



Emergency Response to Accidents Involving Honey Bees

Information for first responders dealing with a vehicle accident or breakdown containing honey bee hives

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Photo by Ana Heck

Contacts below will help you find beekeepers in your area to respond to an accident involving honey bees.

Michigan State University Apiculture (Beekeeping)

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Michigan Beekeepers Association

Michigan Beekeepers Association maintains a [list of local beekeeping clubs](#). Many beekeeping club members are small-scale/stationary beekeepers who would not be prepared to appropriately respond to a road accident involving honey bees, but you can ask the club for contact information for local, large-scale/commercial beekeepers.

Honey bee hive movement in Michigan

Honey bee hives are moved within Michigan between pollination yards and honey producing yards. It's common for commercial hives to be on the road 3-5 or more times per year within Michigan, usually from spring through fall. Michigan does not have a registry of honey bee hives, so the exact number of honey bee colonies in Michigan is unknown. [The United States Department of Agriculture National Agricultural Statistics Service estimated 70,000 honey producing colonies in Michigan in 2023](#). At full strength, a honey bee colony can have more than 50,000 bees. Migratory honey bee colonies are moved across state lines on semi-truck trailers, often in loads of more than 400 hives per trailer. This means that millions of bees are traveling on Michigan roads every year.

To contact an expert in your area, visit extension.msu.edu/experts or call 888-MSUE4MI (888-678-3464)

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Honey bee behavior and stings

Bee behavior changes with temperature and daylight. In the event of a vehicle accident or breakdown involving honey bees during daylight, expect to see many bees flying in the air. In the dark, bees will fly less and will tend to crawl. Honey bees can sting regardless of whether they are flying or crawling. Day or night, bees will tend to form large groups or clusters, especially when the weather is cold. If the weather is too cold, bees will be unable to fly.

Bees will sting if their individual bodies are threatened, or if they smell enough alarm pheromone from other threatened bees. Honey bee workers have barbed stingers that will get caught in skin or clothing. Honey bees can sting through normal attire, including jeans. Honey bees can crawl up a person's body, entering gaps in clothing, and will sting if they are trapped within clothing layers. If you are stung, you should remove the stinger only if you can do so without exposing yourself to more stings. The stinger has a pheromone (scent) that can elicit other bees to sting near that spot.

Do not remove your veil or personal protection equipment near the bees, even to remove a stinger.

Alert someone if you have been stung so they can observe you for signs of an allergic reaction.

Suiting up and initial response

In the event of a vehicle accident or breakdown involving honey bees, it is best to maintain distance between bees and people to avoid injuries or death from stings. It may be necessary, however, for first responders to approach the accident scene to assess damage, assist injured drivers and passengers, or to block off the roadway. First responders who approach honey bee hives should keep the following precautions in mind:

- Honey bees can sting through normal attire, including jeans. Beekeeping suits offer more protection from stings.
- Clothing and protective wear should be secure so that bees cannot crawl inside or between layers. It is recommended to tuck your pants into boots, shirts into pants, sleeves into gloves, etc. Tightly tape your pants around your ankles and tape other openings to prevent bees from getting under your clothing.
- Bees are attracted to lights. Red light headlamps should be used because honey bees don't respond as much to red light. Avoid using flashlights with white lights and vehicle headlights to illuminate the scene.
- Walk away from the bees if you feel overwhelmed, get bees in your suit, need to remove a stinger, etc. Defensive bees may follow you as you walk away and continue trying to sting. Do not walk toward unsuited people when bees are following you.

Human safety

Truck loads of honey bees are generally netted, but the nets are not sealed. Bees can usually crawl under and around the nets and then escape if the vehicle is stopped.

If the breakdown occurs near people, the people should be kept away from the truck as much as possible.

Lights will be attractive to bees at night, so approaching with headlights/flashlights should be avoided until responders are outfitted in personal protective equipment. Red lights can be used because they are less attractive and visible to honey bees.

Concern of honey bees overheating

Honey bees contained in hives are at high risk of death from overheating when the vehicle is stopped. A honey bee colony will cluster in the hive and create heat, which must dissipate. If a truck breaks down on the side of the road, every effort should be made to put the load in motion as soon as possible to prevent overheating and colony death.

If the load is stranded, the bees can be cooled by spraying the hives with water (through the net) to attempt to lower the temperature of the hives and minimize loss from overheating.

Loss of hives from vehicle

In the event of hives lost from the trailer or vehicle, beekeepers can be called to remove bees and equipment from the roadway. Commercial beekeepers are likely to show up to assist in an accident involving another beekeeper's operation, and will have the best knowledge, staff, and equipment to safely move hives. See the emergency contacts listed above.

In addition to contacting local beekeepers, you may also need to reach out to trucking companies or farmers to get more trucks, trailers, and/or forklifts to the site of the accident. It may be necessary to bring in a dumpster or dump trailer if large amounts of equipment are broken and cannot be re-stacked.

In the event of a vehicle/trailer rollover or serious accident, significant loss of honey bees can be expected. Beekeepers can move bees and hive equipment to another location to later inspect colonies for damage and reassemble hives.

If time and space allow, live bees on the ground can be collected into equipment. The bees that are mobile will walk or fly towards hive equipment, guided by scent. After clearing hive equipment from the scene, beekeepers can leave some hive equipment near the site of the accident for remaining bees to gather on; the beekeepers can then remove the equipment and bees the following night when it's dark. If it's not possible to leave hive equipment for bees to gather on or if bees remain, the bees can be destroyed to minimize further risk to nearby humans and animals.

Honey and other hive debris that is left after the initial cleanup phase will be attractive to bees and possible other wildlife, possibly creating subsequent hazards. Once the initial situation has been dealt with, follow up at the site should be made to remove remaining equipment and wash away residual honey.



Photo by Jenifer Lund

Emergency Response to Accidents Involving Livestock Trailers

Michigan State University Extension's [Emergency Response to Accidents Involving Livestock](#) program placed response trailers in several locations across Michigan. Trailers are stocked with the following equipment to respond to accidents involving honey bees.

- 2 beekeeping suits, 1 size L and 1 size XXL
- 2 beekeeping veils, wrap strings around waist and tie to secure veil
- 4 pairs of beekeeping gloves, 2 size L and 2 size XL
- 4 pairs of leg straps for cinching pant legs so bees can't crawl up
- 1 roll of duct tape for sealing loose clothing to prevent bees from entering and stinging
- 4 headlamps, use red light setting to minimize reaction from bees
- 2 smokers, used to mask honey bee alarm pheromones
- 1 lighter for lighting smoker
- Burlap fabric for burning in smokers
- 4 hive tools (small pry bars) for separating hive boxes and frames
- 1 tarp to cover a load of bee equipment

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