

## Pets and their Persons' Behavior

The need to care for pets in disasters emerged as a significant issue in the 1990s after several major disasters. The principal issues are summarized in Table 27-1, which addresses why emergency management programs should be developed for the care of pets and their owners. The issues encompass public health and animal well-being.

**Table 27-1** Major studies of disasters that exemplify the principal pet issues in disasters

Incident	Issue
Oakland, California, firestorm, 1991	Stray pets, reunion of pets and owners
Weyauwega, Wisconsin, train derailment, 1996	Owners evacuating without their pets and then attempting to rescue them
Marysville, California, floods, 1997	Pet owners failing to evacuate

Before studies of specific disasters, the public health concerns had been described only anecdotally. For example, during a large-scale evacuation from a 1984 hazardous materials (hazmat) spill in Dayton, Ohio, owners trying to rescue their pets contributed to traffic jams and delayed the rapid and safe evacuation of others. After Hurricane Andrew, many nurses and other professionals in human health care requested leave from work to take care of their pets. Both situations affected public health adversely. Studies of the 1991 firestorm in Oakland, California; the 1996 train derailment in Weyauwega, Wisconsin; and the 1997 floods in Marysville, California, have helped our understanding of the pet-related issues that commonly arise in disasters.

The concern for the care of animals and their owners in disasters has increased in recent years. As with many new areas, these issues can be complex. In an attempt to characterize and prioritize the problems that arise out of pet ownership in disasters and how to mitigate them, I and others at Purdue University, School of Veterinary Medicine, have researched the epidemiology of several major incidents in which pet issues were a concern. The incidents we have studied are the Oakland, California, firestorm (1991:1273 pets); the Weyauwega, Wisconsin, train derailment (1996:241 pet owners); and the Marysville, California, floods (January 1997: 397 evacuees).

Several patterns are emerging that have relevance for emergency managers and others who want to develop Emergency Operations Plans (EOPs) that address the concerns for pets and owners in disasters.

## Public Health and Safety

Three principal threats to public health arise out of pet ownership in disasters:

- Pet owners who fail to evacuate because of their pets (human evacuation failure)
- Pet owners who evacuate without their pets and later try to rescue them (pet evacuation failure and reentry to secured sites, "pet rescues")
- Mental stress that arises in owners separated from their pets

In all of these situations providing care for pets is a method of caring for people. The

relationship between pets and their owners is a fundamental concept in veterinary disaster management. Emergency management officials should take advantage of the ease with which a large sector of the public can be cared for by providing care for their pets, as well as better stability to the management of the incident can be improved.

Preventing owners who fail to evacuate because of their pets and owners who evacuate without their pets and later try to rescue them is a method for facilitating the care of people. The same is true for livestock and their owners.

### *Human Evacuation Failure*

Up to 25% of pet owners will not evacuate because of their pets. This 25% represents 5% to 10% of the total population directed to evacuate. Evacuation failure is most likely to occur in households without children (up to the age of 18 years) and is highly correlated with the number of pets in the household. The likelihood of an owner not evacuating nearly doubles with every additional cat or dog owned. For example, households that are without children and have three cats or dogs are nearly eight times less likely to evacuate than childless households that have one cat or dog.

Only limited evidence suggests that seniors fail to evacuate because of pets. Seniors who do not evacuate usually stay behind because they do not have the social support networks they need. This should be addressed in cooperation with mental health professionals. Information that suggests seniors will not evacuate because of pets comes from asking seniors what they think they would do if faced with an order to evacuate. A more effective approach is to ask actual disaster victims who fail to evacuate if providing shelter for their pets would facilitate their evacuation.

### *Pet Evacuation Failure and Owner Rescue Attempts*

Our data indicate that approximately 30% to 50% of pet owners leave their pets behind even if they are given advance notice to evacuate. This percentage is highest if the time between the notice and need to evacuate is short. Cats and dogs are not evacuated for specific reasons. The most common reason that cat owners leave their cats behind is that they do not have carriers or cannot catch the cats. This problem can be prevented by advising owners to buy a carrier for each of their cats or by making cat carriers available during evacuation. The most common reason that dog owners leave their dogs behind is that they do not know where to take them. Mitigation of this problem is simple: dog owners should be advised to make boarding arrangements with friends, family, or kennels before evacuation.

Owners who leave their pets behind also appear to be less responsible pet owners in general. For example, these owners score low on a pet attachment scale, and their pets are less likely to have visited a veterinarian or have been licensed at the time of the disaster.

Approximately 50% to 70% of those who leave their pets behind attempt to rescue them later. This means that approximately 5% to 15% of persons who evacuate may attempt to reenter a secured site because of pets. The remaining 30% to 50% of owners who leave their pets behind do nothing more for their pets until they return home.

### **Care of Owned Animals**

We have found that pet owners almost always care for their animals adequately. For example, 80% of households without a cat or a dog stayed with friends, with family, or at a hotel or motel; likewise, 77% of households with pets did. The study also showed that 18% of families without a

cat or dog stayed at public shelters as compared with 16% of pet-owning families.

The great majority of pets and their owners do not need more than temporary (overnight) assistance after evacuations. Shelter for a longer time may become an issue if hurricane damage is extensive or if a power outage is prolonged, such as after an ice storm. Other situations may create the need for prolonged sheltering of owners and pets, such as seniors' evacuating with their pets, but no data exist to support this.

One disturbing finding was that nearly 8% of cat or dog owners stayed in a vehicle at a campground or other location, whereas no persons without pets chose these accommodations. Because the evacuation from the Marysville flood was for only a short period and relatively little damage was done to people's homes, most of these pet owners probably returned home within a few days. However, if the evacuation had been prolonged or extensive damage had occurred, the displacement of pet owners and the potential for their economic and social decline could have been more alarming. The risk for low-income pet owners to become homeless after disasters warrants further investigation.

### **Public Health and Safety Recommendations**

Public safety could be improved if evacuation orders always advised pet owners to take their animals with them and seek accommodation with friends and family. Assistance should be available for pet owners who cannot transport their pets. Providing such transportation services should be viewed as catering to a special need of humans.

A model for helping those with special needs exists in several communities for people dependent on electricity for survival. Examples are persons who are receiving mechanical ventilation or kidney dialysis or who have other medical alert conditions. Electrical utility companies and hospitals have registries of these persons so that in a power failure immediate medical care can be sent to them. Similarly, pet owners could develop a disaster evacuation service in their community.

Shelters for owned pets are probably not necessary unless large human populations have to be displaced without alternative accommodation. In this case separate facilities should be sought for pets, such as county fairgrounds and parks, where tents can be set up. Local resources include tent and awning companies and the National Guard.

### **Mental Health**

Mental health is the component of public health that is concerned with the psychological impact of disasters on people. Disasters can threaten or disrupt the human-animal bond. Consequences of the disrupted bond can be separation anxiety, grief, bereavement, anger, guilt, evacuation failures, reentry attempts, psychosomatic symptoms, and irrational decisions about the animal owner's own health. Keeping animals and their owners together is a way of reducing stress in disaster victims.