

# DISASTER/EMERGENCY PREPAREDNESS AND RESPONSE



## BASICS

### OVERVIEW

- Disaster and emergency response planning heightens awareness of the special issues that emergency managers must consider when incorporating veterinary-care into their emergency operation plans.
- Preparation for all conceivable disasters will be essential in implementing actual disaster management in the event that a disaster event should occur.
- Possible disaster scenarios to consider include: fire, flood, earthquake, oil spill, volcanic eruption, toxic chemical spill, foreign and domestic disease outbreaks, act of agro-terrorism, land-slide, extreme drought, plane crash, explosions, temperature extremes, heavy snowfall, severe avalanche, hurricane or tornado event, and nuclear fallout.

### DISASTER PLANNING

#### *Pre-Emergency*

- Simple disasters such as gas leaks and minor flooding can keep people from tending to their animals for extended periods of time. Residents should be familiar with the likelihood of the specific kinds of emergencies that are common to their region.
- To prevent emergency situations from devastating a livestock base, take steps to prepare for disasters ahead of time. It is best to be overly cautious during a disaster warning.
- Preparing ahead of time and acting quickly is the best way to keep livestock out of danger.
- Veterinarians and clients should work together to develop an individualized animal disaster plan for the facility as well as a detailed evacuation plan.
- Evacuation kits should be pre-assembled.
- Back-up generators are important to have on hand in livestock operations to replace lost power.
- Assemble a disaster response team comprised of veterinarians, animal health technologists, county farm advisors, 4-H advisors, feed dealers, public health officials, and wildlife agency personnel. All disaster team members should have pre-exposure rabies and tetanus vaccination current if possible.
- Provide alternative communications resources.
- Plan for the veterinary care of sick and/or injured stray animals. Care of sick or injured animals will depend on the conditions of the emergency event.
- Prepare a master plan for emergency disaster. The disaster response team should be ICS 100 trained.
- Provide training sessions for involved members of the emergency response team as well as livestock owners. All involved personnel must be trained in emergency preparedness to function efficiently.
- Designate a public information liaison
- Determine an emergency incident command system. This will include an operation base, transportation to and from the location to farms and livestock holding areas.
- Written directions to the home/incident command center should be kept near telephone(s) to direct rescue personnel.
- Alternate food and water sources should be identified in case of contamination.
- Vehicles should be well maintained and full of gas.
- Emergency cash should be kept on hand.

### ***Livestock Owner Absence***

- Pre-place stickers on front and back house doors, barn doors, and pasture entrances to notify neighbors, fire fighters, police, and other rescue personnel that animals are on the property and also directing them to the evacuation supplies.
- Provide a list of the number, type, and location of animals in order to save precious rescue time.
- To facilitate a successful evacuation, provide animal restraints where rescue personnel can find them. Keep in mind that animals may become fractious when frightened.
- Neighbors may be designated to tend to the animals if disaster strikes when owners are not home. They should have any needed keys, be familiar with the animals, know the evacuation procedures, and know how to locate the evacuation supplies.
- It is suggested that a veterinary medical treatment authorization form and a general release form be signed in advance. These will cover those helping in the unfortunate event that any of the animals are hurt during the evacuation.

### ***Animal Identification***

- Having identification on animals will help reunite displaced animals with owners. Ideally, identification should provide name, address, phone number, and a backup phone number.
- If possible, veterinary information should also be included.
- Forms of identification can include: Microchip, tattoo, ear tag, halter tag, neck chain, ear notches, leg band, brand, clipper-shaved information in the animal(s)' hair, livestock marking crayon, non-toxic, non-water-soluble spray paint, or magic markers to write on the animal(s)' side, or permanent marker to mark hooves

### ***Transportation/Housing***

- It is important to separate animals from different households where possible and to maintain the best possible hygiene to decrease disease transmission.
- Ruminant evacuation can be challenging. Develop an evacuation plan and make sure animals are familiar with being led into a trailer.
- Planning and practicing the plan prior to a disaster to increase animal/human safety.
- A prearranged evacuation site outside your immediate area should be determined.
- Possible sites include veterinary or land grant colleges, racetracks, show grounds, pastures, stables, fairgrounds, equestrian centers, livestock corrals, stockyards, or other boarding facilities.
- Potential sources of animal transportation include neighbors, local haulers, farmers, producers or other transportation providers. It is vital to establish a network of reliable resources to provide needed transportation.

### ***Veterinary Records***

- Copies of veterinary documents should be stored in the evacuation kit. Copies can also be maintained in digital format for retrieval after evacuation (email, thumb drive, cloud accounts, etc)
- Vaccination records:
  - Vaccination type and date
  - Rabies certificate (if applicable), medical history, important test results, medical conditions
  - Dietary restrictions or supplements

### ***Proof of Ownership***

- Registration information, proof of purchase, microchip information, current photos with owner
- If possible, each animal and their description should be listed separately. When not possible due to extreme animal numbers, lot records should be available.

### ***List of emergency contacts***

(24-hour contact numbers that can be used by rescue personnel or owner)

- Owner information (pager, cell phone, work phone).
- Pre-arranged evacuation site location(s)
- Local alternate contact acting on behalf of owner, out-of-state contact acting on behalf of owner, veterinarian, local animal control agency,
- Local police department, local fire department, local public health department, local

humane organizations

- Private stables/farms, racetracks, fairgrounds, show grounds, stockyards, equestrian centers
- Local haulers or neighbors with appropriate equipment to help with transportation
- Feed distributor

### ***Local animal census***

- An animal census should be maintained for the specific area.

## **POST EVACUATION ORDER**

Early evacuation decreases the likelihood of becoming a victim of the disaster.

- Confirm space at pre-arranged evacuation site.
- Implement livestock evacuation plan.
- Evacuate animals as soon as possible.
- Realizing that these are life-threatening situations for livestock as well as people, if livestock must be left behind they should be relocated to the predetermined safest place based on the type of imminent disaster. Ensure that they have access to an appropriate and safe free choice food source, clean water, and the safest possible living area including high ground if a potential for flooding exists. Some types of disasters require leaving animals inside while others require leaving animals outside (visit [www.avma.org/disaster](http://www.avma.org/disaster) for links to large animal disaster planning websites). Do not rely on automatic watering systems, because power may be lost.
- If time permits, all outdoor objects should be secured or removed to avoid dangerous flying debris.

## **POST- DISASTER**

- Survey areas for sharp objects, dangerous materials, dangerous wildlife, contaminated water, downed power lines, or other hazards.
- Keep in mind familiar scents and landmarks may have changed, confusing animals.
- Release livestock in safe and enclosed areas only.
- Reintroduce food in small servings, gradually working up to full portions if animals have been without food for a prolonged period of time.
- Allow uninterrupted rest/sleep, as possible, to facilitate recovery from trauma and stress.

## **PRODUCTION MANAGEMENT**

- Animal identification should provide name, address, phone number, and an out-of-area phone number as backup during a disaster/evacuation.



## **MISCELLANEOUS**

### **SEE ALSO**

- Manure Management and Environmental Planning ([www.fiveminutevet.com/ruminant](http://www.fiveminutevet.com/ruminant))
- Euthanasia and Disposal (Appendix 2)
- Anesthesia: Inhalation
- Anesthesia: Injectable
- Animal Disease Traceability (ADT) ([www.fiveminutevet.com/ruminant](http://www.fiveminutevet.com/ruminant))

## **INTERNET RESOURCES**

- FEMA: Animals in Disaster – an interactive web based course available at: <http://training.fema.gov/EMIWeb/IS/is10.asp>

•American Red Cross (2003) Barnyard Animal Rescue Plan;  
<http://www.redcross.org/services/disaster/beprepared/barnyard.html>

• AVMA *Disaster Preparedness Series*: Disaster Preparedness for Veterinary Practices  
[http://www.avma.org/disaster/vet\\_practices.asp](http://www.avma.org/disaster/vet_practices.asp)

***Suggested Reading***

Sebastian E. Heath (1999) *Animal Management in Disasters*. Mosby Publishing; 330 pp.  
Swearengen JR, Vargas KJ, Tate MK, Linde NS. Disaster preparedness in biocontainment animal research facilities: developing and implementing an incident response plan (IRP). *ILAR J.* 2010; 51(2):120-6.

Thompson K, Every D, Rainbird S, Cornell V, Smith B, Trigg J. No Pet or Their Person Left Behind: Increasing the Disaster Resilience of Vulnerable Groups through Animal Attachment, Activities and Networks. *Animals (Basel)*. 2014 May 7; 4(2):214-40. doi: 10.3390/ani4020214.

**Author** Bonnie Loghry

**Consulting Editor** Kaitlyn Lutz

**Acknowledgment** The author and editors acknowledge the prior contribution of Cindy Lovern.