PLANT AND ANIMAL HAZARDS 1859

(No. 6 January 1995)

Plant and animal hazards are common in wildland firefighting situations. Supervisors must ensure that employees are able to identify and avoid plant and animal hazards.

POISON OAK 1859.1

(No. 6 January 1995)

CAL FIRE employees who may become exposed to poison oak must learn to recognize the plant in all its seasonal forms and when it has been burned.

Employees at risk of coming into contact with poison oak shall take the following precautions:

- Fasten pant legs securely over boot tops.
- Wear gloves at all times except when eating or touching skin.
- Avoid touching boots, the outside of gloves, and other gear with bare hands.
- Always wash hands thoroughly before touching skin.
- Wash exposed clothing separately in hot, soapy water.
- Clean tools and equipment with cleaning solvent before storing.
- If possible, avoid the smoke of burning poison oak since it is often more irritating than direct contact with the plant.

After working around poison oak, employees shall always assume they have been exposed and take the necessary precautions.

TICKS 1859.2

(No. 6 January 1995)

Ticks can be carriers of agents that cause Lyme and other diseases (see Section 1852, Occupational Infections). Ticks can be found in grasses and brush where they climb to the tips of vegetation, wait for a host to brush against them, and then attach to the host.

When working in an area likely to have ticks, employees shall take the following precautions.

- Tuck pants into boots or socks, and shirt into pants.

- Apply insect repellent on pants, socks, and shoes. Use a repellent registered for use against ticks.

- Search the body repeatedly (rest periods, lunch etc.) especially hairy regions and inside clothing as ticks seldom attach themselves within the first few hours.

Prompt removal of ticks may prevent disease transmission. Use tweezers or forceps to remove the tick, and try not to touch the tick directly with hands. If contact is unavoidable, use a tissue to protect hands. Grasp the tick as close as possible to the point of attachment and pull gently and repeatedly. Do not twist or jerk the tick and do not burn or cover the tick with heavy oils. If mouth parts of the tick break off and remain in the skin, consult a doctor. Save the tick for identification in a sealed container. Wash hands and bite site thoroughly and apply antiseptic to the bite. Dispose of the tick by flushing it down the toilet after identification.

STINGING INSECTS 1859.3

(No. 6 January 1995)

Employees who have known severe allergies or react violently to insect bites shall not work in insect-infested areas during insect season.

If allergic to insect stings, the employee shall consult a physician for proper advice and vaccine or allergy medication before going into the field. Supervisors shall be informed of severe allergies.

When working near bees, wasps, or yellow jackets employees shall:

- Wear long-sleeved shirts with close-fitting collars.

- Keep pants tucked in boots or firmly secured over boots with band or strap.

- Avoid wearing strong-scented lotions -- they can attract bees.

AFRICANIZED HONEY BEES 1859.3.1

(No. 35 March 2002)

The Africanized Honey Bee (AHB) has become established in California. While all bee attacks should be considered serious and life threatening, an attack by the AHB is even more dangerous. The AHB are known for their aggressive behavior; much more so than the domesticated European Honey Bee (EHB). It is virtually impossible to differentiate between the AHB and the EHB by sight alone. Therefore, all bee attacks shall be considered to involve the AHB.

CAL FIRE personnel can become involved with the AHB during normal work activities and during emergency responses. The following guidelines address three basic scenarios: escape with no bee veil, escape, utilizing a bee veil, and rescue.

ESCAPE WITH NO BEE VEIL 1859.3.1.1

(No. 35 March 2002)

- CAL FIRE personnel who encounter a bee swarm, or hive, shall consider the bees to be AHB. Do not attempt to disturb a hive!
- Notify others around the worksite of the hive or swarm.
- Protect the face and head area over all other body parts. Wrap your head with clothing or other material.
- Try to get into a car, building or other enclosed shelter where the bees cannot follow.
- If immediate shelter is not available, RUN! While the EHB is known to chase someone for about 50 yards, the AHB has been known to attack up to ¼ mile. Run in a straight line. DO NOT JUMP INTO THE WATER. The bees will wait for you to surface.
- After you are clear of the attack, remove the stinger(s) by scraping in a sideways motion. DO NOT USE TWEEZERS OR TRY TO PINCH THE STINGER. Ice packs may reduce swelling.
- Contact your supervisor or the Emergency Command Center.
- Seek medical attention if you, or anyone in the area, show signs of a systematic allergy.

ESCAPE-UTILIZING AN ESCAPE BEE VEIL 1859.3.1.2

(No. 35 March 2002)

- These guidelines are similar to the Section 1859.3.1.1 guidelines. The basic difference is that the employee has an "Escape Veil" in their possession.
- Once the bees begin to attack or sting don the Escape Veil. Personnel may still receive stings; the veil will provide an enhanced level of protection for the head and facial area.
- The Escape Veil is intended only for escaping and SHALL NOT be used to effect a rescue. (See 1859.3.1.3 below for rescue procedure guidelines).
- The Escape Veil is not Flame Resistant. Do not run into the smoke or flames. Run for shelter and/or to distance yourself from the attacking bees.
- Currently, any standard mosquito netting veils are approved as an Escape Veil. There are bee veils available through the Federal Excess Property Program (FEPP).

- The Escape Veil shall be of sufficient size to provide face and neck protection when the employee is wearing a wildland firefighting helmet. This includes both the cap and wide-brim style helmet.

RESCUE 1859.3.1.3

(No. 35 March 2002)

STANDARD RESPONSE (i.e., 9-1-1 call)

- CAL FIRE personnel are not to attempt a rescue of bee victims unless they are in appropriate personal protective equipment (PPE) as described below.
- CAL FIRE personnel should not become victims themselves. The arriving Company Officer shall evaluate conditions in order to determine the level and type of action to be taken. Considerations which may affect the incident action plan should include, but not be limited to, the following (risk assessment/hazard analysis):
  - Location of the incident (populated versus remote)
  - Incident exposures (Day Care Center, Hospital, School, Residential Home, Apartment Complex, etc.)
  - Bee activity, specific location, and approximate size of colony
  - Victim involvement
- Provide for the protection of individuals who are not victims. Escort individuals to a shelter or a safe distance from the bee activity.

- PPE
  - Full Structural Turnouts (helmet, hood, goggles, boots, gloves, pants and jacket). Turnouts shall be taped at the ankles, waist and wrists, utilizing duct tape.
  - Approved Commercial Bee Veil*
    - Elastic Folding Bee Veil Part #: 31112
      Miller Honey Bee Company
      Colton, CA. 92324
      (909)-825-1722
- Standard Operating Procedure for Rescues
  - At a minimum, utilize a 1 ½" hand-line attached to the apparatus foam system (either Class A or B foam, utilizing 1% concentration, is acceptable) to spray both the bees and victim. A full fog pattern is best utilized in a sweeping pattern for maximum coverage.
  - If available, a second 1 ½" minimum foam line should be utilized to cover the attack crew. However, the attack crew should not wait to initiate action if this line is not ready when they are.
  - Stage all apparatus and equipment at least 150 feet away from the bee attack in order to maximize the safety of non-protected personnel.
  - Remove the victim from the swarm area as soon as possible. Take the victim to a safe area for treatment.
- Post-Incident Procedures
  - Inspect and clean PPE
    - Inspect for bee 'stingers.' Remove by scraping them off the PPE.
    - Remove any duct tape glue residue.

*** Other Bee Veils can be approved. Contact Chiefs Galen McCray (Sac HQ), James Cook (RRU), or Kelly Zombro (MVU).**

SNAKES 1859.4

(No. 6 January 1995)

When working in areas where poisonous snakes are known to be present employees shall:

- Wear work boots.

- Be observant around areas obscured by foliage, or near ledges when walking or climbing in rocky country.

- Use a long bar or pole for moving material and timbers that have been stacked or piled. Never put hands under any stored material.

- Probe the areas with a hiking stick or long-handled tool before stepping over logs or other material that may hide snakes.

ANIMAL BITES 1859.5

(No. 6 January 1995)

If bitten by an animal, get medical attention and report to local health authorities or animal control officials (See Section 1852, Occupational Infections). Locate the animal if possible and report its whereabouts to public health officials. If the animal is killed, avoid damaging the head. Public health officials will need the animal (dead or alive) to make rabies tests.

RODENTS 1859.6

(No. 6 January 1995)

Bubonic plague is transmitted by fleas carried by rodents such as chipmunks and rats and other small mammals. Avoid handling or touching these animals.

Report an unusually large number of dead rodents and small animals to local health authorities.

HANTAVIRUS 1859.6.1

(No. 34 December 2001)

Hantavirus pulmonary syndrome is a rare, but frequently fatal, illness caused by a virus shed by rodents, primarily the deermouse. While it has recently been discovered in North America, it is fairly uncommon and the chances of becoming infected are low.

Employees can become infected by inhaling airborne particles of urine, droppings or saliva from infected rodents. Infection is also possible if employees touch their nose, mouth, or eyes after handling infected rodents, nests, or droppings. Rodent bites may also pose a risk.

The risk of exposure to hantavirus occurs anywhere that mice are present. Activities that increase risk of exposure include:

- Occupying or cleaning rodent-infested buildings;

- Having direct contact with rodents or rodent material;

- Working in enclosed spaces infested with rodents

Reducing the risk of exposure can be accomplished by a number of activities:

- Relocate woodpiles and trash cans at least 100 feet from facilities
- Thoroughly inspect the exterior of buildings for any holes or spaces through which rodents might enter. Use steel wool, or screening that is 1/2 inch or smaller to cover holes
- Environmental Protection Agency approved baits
- Spring-loaded snap traps

HANTAVIRUS CLEAN UP PRECAUTIONS 1859.6.1.1

No. 34 December 2001)

The transmission of hantavirus is primarily by aerosols contaminated with the virus from rodent secretions. It is very important to minimize stirring-up materials into the air while cleaning. To minimize exposure to employees the following guidelines are recommended by the Center for Disease Control (CDC).

- Ventilate building(s) one hour before clean up work is started. If possible, ventilate the night before
- Wear latex rubber gloves
- Apply household disinfectants at the maximum recommended concentrations to dead rodents, droppings, nests, contaminated traps and surrounding area and allow at least 15 minutes contact time before removal
- A hypochlorine solution of 1 1/2 cups of household bleach in 1 gallon of water may be used in place of commercial disinfectants
- Clean the affected area with a sponge or mop
- Double-bag the disinfectant-soaked rodent and clean-up materials securely in plastic bags and seal
- Before removing gloves, wash gloved hands in disinfectant, and then in soap and water (if available). Thoroughly wash hands with soap and water or commercially available waterless disinfectant soaps

- Dispose of gloves and clean-up material with other household waste

- Repair screens, holes or cracks in walls. Rodents can fit through a hole the size of a dime

CAL FIRE's Safety Inspection Reference Guide has checklists for various facilities that need to be inspected for hantavirus exposures. Generator buildings, vaults, lookouts, water distribution and sewer pump buildings, work areas/shops, and temporary fire stations are a few of the identified facilities where employees should take hantavirus precautions.

Additional information is available at the following websites:

- www.cdc.gov/ncidod/diseases/hanta/hps/index.htm

- www.cdc.gov/ncidod/dvrd/spd/mnpages/mailmatl.htm

- www.dhs.ca.gov/ps/dcdc/pdf/Hanbro99.pdf

CDC has also prepared a quick reference card that outlines the recommended clean-up process:

- www.cdc.gov/ncidod/diseases/hanta/hps/noframes/prevcard.htm

(see next section)

(see HB Table of Contents)

(see Forms or Forms Samples)