



### DISASTER RECOVERY INFORMATION

## Interim Guidelines for Animal Health and Control of Disease Transmission in Pet Shelters

*These Interim Guidelines have been developed by consultation between the American Veterinary Medical Association and the U.S. Centers for Disease Control and Prevention and are advisory in nature. They are intended to provide guidance for the care of animals entering shelters and for persons working with or handling the animals in response to natural disasters.*

Animals arriving at shelters as a result of a natural disaster need special care. Because they may have been exposed to contaminated water and may not have had access to safe food and fresh water, many are stressed and dehydrated and some may be injured and/or ill. Stressed animals may or may not show signs of illness and may also exhibit behavioral disorders. Following some simple animal management and disease control guidelines can help improve animal health and reduce the risk of disease transmission and injury between animals and people.

What follows are some recommendations for pets arriving at animal shelters.

### Animal Health History, Examinations, and Identification

- Each animal should be examined at a triage site. Particular attention should be paid to hydration status, cuts and abrasions, paw/hoof/foot health (e.g., pads and claws, area between toes), ear health (e.g., redness, discharge), oral injuries (may have occurred if animal was foraging for food), vomiting and/or diarrhea, respiratory disease, and evidence of parasite infestation.
- Animals should be bathed upon entry, particularly if they may have been in contact with contaminated flood water. Dawn™ dish soap can remove petroleum and some other toxic chemicals, but care should be taken during its use on sensitive species (e.g., horses). Those bathing the animals should wear protective clothing (e.g., rain suits, ponchos), gloves, and a face shield or goggles with a surgical mask to avoid mucous membrane contact with droplets and splashes that may contain toxic materials.
- Intake personnel should ask whether the pet has been in the custody of the owner since the beginning of the evacuation and should inquire about the animal's health and vaccination history, paying particular attention to any current medical needs or chronic health problems (e.g., diabetes, which would signal a need for insulin injections). In addition, owners should be questioned about the animal's usual temperament (e.g., whether the animal can safely be housed with others of the same species, whether it might be aggressive toward caretakers).
- A health record for each animal should be created and updated as needed. Identification information for the animal should correspond to that for the owner, so that animals and their owners can be reunited. Owned animals should be clearly marked as "owned" and not "abandoned" to reduce the risk of mix-ups. Photographs should be taken, if possible. Collars (leather or nylon, not choke chains) containing readily legible identification information should be placed on all animals. Ideally, all animals should be microchipped.
- Cages should be clearly labeled so that newly arriving personnel are easily apprised of the health status and temperament of sheltered animals.

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- Animals arriving without owners should be scanned for microchip identification. Microchips are most often placed between the shoulder blades, but earlier models were prone to migration, so animals should be scanned from the shoulder blade down to the ventral chest. All scanners are not capable of reading all microchips, so if multiple types of scanners are available, scan with each type before declaring an animal to be microchip-free. Animals without microchips should be checked for other forms of identification such as a tag or tattoo. Tattoos on dogs may correspond to an AKC registration number and this information should be used to trace the animal, if possible.

## **Animal Health Management and Prevention and Treatment of Zoonotic and Nosocomial Diseases**

### ***Intestinal Parasitism***

- Dogs should be treated prophylactically for internal parasites including Giardia, roundworms, hookworms, and whipworms.
- Exposure to mosquitoes in flood-ravaged areas presents an increased risk of heartworm disease. If possible, dogs should be tested for heartworms and appropriate preventatives or treatment administered.

### ***External Parasitism***

- Dogs and cats should be examined for flea or tick infestation, and treated appropriately.
- Preventive flea and tick treatments should be considered for all dogs and cats housed in shelters.

### ***Vaccinations***

While the American Veterinary Medical Association normally recommends that vaccination programs be customized to individual animals, in disaster situations vaccination status may be difficult, if not impossible, to determine. For this reason, administration of "core" vaccines to animals upon admission to shelters when vaccination status is unavailable or not current is considered appropriate. Vaccines take some time to become effective and will not address pre-existing exposures, so personnel are cautioned to be alert for clinical signs of disease.

- A rabies vaccination should be administered to dogs, cats, and ferrets. This is especially important for dogs and cats housed in group settings. Personnel should be aware that rabies vaccines may take as long as 28 days to become effective.
- Additional core vaccinations for dogs include distemper, hepatitis, and parvovirus.
- Additional core vaccinations for cats include feline viral rhinotracheitis, panleukopenia and calicivirus. Vaccination against feline leukemia should be considered for young kittens that will be housed in contact with other cats.
- Vaccination (intranasal) against Bordetella bronchiseptica and parainfluenza should be considered for all dogs to reduce the incidence of kennel cough.
- Because leptospirosis risk is higher in flood-ravaged areas and because the disease is zoonotic, vaccination should be considered. Personnel are cautioned that leptospirosis vaccines are serovar-specific, and that the potential for adverse reactions may be higher than for some other vaccines.

### ***Diarrheal Disease***

- Animals presenting with (or developing) diarrhea should be separated from healthy animals (see Facilities Management).

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- Nosocomial agents of concern that may be transmitted by feces include parvovirus, panleukopenia, Giardia, and intestinal parasites.
- Zoonotic agents of concern for small animals include Campylobacter and Salmonella, which are highly infectious and have been associated with outbreaks in shelters and veterinary clinics.

### ***III Birds***

- Ill birds are usually lethargic, depressed, and inappetent. Care should be taken when handling ill birds because they may be infected with the zoonotic bacteria Chlamydia psittaci, which causes psittacosis. Face masks should be worn when handling birds of unknown origin that are exhibiting signs of illness.

### ***Behavioral Concerns***

- Fear, panic, separation anxiety, noise and storm phobias, and other behavioral disorders are common problems in displaced animals. Animals that have never had these problems may develop them and pre-existing problems are likely to worsen.
- Providing housed animals with fresh food and water on a regular basis and establishing other familiar routines will assist animals in adjusting to their new environment. Food and water should be provided at multiple smaller and dispersed stations, rather than a few large clumped stations, to minimize fear competition and fighting among unfamiliar animals.
- Animals without a prior history of aggression may snap, bite, or hiss as a result of fear or uncertainty. Shelter personnel should approach rescued animals calmly, but cautiously. Only experienced personnel should handle animals that exhibit significant behavioral disorders.
- Behavioral exercises and behavioral medications may be administered short- or long-term, as required, to help animals recover. Shelters are encouraged to seek assistance from qualified animal and veterinary behaviorists who can assist them in meeting these needs.

### ***Euthanasia***

- Animals that are irreversibly ill or exhibiting intractable signs of aggression should be euthanized. Records should be kept of animals euthanized.
- Animals that have been previously associated with transmission of monkeypox (i.e., prairie dogs, African rodents) are under legal restrictions for movement, except to a veterinarian for care. If one of these high-risk species is presented for veterinary care at a shelter, they must be kept isolated from other animals and housed in individual cages. If this cannot be accomplished, these animals must be humanely euthanized.

### ***Medical Use, Storage, and Recordkeeping***

- Veterinarians are responsible for making clinical judgments regarding the health of the animal and the need for medical treatment. Use of prescription drugs may be authorized only by a veterinarian.
- Drugs and vaccines should be stored under conditions recommended by the manufacturer. Products should be examined periodically to ensure cleanliness and current expiration date.
- Records of individual animal treatments should be kept, including animal identification, date of treatment, name of product administered, name of the individual administering product, and the name of the supervising veterinarian.

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### ***Personal Protection for Caretakers***

- Wash hands with soap and water Before and after handling each animal
  - After coming into contact with animal saliva, urine, feces, or blood
  - After cleaning cages
  - Before eating meals, taking breaks, smoking, or leaving the shelter
  - Before and after using the restroom.
- Wear gloves when handling sick or wounded animals.
- Wear gloves when cleaning cages.
- Consider use of goggles or face protection if splashes from contaminated surfaces may occur.
- Facemasks should be worn when handling ill birds to minimize the risk of contracting psittacosis.
- Bring a change of clothes to wear home at the end of the day.
- Bag and thoroughly clean clothes worn at the shelter.
- Do not allow rescued animals to “kiss” you or lick your face.
- Do not eat in animal care areas.
- Whenever possible, caretakers should have completed a 3-dose prophylactic vaccination series for rabies.
- Pregnant women and immunocompromised persons should not volunteer for positions involving direct animal contact.

### ***Avoiding Bites and Scratches in Pet Shelters***

- Use caution when approaching any animal that may be sick, wounded, or stressed.
- If available, use thick gloves, restraints, or sedation to handle aggressive animals.
- If bitten or scratched, thoroughly wash wound with soap and water and seek medical care.
- Because the exposure histories of these animals are unknown, bites from dogs, cats, and ferrets may be considered a potential risk for rabies, even if the animal appears healthy and has been vaccinated. Therefore, personnel who are bitten should be evaluated for rabies risk. Dogs, cats, and ferrets that bite a person should be quarantined for 10 days and observed for signs of rabies. If an animal develops signs of rabies or dies during the 10-day period following the bite, it should be tested for rabies. Persons bitten during pet shelter operations do not require rabies postexposure prophylaxis unless the animal is diagnosed as rabid.
- If a person is bitten by a dog, cat, or ferret that is available for quarantine, adequate identification records and contact information must be kept for both the animal and the person bitten, so the exposed individual can be contacted in the event the quarantined animal does prove to be rabid. Persons exposed to an animal confirmed with rabies, or to an animal that is unavailable for a 10-day quarantine or testing, should receive rabies postexposure prophylaxis in accordance with the Advisory Committee on Immunization Practices Guidelines.

## **Facility Management**

### ***Separation of Animals***

- Animals should not be housed or permitted in food or break areas.
- Separate newly arriving animals from animals that have been housed one week or longer.
- Animals of different species should not be housed together (e.g., do not place a ferret and a rabbit in the same cage)

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- Avoid caging animals from different households together. If animals of the same species come into the shelter together and the owner requests that they be caged together, this should be allowed as it may reduce an animal's stress if it is housed with a companion. This should not be done if the owner indicates the animals do not get along with one another.
- If animals of unknown origin must be housed together, care should be taken to not mix genders for unneutered animals.
- Routinely monitor animals for signs of illness. Separate sick animals from healthy animals, especially animals with diarrhea or signs of upper respiratory disease. If a separate room or area is not available, animals with diarrhea or signs of respiratory disease should be housed in bottom cages.
- People assigned to care for sick animals should care for those animals only, and should not move between sick and healthy animals.
- Limit contact of young children, the elderly, pregnant women, and immunocompromised people with rescue animals, particularly animals that are ill.

### ***Cleaning and Disposal***

- Thoroughly clean and disinfect cages between animals.
- Remove and dispose of animal waste in a timely manner.
- Double bag and remove dead animals shortly after death. A log of animals that have died or have been humanely euthanized should be kept. This log should include animal identification and/or descriptive information for each animal.
- Identify an area separate from the shelter for carcass storage and disposal.
- Arrange for waste removal from the pet shelter.
- Pet shelters should have adequate lighting, water, and wastewater disposal.

### ***Environmental Security***

- If at all possible, devise strategies to prevent wild rodents from mixing with shelter animals.
- Keep wild rodents away from food supplies.

### ***Additional Recommendations for Exotic Animals (including pocket pets, reptiles, amphibians, and birds)***

- Exotic animals should be microchipped for accurate record keeping, unless they are identified by other means, such as well-secured leg bands or legible permanent tattoos. Leg bands are a reliable means of identifying birds and often will allow ownership to be traced. For this reason, these bands should be left in place unless they pose a hazard. Photographs of birds' feet may also be used to identify them.
- House each species of animal in separate areas to reduce stress from strange noises and environments. Do not house birds in the same area as mammals or reptiles because the presence of these animals can cause undue stress and may present a risk of infectious disease to avian species.
- Make sure that diets are appropriate for each species. If the species is unfamiliar to the handler, then consult a veterinarian or handler who is experienced with the housing and husbandry of that species.
- Ill birds must often be force-fed. Birds should only be force-fed by experienced handlers or veterinarians.
- Minimize handling of exotic pets to reduce stress and risk of injury for animals and handlers (see Appendix A—Safe Handling of Exotic Animals)

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- Do not house more than one exotic animal in a cage unless the animals have previously been housed together.
- Exotic pets should not be taken out of their cages except during cage cleaning.
- Confine exotic animals to other cages or escape-proof containers when cleaning permanent cages.
- To prevent transmission of Salmonella and Chlamydia, designate a separate area for cleaning cages. Do not clean cages in sinks or bathrooms that will be used for food preparation or bathing of infants or other immunocompromised persons. After cleaning chores are completed, thoroughly disinfect the area
- It is extremely important to follow appropriate hand washing techniques after handling and feeding exotic animals or cleaning their cages, bowls, toys, or other cage furniture.
- To avoid transfer of fecal matter, feathers, food, and other materials from one cage to another, bird cages should not be stacked.
- Many exotic pets, especially reptiles and amphibians, have special environmental needs; these needs should be an important consideration during sheltering.
- Exotic pets tend to be escape artists. Ensure that caging is properly constructed and sufficiently secure to prevent destruction and escape.
- Do not release exotic animals into the wild under any circumstances.

## A Note on the Human-Animal Bond and the Well-Being of Pets and Owners

Separation of pets and owners is a difficult issue. When people have lost everything, their pets can be an important source of emotional support. This is particularly true for those without family or a strong human social network. Removal of this last remnant of normality and comfort can be psychologically traumatic.

Despite the importance of the owner-pet relationship, limited availability of suitable housing, as well as animal and public health and safety concerns, will make housing pets in animal shelters or foster homes not only necessary, but in the best interest of many pets and their owners. Foster homes are an alternative that can provide some semblance of routine and reduce crowding and stress in animal shelters that might otherwise predispose animals to injury and disease.

For additional information about rescue efforts and animal health and welfare, particular diseases or conditions or infection control, please call these organizations or visit their web sites:

- CDC Healthy Pets Healthy People (<http://www.cdc.gov/healthypets/>)
- American Veterinary Medical Association (<http://www.avma.org/>)
- Veterinary Medical Assistance Teams (<http://www.vmat.org>)
- Association of Shelter Veterinarians (<http://www.sheltervet.org>)
- American College of Veterinary Behaviorists (<http://www.veterinarybehaviorists.org/>)
- The Center for Food Security and Public Health (<http://www.cfsph.iastate.edu/brm>)
- Pets and Disaster: Be Prepared ([http://www.redcross.org/services/disaster/0,1082,0\\_604\\_00.html](http://www.redcross.org/services/disaster/0,1082,0_604_00.html))
- Animal Safety: Pets and Disaster (<http://www.redcross.org/services/disaster/beprepared/animalsafety.html>)

## Appendix A: Safe Handling of Exotic Animals

Many exotic pets have unique features that need to be considered when handling these animals. Some basic guidelines for handling common exotic species follow.

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### ***Rabbits***

- Grasp loose skin over the neck and shoulders while directing the head away from your body.
- Support the lower part of the rabbit's body with the other hand.
- Never restrain or lift a rabbit by the ears.
- If the rabbit begins to struggle or kick violently, immediately place on a solid surface and calm the animal. Struggling often results in fractured spinal vertebrae and subsequent euthanasia.

### ***Mice***

- Mice are generally caught and handled by their tails.
- Grasp the tail between its midpoint and the mouse's body
- For more control, grasp the loose skin over the mouse's neck and shoulders using the thumb and fingers.
- Do not drop mice into cages. Rather lower them into the cage and release upon contact with bedding.

### ***Guinea Pigs***

- Gently, place one hand on the shoulders or chest of the guinea pig.
- Use the other hand to support the animals' hindquarters.
- Wrap the guinea pig in a towel or hold the animal against your body to reduce any struggling.
- Do not attempt to restrain guinea pigs solely by grasping the skin. Guinea pigs lack an ample amount of loose skin to do this safely and handling them in this manner may cause hair loss.

### ***Birds***

- Pet birds, such as parrots and finches, may be restrained by capturing in a towel. Darkening the room prior to entering the cage will assist the handler in the capture process and calm the bird. Care should be taken with wild birds, such as birds of prey. These species should only be captured and restrained by qualified handlers.
- Quickly grab the bird's neck from behind the animal. Your hand should gently encircle the neck to elongate the neck between the head and shoulders.
- Once the animal is under control, grasp the legs from the front of the animal and stretch the animal as much as possible without causing injury.
- The weight of the towel will keep the wings at the bird's side.
- Ensure that the bird's ribcage is not restricted and do not hold the bird around the body.
- Small birds may be caught without using a towel. First, capture the bird from the rear by encircling the neck. Then grasp the feet with the other hand.

### ***Lizards***

- Hold the head firmly by grasping behind the jaw with your thumb and first finger while wrapping the other fingers around the lizard's shoulders to control the front legs.
- Use the other hand to grasp the rear legs and tail just below the base of the pelvis.
- Do not grab the length of the tail. Many lizards have the ability to lose their tails as a natural defense mechanism.

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### ***Snakes***

- Hold the head gently by grasping behind the jaw. Allow your hand to move with the snake's head movement to prevent injury.
- Providing good support support for the rest of the snake's body will help ensure it feels secure. Multiple handlers may be necessary for large snakes.
- Do not allow the snake to wrap the end of its tail around you or other objects.

### ***Turtles and Tortoises***

- Grasp the shell midway between the front and rear legs.
- Prevent bites by not reaching across the front of a turtle or tortoise that is unrestrained.
- Frightened animals will often urinate on handlers as the animals are being picked up.

### ***Amphibians***

- Fine mesh nets or small plastic containers may be used for catching and transferring animals.
- If the animal must be handled, protect the animal's skin by using moistened gloves and/or a moistened paper towel or dishcloth.
- Large amphibians, such as giant salamanders, large toads, and hellbenders, should have their heads restrained to prevent biting. Place their head between your thumb and first finger.

### ***Ferrets***

- Grab the loose skin around the back of the neck firmly.
- Hold the ferret up so the hind feet cannot touch the ground.
- Stroke the animal's underside from top to bottom to aid in relaxation.

### ***The following references provide additional information about handling exotic animals:***

- The University of Iowa Animal Research Institutional Animal Care and Use Committee:  
<http://research.uiowa.edu/animal>.

For more information, visit <http://emergency.cdc.gov/disasters/hurricanes/psa.asp>,  
or call CDC at 800-CDC-INFO (English and Spanish) or 888-232-6348 (TTY).

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