
8	**LPG Tanks (Cooking/Location/Protection):** ***LPG cooking prohibited inside buildings; LPG tanks shall be stored outside;*** Portable LPG containers shall be stored within a suitable enclosure or otherwise protected against tampering			
9	**TENT Permit:** LAFD *'Specific Action or Project'* Permit for tent (or aggregate of tents) over *700 sq. ft. [**EXCEPTION**: Tent (or aggregate of tents) over 700 sq. ft. which are open on all sides and maintain a clearance of 12 feet to all structures or tents]*			
10	**TENT Specifications:** Tent complies with LA Fire Code (e.g. flame retardant, properly secured, etc.)			
	CORRECTIVE ACTION TO BE TAKEN:			

	ELECTRICAL & LIGHTING	YES	NO	N/A
11	**Clearance (3 ft. around Electrical Panels):** Maintain *3 ft. clearance* around electrical panels in buildings			
12	**Clearance (4 ft. Perimeter):** No distribution boxes or spiders within *4 ft. perimeter* unless approved by Fire Dept.			
13	**Cables, Cords & Connectors:** Cables properly protected, dressed and kept clear of possible of exits; cords and connectors of an approved type			
14	**Distance from Heat Sources:** Lighting adequately separated from flammable/combustible materials and surfaces			
15	**Generators (Inspected, Grounded/Insulated & Location):** Generators have been inspected, are grounded or insulated, and have been placed in approved locations (e.g. so that the exhaust will not enter buildings and/or heat from the exhaust will not cause a fire, etc.)			
16	**Grounded:** All electrical equipment, lighting, portable A/C, etc. shall be properly grounded			
17	**Hookup to Panel (Permit & Over-Current Hookup):** Electrical panel hookup must be done with a permit from L.A. Dept. of Building & Safety; hookup must be linked to over-current protection device			
18	**Water/Damp Areas:** Ground Fault Circuit Interrupters (GFCI) in use when cables, cords and connectors are within 10 feet of a water hazard.			
	CORRECTIVE ACTION TO BE TAKEN:			

	EXITING	YES	NO	N/A
19	**Clearance (Exiting):** ***Production equipment may not obstruct any part of the exiting system.*** All designated fire, emergency and regular exits shall be kept clear & unobstructed, including aisles, corridors, doors (i.e. regular exit doors, fire doors, etc.), hallways, sidewalks, stairways, etc., and the *4 ft. perimeter* around applicable sets.			
20	**Fire Escapes:** ***Fire escapes cannot be used for storage or operational activity***, and must be kept clear as escape routes			
21	**Roof/Basement/Mezzanine:** Roof, basement, mezzanine areas *limited to 10 persons* without Fire Dept. approval			
22	**Visible:** All exits must be adequate, visible, lit and well-marked			
	CORRECTIVE ACTION TO BE TAKEN:			

FLAMMABLE/COMBUSTIBLE LIQUIDS & GASES		YES	NO	N/A
23	**Distance from Heat Sources:** Flammable/combustible liquids and gases kept ***25 feet away*** from heat sources			
24	**Pressurized Gas (Hoses/Valves):** Approved hoses and valves used for pressurized gases (e.g. propane)			
25	**Refueling (Permit/Location/Vessels Bonded/Stop Motor):** Refueling vehicle must possess a valid LAFD *'Specific Action or Project'* permit; refueling must be conducted in approved area; supply and receiving vessels bonded together; *NO refueling while equipment is in operation. No smoking within 25 feet of vehicle.*			
26	**Spray Painting/Lacquer Application & Cleanup:** Spray painting and lacquer application approved and performed safely in a properly ventilated area to prevent flammable vapors from accumulating. Rags used with paints solvents and other flammables shall be safely disposed of in containers with a tight-fitting lid.			
27	**Storage (Approved Containers, Secured, "NO SMOKING" Signage):** Proper storage of flammable liquids in approved containers (*Max. 5-gallon containers*); pressure vessels secured and stored with "No Smoking" signs, and protected from vehicle traffic			
	CORRECTIVE ACTION TO BE TAKEN:			
PYROTECHNIC SPECIAL EFFECTS (SPFX) & SPECIAL PERMITS		**YES**	**NO**	**N/A**
28	**Extinguishers:** Fire extinguishers provided by pyrotechnic operator onsite, charged and in good working order			
29	**License:** Proper license in possession of pyrotechnic operator			
30	**Permit:** LAFD *'Special Permit'* required for open flame (e.g. candles), hot work, pyrotechnics, etc.			
31	**Safety Meeting:** A safety meeting shall be conducted prior to pyrotechnic activity			
32	**SPFX Used as Per Permit:** Special effects used as per LAFD *'Special Permit'*			
	CORRECTIVE ACTION TO BE TAKEN:			
SETS/CONSTRUCTION		**YES**	**NO**	**N/A**
33	**Auto/Motor Craft on Stage:** LAFD *'Special Permit' (F-315-G)* required; fuel in tank not to exceed *1/4 tank or 5 gallons (whichever is less);* fuel tanks and fill openings closed & sealed to prevent tampering; no fueling/de-fueling within building; batteries disconnected on applicable auto/motor craft			
34	**Clean Work Area (Saw Dust & Scraps):** Light combustibles in carpenter shop and other work areas removed frequently			
35	**Distance from Brush:** Sets must be at least *20 feet from brush*			
36	**Flame Retardant:** Curtains, backdrops, window covering, trees, bushes, hay, etc., if not fresh must be flame retardant			
37	**NO SMOKING:** Set construction areas kept clean with "NO SMOKING" signs			
38	**Sets Requiring LAFD Approval:** Sets requiring Fire Dept. approval are (1) Interior Raised Floor > 600 sq. ft. (2) Hard Ceiling > 600 sq. ft. (3) Foam sets (4) Sets impacted by SPFX			
	CORRECTIVE ACTION TO BE TAKEN:			
SMOKING (DESIGNATED & NO SMOKING AREAS)		**YES**	**NO**	**N/A**
39	**DESIGNATED SMOKING (Location):** Where smoking areas are allowed, those areas are clearly marked and supplied with butt cans			
40	**NO SMOKING (Signage):** "NO SMOKING" signs prominently visible where smoking is prohibited			
41	**NO SMOKING (Prohibited Areas = Near Brush, SPFX & Flammables/Combustibles):** Smoking ***prohibited*** near brush, pyrotechnics/special effects, flammable liquid storage and dispensing areas			
	CORRECTIVE ACTION TO BE TAKEN:			

Failure to comply with the requirements identified within this document may result in the dispatch of a UFSO, the revocation of permit and/or cancellation of film production. [LAMC 57.104.18, 57.105.5, 57.4807.1]

Should LAFD inspectors need further information regarding the completion of this form, please contact:

Signature _____ **Phone Number** _____

Print Name _____ **Title** _____

LAFD Inspector Signature _____

Appendix B
Safety Bulletin #21

INDUSTRY WIDE LABOR-MANAGEMENT SAFETY COMMITTEE

SAFETY BULLETIN #21

GUIDELINES FOR APPROPRIATE CLOTHING AND PERSONAL PROTECTIVE EQUIPMENT

The purpose of this Safety Bulletin is to provide guidance in the selection of appropriate clothing and certain types of Personal Protective Equipment (PPE).

This bulletin does not include or apply to clothing or PPE for persons subject to the bloodborne pathogens standard (Safety Bulletin #24, "Cal-OSHA Safety Requirements for Handling of Blood and Other Potentially Infectious Materials"). Additionally, personnel working with or around pyrotechnics and/or open flame on production should refer to Safety Bulletin #16, "Recommended Guidelines for Safety with Pyrotechnic Special Effects" and/or Safety Bulletin #19, "Recommended Guidelines for the Use of Open Flames on Production" for guidance.

Suitable and effective PPE shall be provided and used where an activity presents a significant risk to health and safety and the risk cannot be reduced by any other means.

In particular, employers shall inform employees engaged in any of the following activities of specific PPE requirements by OSHA and/or other authorities:

- Working with electricity (see Safety Bulletins 23, 23A, 23B and 23C)
- Working with hazardous materials
- Welding or cutting
- Working around boats and water (see Safety Bulletin 15)
- Working with special effects, pyrotechnics, open flames, or hazardous objects (see Safety Bulletins 1, 2, 12, 16, 19, 27, 30, and 31)
- Construction, including alteration, painting, repairing, maintenance, renovation, removal or wrecking (see Safety Bulletin 39)
- Working around traffic (see Safety Bulletins 8, 8A, 8B, 8C, 20, 28, and 40)
- Working at heights

PPE must not significantly increase other risks by reducing visibility or interfere with other safety measures. Employees must be given appropriate instruction and training on how to use any PPE issued. Once issued, PPE must be worn as required and any defects must be reported to the employer.

Revised: June 5, 2009

CLOTHING

- Clothing determined by the employer to be appropriate for the work being done shall be worn.
- Jewelry, loose sleeves, exposed shirt tails, neckties, lapels, loose cuffs or other loose clothing shall not be worn around machinery in which it might become entangled.
- Long hair shall be tied back when working around machinery and/or equipment with moving parts.
- Costumes should be selected and prepared in anticipation of the potential risks and hazards.

FOOT PROTECTION

- Appropriate foot protection shall be worn by employees who may be exposed to foot injuries from hot surfaces, corrosive materials, hazardous substances, falling objects, crushing or penetrating actions which may cause injuries, or who are required to work in abnormally wet or cold locations.
- Personnel working around open flame and pyrotechnic material must always wear appropriate closed-toe footwear.

HAND PROTECTION

- Hand protection (gloves) shall be worn by employees whose work exposes them to potential injuries, such as exposure to cuts, burns, harmful physical hazards, chemical agents or electrical hazards which are encountered and capable of causing injury or impairments.
- Hand protection should not be worn if there is a danger of it becoming entangled in moving machinery.
- Hand protection should be appropriate for the type of exposure.
- Gloves should be properly discarded when they become worn, contaminated, saturated or otherwise no longer usable.

EYE AND FACE PROTECTION

- Employees working where there is a risk of receiving eye injuries shall wear appropriate eye or face protection.
- Side shield protection shall also be utilized when employees are exposed to the risk of flying objects/particles/materials entering the eyes from the side.
- Suitable screens or shields isolating the hazardous exposure may be used if they provide adequate safeguarding for nearby employees.
- Specialized forms of eye protection are required for certain types of work, such as welding.
- The use of sunglasses or prescription eye glasses may not provide appropriate eye protection.

HEARING PROTECTION

- When operating or near loud equipment, amplified sound, pyrotechnics or gun fire, consideration should be given to wearing appropriate hearing protection suitable for the hazards encountered.

HEAD PROTECTION

- Employees exposed to flying or falling objects and/or electric shock and burns shall be safeguarded by means of approved head protection.
- Operation of vehicles, such as motorcycles, all terrain vehicles, bicycles, etc., may require the use of a helmet. (see Safety Bulletins 20 and 40)

SAFETY VESTS

Federal, State and local laws require safety vests to be worn and visible when working on active public roadways.

Safety vests shall always be properly worn by employees under the following circumstances:

- During set-up, rigging, filming or striking activities performed in or near an active public roadway, unless production has obtained full closure and control of the roadway. **NOTE:** Alternative safety considerations should be made when wardrobe requirements would prevent cast from wearing safety vests while working in or near an active public roadway without full closure and control.
- When directing traffic or responsible for lockup during partial lane closures where intermittent traffic control is used to control traffic.

Other conditions and locations may require the use of safety vests, such as railroads, subways, construction sites, airports, docks, etc.

The color of the safety vests must be either fluorescent orange-red or fluorescent yellow-green. The retro-reflective material shall be orange, yellow, white, silver, yellow-green or a fluorescent version of these colors.

RESPIRATORY PROTECTION

The need for respiratory protection is unique to the hazards of the workplace. Consult your employer regarding their specific respiratory protection policy.

SANITATION OF PPE

- PPE shall be kept clean and in good repair.
- PPE not capable of being easily cleaned or disinfected shall be disposed of after use.
- PPE must be properly stored when not in use.

Appendix C
Safety Bulletin #34

INDUSTRY WIDE LABOR-MANAGEMENT SAFETY COMMITTEE

SAFETY BULLETIN #34

Guidelines For Working In Extreme Cold Temperature Conditions

INTRODUCTION

When working in cold conditions, the two most common hazards are hypothermia and frostbite. With proper awareness and pre-planning, these hazards can be eliminated.

HYPOTHERMIA

Hypothermia is a potentially deadly condition, which results in an abnormally low body temperature. This drop in temperature occurs when the body loses heat faster than it is produced. Anyone exposed to near freezing temperatures for prolonged periods of time should be familiar in the prevention and treatment of hypothermia. A combination of cold, wet and windy conditions will result in hypothermia for anyone who is inadequately prepared and protected.

Certain conditions will increase your risk:

- Improper dress for the conditions
- Poor physical condition
- Fatigue
- Illness
- Poor diet
- Alcohol, tobacco or drug use

An individual's physiology may affect the body's ability to acclimate, possibly increasing the risk of hypothermia.

Early symptoms of hypothermia are often overlooked, they include:

- Intense shivering
- Muscle tension
- Fatigue
- Intense feeling of cold or numbness

To most people, these may just seem like normal consequences of exposure to winter conditions. Ignoring these early signs can be very dangerous. If you or a co-worker experience early symptoms of hypothermia, take action.

Also watch for additional behavioral signs including:

- Slurred speech
- Difficulty performing tasks
- Loss of coordination
- Lethargy
- Erratic behavior, poor decisions
- Irritability
- Slow breathing and heart rate

At the first sign of any of these conditions, notify your supervisor and seek medical attention (*i.e.*, set medic, studio hospital or medical provider). Go inside and get warm, before you attempt to complete the job or project you are working on.

HYPOTHERMIA PREVENTION

Preventing hypothermia is not difficult. In fact, it is much easier to avoid hypothermia than to treat it after the fact. You can prevent hypothermia if you pre-plan, know what the conditions are expected to be and plan your clothing accordingly.

Some clothing tips to remember:

- Clothing does not warm you, it provides insulation to preserve your warmth; layer your clothing.
- As much as half of your body heat is lost through your head and neck, so keep them covered.
- Keep rain and wind out of your clothing.
- Avoid overheating and sweating by ventilating as needed.
- Wool clothing is best, followed by synthetics; down is okay, if kept dry, but cotton is a bad choice.

Food and behavior:

- Watch what you eat, minor changes to your normal behavior are an important step in preventing hypothermia.
- This is not the time for a starvation diet, it is important to maintain your optimal metabolism.
- Take extra steps to stay warm and dry by preventing exposure to wind and water.

If you are working in cold weather, remember these tips:

- Do not diet; give your body the appropriate nutrients.
- This will increase your metabolism and help keep you warm.
- Continue to drink fluids; water is best, do not drink alcohol.

Consider the following:

- If you do not need to be outside, go inside, even if it is only for a few minutes.
- If you cannot go inside, exercise, jog in place, shake your arms; these activities will increase your circulation and increase heat.

If someone is showing signs of hypothermia:

- Hypothermia symptoms should receive medical treatment as soon as possible.
- Prevent further heat loss by sheltering from exposure to wind and water.
- Bring the crew member inside to a warm area, if possible.
- Treat the crew member gently.
- Seek medical attention (i.e., set medic, studio hospital or medical provider).
- Remove any wet clothing and replace with dry clothing.
- Wrap the crew member in blankets and cover their head.
- Caffeine, alcohol or tobacco should not be used.

FROSTBITE

Frostbite is more common than hypothermia. It is the result of the freezing of the extracellular fluid in the skin, which can permanently damage the tissue. This condition usually affects the extremities, such as the tips of fingers, the ears and nose but other exposed areas can also be affected. Like hypothermia, a combination of elements usually leads to frostbite, not cold air alone. In fact, most frostbite is the result of conduction, the rapid transfer of heat, for example, touching cold metal surfaces with bare hands. Exposure to cold temperatures and wind can quickly result in frostbite.

Factors that can increase your risk of frostbite are:

- Improper dress for the conditions
- Poor physical condition
- Fatigue
- Illness
- Poor diet
- Alcohol, tobacco or drug use

Signs and Symptoms of Frostbite

Mild frostbite affects the outer skin layers and appears as a blanching or whitening of the skin. This usually disappears as warming occurs, but the skin may appear red for several hours.

In severe cases, the skin will appear waxy-looking with a white, gray-yellow or gray-blue color. The affected parts will have no feeling and blisters may be present. The tissue will feel frozen or "wooden".

Other indicators are; swelling, itching, burning and deep pain as the area is warmed.

Frostbite Prevention

Just as with hypothermia, frostbite is much easier to prevent than it is to treat. All of the items listed above for hypothermia would also apply for frostbite.

Summary

- Wear proper clothing which insulates from the cold and provides protection from wind, rain and snow.
- Cover your neck and head.
- Protect your hands and feet (mittens are warmer than gloves but may limit activity).
- Keep clothing and shoes loose, to ensure good circulation.
- Drink plenty of fluids.
- Do not diet; give your body the appropriate nutrients.
- Alcohol, tobacco or drugs should not be used.
- Keep moving, do not stand still.
- Take breaks to go inside and warm up.
- Never touch a cold metal object with your bare hands.

Frostbite Treatment

If you think you may have frostbite, even a mild case, immediately seek medical attention. The following list will provide some guidelines for treating frostbite:

- Get to a place where you can stay warm after thawing, do not allow the affected body area to refreeze.
- Seek medical attention (i.e., set medic, studio hospital or medical provider); rewarming should be conducted under medical supervision.
- Warm water is best for re-warming; do not rub or massage the area, or use dry heat (such as a sunlamp, radiator, or heating pad).
- If blisters are present, leave them intact.
- Alcohol, tobacco or drugs should not be used.

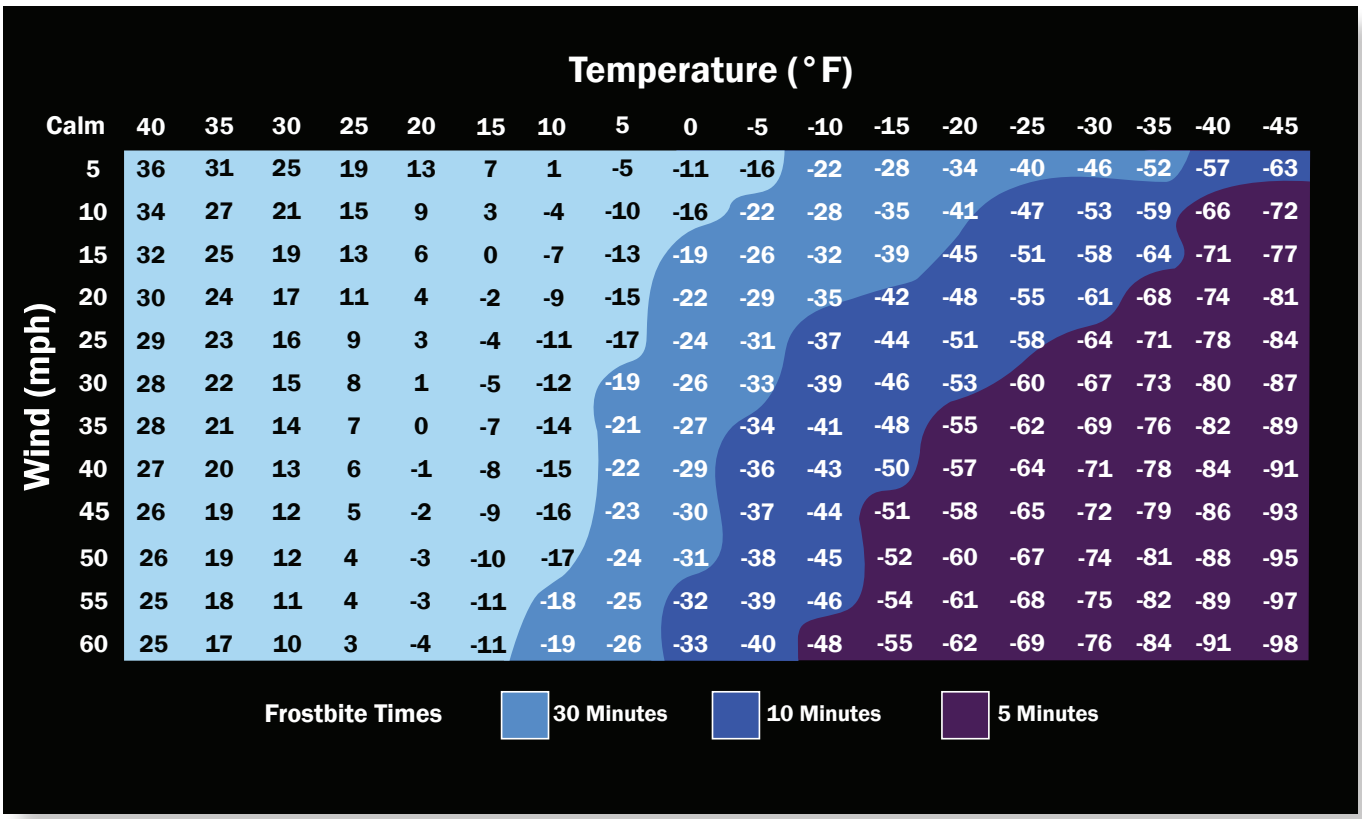
GENERAL PRECAUTIONS

The following are some additional steps the production can take to minimize the risks:

- Monitor local weather forecast information daily and conduct cold stress assessments for all areas.
- Provide adequate heated shelters for cast and crew.
- Maintain a suitable thermometer and anemometer (wind measuring device) at the site; these will be used to determine the equivalent chill temperature.
- Charts for establishing acceptable working conditions based on temperature and wind speed, are in Addendum 34A, attached.
- Establish safe areas and paths, no wandering or sightseeing, this will reduce the risk of getting lost.

Appendix D

Safety Bulletin #34A



Appendix E
Safety Bulletin #35

INDUSTRY WIDE LABOR-MANAGEMENT SAFETY COMMITTEE

SAFETY BULLETIN #35

Safety Considerations for the Prevention of Heat Illness

This bulletin addresses safety considerations when exposed to heat. Safeguards should be taken to prevent heat illness.

INTRODUCTION

Heat stroke can be fatal. Because of the health risks, the symptoms of heat related illness must be recognized. Excess heat buildup in the body can arise through physical exertion, as well as from hot and humid weather. This can place abnormal stress on the body that can result in one or more serious medical conditions such as heat rash, sunburn, heat cramps, fainting, heat exhaustion, or heat stroke.

WHAT IS HEAT ILLNESS?

Heat illnesses are medical conditions that occur when heat builds up inside the body beyond its ideal 98.6 degree Fahrenheit temperature. There are several ways in which the body may react to excessive heat.

HEAT RASH is a skin irritation caused by excessive sweating during hot, humid weather.

SUNBURN is caused by exposure to the sun's rays. Overexposure can cause immediate burns and blisters, while repeated or long-term exposure can potentially lead to skin cancer.

HEAT CRAMPS affect people who sweat excessively during strenuous work activity. The sweating depletes the body's salt and fluids. The low salt level in the muscles causes painful cramps.

FAINTING (Heat Syncope) is caused by a lack of adequate blood supply to the brain usually as the result of dehydration and lack of acclimatization to work in warm/humid weather.

HEAT EXHAUSTION is caused by a loss of fluids from sweating and/or a lack of drinking proper fluids. Symptoms include, but are not limited to, sweating, cool or clammy skin, weakness, fatigue, nausea, vomiting, dizziness, headache, fast or weak pulse, and/or fast or slow breathing.

HEAT STROKE is a life-threatening emergency that occurs when the body overheats to a point where its temperature control system shuts down and heat builds up internally.

The signs of impending heat stroke are altered behavior, convulsions, unconsciousness and, usually, lack of sweating. ***Should these symptoms occur, seek medical assistance immediately.***

SYMPTOMS OF HEAT ILLNESS

Early heat illness signs and symptoms may not always follow a progressive pattern from a mild condition such as heat rash up to the life-threatening condition of heat stroke. Thirst alone is a poor indicator of how the body is reacting to heat. Know the symptoms of heat illness to watch for:

- Discomfort
- Headache
- Fatigue
- Loss of coordination
- Vomiting
- Fainting
- Blurry vision
- Confusion
- Dizziness
- Seizures
- Muscle pain/cramps
- Lack of sweating or excessive sweating
- Altered behavior
- Irritability
- Poor concentration

TELL A SUPERVISOR IMMEDIATELY IF YOU THINK YOU OR A CO-WORKER ARE FEELING ILL FROM THE HEAT.

HEAT ILLNESS SUSCEPTIBILITY FACTORS

There are many risk factors that increase susceptibility to heat illness. They include, but are not limited to:

ENVIRONMENTAL CONDITIONS

- Hot air temperature
- High relative humidity
- Physical activity
- Radiant heat from the sun or other source
- Personal protective equipment worn
- Lack of air movement

PERSONAL CONDITIONS

- A history of heat illness
- Insufficient water consumption
- Over/under weight
- Poor level of fitness
- Lack of acclimatization
- Poor medical condition
- Use of prescription and over the counter medications and other drugs
- Consumption of alcohol, caffeine, carbonated drinks, energy drinks
- Advanced age or young age
- On a low salt diet

Consult with a doctor if you know you have risk factors for heat illness.

ACCLIMATIZATION

During the first few days of working in heat, the body needs time to adjust. This period of adjustment (acclimatization) varies by individual and can take up to a few weeks. During this acclimatization period you should:

- Start work slowly and increase the pace gradually. During a heat wave there is still a risk for heat illness even if previously acclimatized.
- Report to a supervisor if returning to work after an absence or illness, or when changing from a cool to a hot and/or humid climate.
- Supervisors and employees should be aware that acclimatization to heat can take several days and work/rest cycles should be scheduled accordingly.

HEAT ILLNESS PREVENTION

Drink Plenty of Water

Dehydration occurs quickly no matter how well acclimatized to the heat. The average person loses between 1 and 2 quarts of fluid an hour in perspiration during heavy exertion in hot weather. The only way to replace the loss (and help the body continue to cool itself) is to drink water.

- Frequently drink small quantities of water throughout the entire work shift. A minimum of 1 quart (four 8-oz cups) per hour is recommended.
- Don't wait until thirsty to drink water. Being thirsty is not a good signal for the need to hydrate. Drink water both before and after work. Avoid substituting soft drinks and coffee for water.
- Drinking water needs to be available for all employees at all work locations.
- Know the location(s) of the closest drinking water supplies.

Wear Appropriate Work Clothes and Cool Down Under Cover

- Know the nearest cool resting place(s). Get out of the sun or away from the source of heat and find a cool, preferably well ventilated, resting place when you are starting to overheat or need to cool down.
- Wear light-colored loose fitting long-sleeved shirt and pants, and UV sunglasses or, if appropriate, other protective equipment.
- Wear a wide brim hat (baseball caps do not cover the ears and neck).
- Use sunscreen or sun block and reapply as needed.
- Eat light meals. Hot, heavy meals add heat to the body.

SUMMARY

Heat illness is preventable. Know your limits and take time to adjust to the heat. Above all, drink plenty of water and immediately report any signs of heat illness in yourself or others.

Appendix F
Safety Bulletin #38

INDUSTRY WIDE LABOR-MANAGEMENT SAFETY COMMITTEE

SAFETY BULLETIN #38

GUIDELINES FOR INCLEMENT OR SEVERE WEATHER

This bulletin identifies the safety considerations that should be addressed when working outdoors in areas where there is a potential for thunderstorms, lightning, flash flooding, extreme winds, large hail, tornados and hurricanes.

PRE-PLANNING

Pre-planning can reduce many of the potential dangers posed by inclement weather. The location manager, his/her department representative or production management, should develop an **"action plan"** when preparing to use locations that may present an inclement or severe weather hazard.

The **action plan** should designate a person who is responsible for monitoring potential inclement weather by commercial weather services, television and radio station news casts, or other available means.

The **action plan** should include a method for communication with cast and crew members in the event of inclement or severe weather. The communication methods should reflect the conditions and circumstances at the scene. Other elements to include should be site specific procedures which include methods and routes of evacuation, meeting areas, a means of establishing a head count for cast and crew members and procedures for equipment shut-down, stowage and/or removal. If there is the possibility of inclement or severe weather, a "**safety meeting**" shall be held to review and communicate the elements of the **action plan**.

Specific hazards which may be addressed in the action plan:

1. Flash Flooding

Causes:

Flash flooding is usually caused by slow moving thunderstorms and can occur within a few minutes or hours of excessive rainfall. High risk locations include low water crossings, recent burn areas in mountains and urban areas which have pavement and roofs which concentrate rainfall runoff.

Flash flooding may be worsened by topography, soil conditions and ground cover. Be especially cautious at night when it is harder to recognize flood dangers.

Realize it does not have to be raining at your specific location for a flood to occur.

Potential Hazards:

- Crew and equipment could become trapped or stranded as escape routes may be damaged and/or blocked.
- Equipment and personnel could be swept away or covered by water, mud or debris.
- Drowning
- Electrocution
- Mud slides

Possible Actions:

- Activate the action plan.
- Secure equipment and all electrical power.
- Remove all cast and crew from elevated equipment, scaffolds, booms and sets.
- Stay clear of potential slide areas next to hillsides or on edges of cliff areas.
- Follow directions for evacuation procedures as outlined in the action plan.
- Gather at pre-determined evacuation point and ensure everyone is accounted for.
- If you come upon a flowing stream where water is above ankles, STOP! Turn around and go another way.
- Do not drive through moving water or a flooded roadway.
- Do not attempt to return to the area until an "all clear" signal has been given by a regulatory authority or production management.

2. Lightning

Causes:

Lightning results from the buildup and discharge of electrical energy in clouds. Lightning may strike several miles from an associated thunderstorm and may strike when no clouds or rain are present.

Potential Hazards:

- Electrocution
- Burns
- Falling debris
- Concussion
- Fire

Possible Actions:

- Activate the action plan
- When working in lightning prone areas, the use of a lightning detector/meter is highly recommended. If a meter is not available, it is possible to estimate the distance of lightning by the thunder. When lightning is seen, count the seconds until thunder is heard and then divide the seconds counted by five to obtain the approximate distance in miles.
- 30-30 rule: The first 30 means if you count to 30 seconds or less (from lightning to thunder), the lightning is within 6 miles of your location and you are in potential danger and should seek shelter. The second 30 means you should wait 30 minutes from the last flash or thunder to establish an "all clear."
- Seek shelter in a sturdy building, a hardtop automobile or truck with the windows rolled up. If such cover is not available seek shelter in wooded areas with thick small trees. Avoid isolated trees.
- Avoid high ground and keep clear of tall objects, towers, aerial lifts, camera booms, scaffolding, fences or other metal equipment.
- Avoid contact with any body of water.
- Avoid using a telephone or cellular phone.
- Where appropriate, shut down generators in accordance with the established action plan.
- Avoid using other electrical equipment or appliances.
- When instructed, move to the pre-determined evacuation area.
- Do not attempt to return to the area until an "all clear" signal has been given by a regulatory authority and/or production management or 30 minutes after the last thunder sound is heard.

3. High Winds

Causes:

High winds can be associated with extreme weather phenomenon including thunderstorms, tornados, hurricanes, and high and low pressure systems. During the summer months in the Western States, thunderstorms often produce little rain but very strong wind gusts (some up to 100 mph) and dust storms.

Potential Hazards:

- Flying debris
- Dust
- Possibility of persons being swept off their feet
- Equipment can be blown over and carried for a distance
- Set destruction
- Eye injuries

Possible Actions:

- Activate the action plan
- Remove all cast and crew from elevated areas, sets, scaffolding and other high objects
- Lower all aerial, lighting, diffusion, camera boom equipment and tents
- Tie down and secure all loose equipment
- When instructed, seek refuge from the winds at your pre-determined safe area
- Be aware and protect your eyes from potential injury
- Do not attempt to return to the area until an "all clear" signal has been given by a regulatory authority or production management

4. Large Hail

Causes:

Hail is usually associated with thunderstorms and is caused by freezing rain that can become very large.

Potential Hazards: May cause injuries to crew and damage to equipment

Possible Actions:

- If a watch or warning has been issued, the action plan should be activated and the crew should follow all instructions
- Secure and protect all equipment
- Get down from elevated areas, aerial lifts, booms, scaffold and other high areas
- When instructed, seek shelter at your pre-determined safe area
- Do not attempt to return to the area until an "all clear" signal has been given by a regulatory authority or production management

5. Blizzard or Severe Snow Storms

Causes:

A storm accompanied by strong winds creating blizzard conditions with blinding wind-driven snow, severe drifting and dangerous wind chill.

Potential Hazards:

- Blinding conditions
- Creation of snow drifts

- Dangerous wind chill factor (refer to Safety Bulletin #34)
- Avalanche danger, being caught and/or buried
  - Usually triggered by victim or members of victims party
  - Generally occurs with clear skies, little or no snow fall, and light or calm winds
  - The weak layer often consists of surface hoar, facets, or depth hoar
  - On 30-40 degree slopes, often at a convex part of the slope

Possible Actions:

- If a watch or warning has been issued, the action plan should be activated and the crew should follow all instructions
- Secure and protect all equipment
- Get down from elevated areas, aerial lifts, booms, scaffold and other high areas
- Stay clear from potential avalanche areas
- When instructed, seek shelter at your pre-determined safe area
- Do not attempt to return to the area until an "all clear" signal has been given by a regulatory authority or production management

6. Tornados

Causes:

A tornado is a violent windstorm characterized by twisting, funnel-shaped wind. Tornados tend to occur in the afternoon and evening hours.

Potential Hazards:

- Tornados are unpredictable and may form without warning
- Winds can exceed 200 to 300 mph
- Tornados may appear nearly transparent until dust and debris are picked up or a cloud forms within the funnel
- Severe damage can occur to structures
- The precise location of a touch down point cannot be determined

Possible Actions:

- If a watch or warning has been issued, the action plan should be activated
- The crew should be regularly updated regarding any changes to potential weather conditions
- All cast and crew members must follow all instructions given
- No employees should be working on elevated equipment. This includes aerial lifts, scaffolds, camera booms, and other high areas
- Evacuate the area immediately if instructed by a regulatory authority or production management
- Only secure equipment if there is time and it can be done safely
- Do not attempt to return to the area until an all clear signal has been given by a regulatory authority or production management

7. Hurricanes

Causes:

A slow developing tropical weather phenomenon that forms over water. Its greatest impacts are felt near or on shorelines of land. You will not be surprised by a hurricane, as they are usually tracked by a weather service for many days. They are also known as cyclones or typhoons.

Potential Hazards:

- Severe winds and rainfall, which may cause extreme flooding
- Storm surges
- High waves possibility of persons being swept off their feet
- Drowning
- Localized tornados
- Extreme damage to structures, roads, utilities, vehicles and boats
- Severe injury due to flying debris

Possible Actions:

- In most cases, you will have several days warning to actiate your action plan
- Do not stay by shoreline
- Pack and secure all equipment and remove to a safe area
- Lower all aerial lifts, camera booms, and other equipment. Remove to a safe area as time permits
- If ordered to evacuate, leave area early—do not hesitate
- Do not attempt to return to the area until an "all clear" signal has been given by a regulatory authority or production management

ADDITIONAL NOTES

- OSHA mandates that aerial lifts and other like equipment are not to be operated when winds exceed 25 mph.
- Be aware that many of the same precautions (e.g., eye protection and securing equipment), can also apply to man-made wind effects such as rotor wash from airplanes or helicopters and large ritter fans.

Appendix G

Guidelines for Reducing the Spread of Influenza-Like Illness

INDUSTRY WIDE LABOR-MANAGEMENT SAFETY COMMITTEE

SAFETY & HEALTH AWARENESS SHEET
GUIDELINES FOR REDUCING THE SPREAD OF INFLUENZA-LIKE ILLNESS

INTRODUCTION

There are a wide variety of seasonal influenza and flu-like illnesses that can impact the workplace. Seasonal and novel influenza H1N1, previously referred to as "swine flu," are among the most widely known. This Safety & Health Awareness Sheet has been developed to educate personnel on signs, symptoms and preventative measures to avoid catching or spreading the flu.

SYMPTOMS

In general, symptoms of seasonal influenza or novel influenza H1N1 can include the following:

Fever > than 100°F	Chills
Cough	Headache
Sore throat	Fatigue
Runny or stuffy nose	Body aches
Decreased appetite	Diarrhea
Nausea/vomiting	

Symptoms of novel influenza H1N1 may disproportionately affect young people age 25 and below, whereas the seasonal flu affects those age 65 years and older

Like seasonal flu, novel influenza H1N1 may worsen underlying chronic medical conditions. People at higher risk of serious complications from seasonal or novel influenza H1N1 include:

- Children younger than 5 years old
- Pregnant women
- People of any age with chronic medical conditions, such as asthma, diabetes, or heart disease
- People with weakened immune systems

If you are at higher risk contact your healthcare provider regarding possible preventative measures (e.g., antivirals, vaccines, etc.).

ACTIONS

How is influenza spread?

Flu viruses are spread mainly from person to person through coughing, sneezing or touching. You may infect yourself by touching contaminated surfaces and then touching your eyes, nose or mouth.

People infected with influenza may infect others before symptoms develop and after becoming sick.

Take these steps to protect yourself and others:

- Wash your hands often with soap and water or an alcohol-based hand cleaner. This is especially important after you cough, sneeze or use the bathroom. Always wash your hands prior to entering the crafts service/catering areas!

Additionally:

- Avoid touching your eyes, nose or mouth.
- Cover your nose and mouth with a tissue when you cough or sneeze. Throw the tissue in the trash after use.
- Cough or sneeze into your upper sleeve if you do not have a tissue.
- Avoid close contact with people exhibiting signs of influenza.
- If you are sick with a flu-like illness, the Centers for Disease Control (CDC) recommends that you stay home for at least 24 hours after your fever is gone (without the use of fever-reducing medicine).
- Sanitize your hands before touching crafts service equipment, including inside ice chests, the handles of serving utensils or other commonly shared surface.
- Regularly sanitize commonly touched surfaces (i.e., door handles, phones, tools, handrails, etc.) with alcohol or bleach solutions.

WHEN TO GET MEDICAL HELP

If you are at risk of serious complications and you become ill with any of the symptoms below, you should contact your health-care provider immediately.

See emergency medical care if you experience any of the following symptoms:

- Difficulty breathing or shortness of breath
- Pain or pressure in the chest or abdomen
- Sudden dizziness
- Confusion
- Severe or persistent vomiting
- Flu-like symptoms improve, but then return with fever and worsening cough
- Decreased urination

ADDITIONAL INFORMATION

http://www.flu.gov

http://www.cdc.gov/flu/

http://www.who.int/en/

http://www.hhs.gov

PROTECT YOURSELF BY WASHING YOUR HANDS FREQUENTLY!

PROTECT YOUR CO-WORKERS BY COVERING YOUR COUGH!

Industry Safety Resources

Safety Bulletins

Safety Bulletins are researched, written, and distributed by the Industry Wide Labor-Management Safety Committee for use by the motion picture and television industry. The Industry Wide Labor-Management Safety Committee is composed of Guild, Union, and Management representatives active in industry safety and health programs.

These Safety Bulletins are guidelines recommended by the Safety Committee. They are not binding laws or regulations. State, federal, and/or local regulations, where applicable, override these guidelines. Modifications in these guidelines should be made, as circumstances warrant, to ensure the safety of the cast and crew.

The Committee and these Safety Bulletins are representative of the commitment of both Labor and Management to safe practices in the motion picture and television industry. The members of the Committee and all those who contributed to its work have devoted a great deal of time and effort to these guidelines because of the importance of safety to our industry.

Current safety bulletins are available on the CSATF website:

http://www.csatf.org/bulletintro.shtml

Safety is everyone's responsibility.

24-Hour Industry Safety Hotline

The 24-hour industry safety hotline number directs callers to an automated system that will assist them in reaching the desired Studio Safety Hotline.

888-7-SAFELY

A list of the Studio Safety Hotlines can also be found on the CSATF website:

http://www.csatf.org/studio_safety_hotlines.pdf