

# **Planning for Honey Bee Nuisance Calls and Emergencies**

**A Guide for Louisiana State, Parish and  
Municipal Agencies**

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# **Purpose / Goal**

## **Purpose:**

To help officials determine a plan of action regarding honey bees.

## **Goal:**

- A. Define honey bee emergency and nuisance call.
- B. Locate local agencies that may be able to assist with nuisance and emergency calls: fire departments, E.M.S. services, sheriff's departments, State Police, health department, mosquito control, Department of Agriculture and Forestry, Cooperative Extension Service, 911 boards, local bee clubs and local beekeepers.
- C. Determine what agencies can be of assistance, list phone numbers for the type of assistance that is available and distribute that list among agencies.
- D. Discuss with local agencies how to handle bee calls and establish written guidelines for their respective areas.

## Forward

**Honey bees** are social insects and one of the most familiar insects in the world. The bees play a key role in the human and natural world. They work together in a highly structured social order. In the wild, feral colonies create elaborate nests in trees, bushes, old discarded debris, structures, etc., that can contain over 80,000 bees during the warmer months. Honey bee colonies swarm (or reproduce) primarily in the spring and early summer but can swarm through early fall.

Domestic bees are kept in hives all around the state in different locations. These boxes are usually painted white, are rectangular and can be a single box or several boxes stacked on top of each other. They can contain up to 80,000 bees.

The honey bee is the Louisiana state insect, and they contribute many things for human use including pollinating crops, flowers and trees, and producing honey, beeswax, and propolis. Their pollination value to Louisiana is over \$400 million annually.

Many beehives are moved by different modes of transportation in and out of the state. Most domestic hives do not create a problem except when situations such as the following occur: vehicle accidents, hive disturbance and acts of nature including flooding, tornados or high winds.

### What Are Killer Bees?

More properly called **Africanized honey bees**, these come from a subspecies of honeybee (*Apis mellifera scutellata*) released accidentally in Brazil in 1957. They were imported from South Africa by a researcher who was attempting to produce a variety of honey bee better adapted to the tropics than the European honey bee. Unfortunately, Africanized honey bees not only produce honey better in hot climates, but they are also **much more defensive** of their colony. Many people have been stung and some have died by mass singings resulting from getting too close to and disturbing a colony of Africanized honey bees.

The escaped bees did well in the wild and expanded their range throughout most of South America and all of Central America and Mexico. They were found in Texas in October 1990, in California in November 1994, and in Louisiana in July 2005. Because they are adapted for tropical conditions, they may not expand their range beyond the southern part of the United States, but that remains to be seen. They can tolerate up to 3 1/2 months of freezing weather.

Remember, while someone may not be allergic to bees, they could have severe side effects due to health conditions or number of stings.

Someone stung just once or a few times by honey bees or other venomous insects usually is not in danger. If a person is allergic to bee venom, however, one sting can be deadly.

Some signs of an allergic reaction include difficulty breathing, hives, itching, weakness, etc.

A good way to tell if the stinging insects are honey bees is to check for the stinger and venom sac left in the skin. Honey bees leave a stinger and venom sac while most other insects do not.

If a honey bee swarm or colony is located in area well traveled by the public, it would be in the best interest of the city or agency to have the bees removed as soon as possible. If a quick response is not available through a beekeeper or other agency, then the city may wish to handle the problem on its own.

If there is no stinging emergency then a caller with a bee problem should be referred to an agency or someone on a nuisance / removal list. A nuisance / removal list can be composed of beekeepers willing to catch swarms or remove bees from structures. Some exterminators may wish to be on the list also. Some local agencies, depending on area, may be interested as well. Examples include the Department of Agriculture and Forestry, Cooperative Extension Service, Mosquito and Rodent Control, Health Department, etc.

A list is available at:

[www.LSUAgCenter.com/en/environment/insects/bees\\_wasps](http://www.LSUAgCenter.com/en/environment/insects/bees_wasps) for assistance in removal of bees.

To add your name to this list contact Dr. Dale Pollet at 225 578-2180 or email [dpollet@agctr.lsu.edu](mailto:dpollet@agctr.lsu.edu) to have your name and information added.

## **Definitions**

### **Honey Bee Emergency**

1. Is when someone has been stung or is in the process of being stung by a large number of bees. (Swarming bees do not necessarily constitute an emergency)
2. Someone has been stung and is having an allergic reaction that affects breathing. Some signs of an allergic reaction are: difficulty breathing, hives, itching, weakness, etc.
3. When someone is in immediate danger of being stung.
4. When bees are aggressively stinging

## **Nuisance call**

1. A bee colony or swarm located in a path frequently traveled by the public or in walls of a structure.
2. Bees swarming but not stinging.

## **Swarm**

A group of honey bees moving from a hive to establish another hive. Usually clustered in a ball, hanging from a branch or structure.

## **Swarming**

A departure from a hive or nest by a large number of workers accompanied by reproductives. If around a blooming plant the bees are probably gathering nectar and pollen and will move on once the bloom is complete.

## **Beekeeper**

Someone who has knowledge on handling honey bees safely. Can be a professional beekeeper or a hobbyist beekeeper.

# **Guidelines for Handling Honey Bee Calls and Honeybee Emergencies for Dispatchers**

## **Goals:**

1. Teach dispatchers how to determine a honey bee emergency versus a nuisance call, and what to do in either case.
2. Teach first responders to safely reach stinging incident victims and to remove and treat victims.

When a dispatcher receives a call on stinging insects, he or she should first try to determine if there is an emergency and to send proper personnel according to department guidelines. Also, if possible, the Department of Agriculture and Forestry and Cooperative Extension Service should be notified of a honey bee or stinging emergency.

Knowing if the insects are honey bees and knowing the location and size of the colony or swarm will help the dispatcher refer the caller to the right agency if it is not an emergency.

The following are some questions that a dispatcher may ask to help determine if an emergency does exist:

- A. Has someone been stung? If so, how many times, and what is their condition?
- B. Does the patient have an allergy to insect stings?
- C. Does the patient show signs and symptoms of an allergic reaction?
- D. Is anyone else being stung or in a position that they could be stung and not escape?
- E. Are the bees located where large numbers of people travel and might be stung?  
Examples include schools, ball fields, shopping malls, etc.
- F. Is the caller certain that the insects are honey bees?  
Get a description of the bees, the size of swarm or colony and the location.
- G. How did the emergency occur and how long ago did it happen?

**Dispatch Pre-arrival Instructions:**

- A. Be sure patient is moved to a safe location.
- B. Remove bees and the stinger and venom sac as quickly as possible.  
It is preferable to scrape the stinger off the skin.
- C. Keep the patient calm.
- D. If it is not an emergency, seek medical advice prior to taking medications.

## **Teaching First Responders Effective Techniques to Safely Reach Stinging Victims and To Remove and Treat Them**

First responders to honey bee emergencies usually are going be fire departments, E.M.S. services, or police departments. It is important for these services to know what to do so they can help victims and not endanger themselves.

Once emergency crews arrive at a scene, before leaving their units, they should observe the scene. Some questions they should ask as follows.

1. Is anyone being stung or unconscious?
2. Is anyone trapped or in danger of being stung?
3. Are honey bees flying around? (This may indicate a stinging incident.)
4. Is there a chance that a passerby could be stung?
5. Do you have the proper equipment to safely rescue victims?

If someone is being stung and it is going to take time to set up emergency equipment, encourage the victim to escape the bees by running away and seeking indoor shelter such as in a car or building. Bees usually will stop chasing someone after a few hundred feet. Loudspeakers or a P.A. system could be used to communicate with victims.

If someone is trapped or unconscious and being stung, then it will be up to emergency responders to rescue the victim.

The first part of any rescue is to protect the rescuer with the right safety equipment. Honey bees can sting through most normal clothes. Most beekeepers wear white cotton coveralls for bee suits. Honey bees sometimes can sting through these coveralls, but usually beekeepers will not be stung because they know how to handle honey bees in the correct manner. Beekeepers wear a hat with a veil that connects the hat to the coveralls and provides good protection to the beekeeper's head and neck. Pant legs of the coveralls can be tucked into boots inside the socks or strapped snugly to the ankles or boots. Special bee gloves with long gauntlets often are worn.

When beekeepers know they are going to be working with highly defensive bees, they may wear a thick sweat suit or jogging suit under their bee suit, which makes it completely sting-proof. A new bee suit on the market is virtually sting-proof and is used by several departments in Texas and Louisiana today. These suits are made by Golden Bee Products of Metairie, La.

While a good bee suit is the safest form of personal protection, other types of gear could offer limited protection if there was no other choice. Fire Department Bunker Clothes used for fire fighting will offer some protection from bee stings, but unless the clothes are sealed tightly and taped at cracks and joints, the bees will find ways to enter. Once the bees are inside it is very hard for a rescuer to continue working while being stung. A Nomex Hood, fire helmet, and SCBA Face Mask with low-pressure air tube removed will help protect the face and neck, but the Nomex Hood can be stung through. Bees usually crawl upwards so it would be best to tuck the bunker coat inside the pants and the pants inside the boots. These areas should be taped together as time allows.

A Fire Department Hazmat encapsulated suit is airtight and provides excellent protection but it does have drawbacks. It takes time to put on. A SCBA must be worn with it adding another 25 to 50 pounds to the weight of the suit. In addition, it is bulky and quickly gets very hot. Hazmat splash type suits could also provide protection. Depending on the type available, the hood could be taped to a SCBA Face Mask and the gloves and leggings taped shut.

Regardless of the type of suit, light colors are preferable, with white being the best. Bees are more aggressive toward darker colors, with black being the worst. Anything worn around bees should not be made out of animal products such as leather or wool. Bees are more aggressive toward these products.

Another tool most fire departments have is foam. Fire departments have film-forming foam for different types of HAZMAT spills or HAZMAT fires. Generally a 3% solution is used on most HAZMAT situations. A 3% solution is also suggested for honey bees. When a foam solution is sprayed on bees, it knocks flying bees down, prevents them from flying and usually kills them within a minute.

First responders must remember to use foam sparingly at scenes unless they have a large supply on hand. A 3% solution through a 100 GPM fog nozzle will use approximately 3 gallons of foam concentrate over 1 minute. If no foam is available, straight water through a fire department fog nozzle will wet bees and prevent them from flying but will not kill them. A 3% soap solution can also be used.

## **Rescue Operations**

Rescue workers should park the pumping apparatus 100 to 150 feet away from bee activity, and other non-essential vehicles should be parked further away depending on bee activity. Rescue workers with proper protective clothing as described earlier can enter the scene with nozzles set at a fog pattern. While moving to the victim, rescuers can direct foam overhead and in front of them in a circular motion to stop flying bees and to wet the victim to stop stinging bees. The victim should be wetted thoroughly with foam and removed rapidly from the scene using E.M.S. techniques and further treated once a safe distance is reached.

To exit with the victim, use foam nozzles the same way as entering. Remember, if a victim's life could be in danger, the first objective is to remove the victim from the

danger. A second or back-up line with personnel should be ready if needed. The back-up line can be used to protect the rescuers as they enter and leave the scene with victims.

If rescuers run out of foam during an operation, they can continue to use water until more foam is available, or they can back out of the scene.

If rescuers don't have any foam, then sting-proof suits should be worn if possible and fog streams used in the same manner as foam streams.

In an auto accident (for example involving a truck loaded with beehives) it may be easier to pull the vehicle from the scene and then treat victims if there are people inside and the windows are not broken. If the auto can be moved without injuring people inside, have rescuers connect a cable or chain to the auto and pull it to safety. A crew of rescuers should be ready with foam and protective gear should any bees be around the car when it is pulled to safety.

Once a stinging victim has been moved to safety, he should be treated just as any other patient. A stinging victim should be checked for all allergic reactions to stings and treated according to E.M.S. protocols of that area. Most E.M.S. protocols will call for oxygen, IVs, EKGs and possibly Benedryl, 25-50 mg and/or Epinephrine, 0.3 to 0.5 cc's of a 1/1,000 solution. E.M.S providers should try to remove all stingers and bees that may still be on the patient.

It is important to quickly remove any stings from a victim. When a honey bee stings it normally leaves its stinger and a venom sac in the skin. The muscles around the venom sac continue to contract and force venom into the skin even after being pulled from the bee's body. The faster a stinger is removed, the less venom will be injected. Stingers should be removed by scraping rather than pulling. Squeezing the venom sac forces more venom into the injection site

Emergency responders may arrive at an area where honey bees have been disturbed and are flying around in large numbers (such as occurs when a truck loaded with beehives overturns) but where no one is in immediate danger of being stung. The responders should keep the public at a safe distance and allow beekeepers to reload and remove the bees. Dispatchers should keep a list of beekeepers or other agencies that might respond and assist in such situations.

If the bees are located in a highly populated or public area where there is a high risk of someone being stung, first responders must decide whether to use foam to eliminate the bees or wait for a beekeeper to remove the bees.

If first responders decide to destroy the bees, they should do so in the same way as a rescue. Plenty of foam should be on hand, and personnel should have proper protective clothing. Personnel should advance the nozzle in a fog pattern to the area of highest concentration of bees.

The nozzle should be worked in front and over heads of workers in a circular motion. Once workers have saturated the bees with foam, they should back away and look for

areas of bees missed and then repeat spraying if necessary. If available, a back-up line and crew should be ready if needed.

If fire or other departments wish to destroy swarms, they should use foam as described earlier. Generally swarms are very calm regardless if they are Africanized or European, and chances of being stung are low.

When using foam on swarms, just spray the swarm gently but thoroughly with nozzles set on a fog stream. The bees will normally stay in the spot they were sprayed and die.

If fire departments or other agencies wish to handle swarms, they should be handled within 24 hours of the call because the swarm may be gone by the time the units arrive.

If agencies wish to abate bees inside of structures or trees, they must remember that the most certain way to destroy whole colonies is to expose them to the foam solution. The only way this can be done is if the structure is torn open and the nest is sprayed thoroughly. While opening a structure to access a colony, bees will be more defensive and the chances of being stung are higher. While one worker opens up the structure, another worker should spray foam on the hive entrance and around the area to be opened. As the structure is opened the nest should be soaked thoroughly with foam. After the bees are dead, the homeowner or responsible party should have the dead bees and comb removed and have the walls washed with ammonia or chlorine bleach and the structure repaired. If the structure is not repaired and sealed tightly and the pheromones in the wax on the wood destroyed swarms may be attracted to the scent of the old nest, and they may try to start a new colony in the same spot or nearby.

If possible, any time aggressive bees are destroyed a sample of 50 or more bees should be preserved in a plastic bottle of alcohol and shipped to the Department of Agriculture and Forestry for testing to see if they are Africanized.

## **Supplement for Law Enforcement**

1. Bees are sometimes transported inside and outside of the state. These bees are sometimes in large numbers on trucks, trailers and eighteen-wheelers.
2. Large numbers of bees that are transported in the day are usually covered with bee nets to prevent escapes. Escaped bees could cause problems with traffic and pedestrians.
3. While these nets are effective, they are not always 100%. It is important that once these trucks are loaded, nets are in place, and the truck is moving, it must stay moving, especially in highly populated areas.
4. A problem that occurs when transporting bees during the day is the bees cannot cool themselves while trapped in the nets on the truck. On a hot day, if the truck is

stopped, the beehives can overheat and die within a short time. An eighteen-wheeler load of dead bees can cost the owner several hundred thousand dollars.

5. If a truck is stopped and the bees are getting through the net, they will continue to do so until the truck begins moving again. This situation could endanger the public by causing a stinging incident or panic.

## **Suggestions for Law Enforcement**

For reasons stated above, caution should be used when pulling over vehicles that are carrying bees. If possible, wait until the vehicles in a more isolated area in order to protect the public. If a citation is to be issued, it should be done so as quickly as possible. Expediency in handling the citation will help to protect the officer as well as the public, and will help prevent the bees from overheating and dying.

A better solution is to write down the license plate number and vehicle information and issue a citation by another means.

## **Implementing Guidelines**

The Cooperative Extension agents of each parish could approach the police jury in setting up guidelines through the board of directors of 911, sheriff's offices and local governments. Then each respective jurisdiction should write and implement a basic guideline for bee emergency and nuisance calls in their area.

A list is available at: [www.LSUAgCenter.com](http://www.LSUAgCenter.com)

Or: [www.Labeekeepers.org](http://www.Labeekeepers.org)

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