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Animals & Society Institute

ANIMALS IN DISASTERS: RESPONSIBILITY and ACTION

POLICY PAPER

An inclusive summary of the most up-to-date information about disaster response for animals in the United States, and a set of proposed initiatives for not-for-profit organizations and government agencies

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When an incident overwhelms local and state response capacities, a governor may request that the president declare a major disaster. After consideration at the regional level and at Washington, D.C. headquarters, FEMA makes a recommendation to the president. The presidential declaration activates resources through the departments and agencies coordinated through FEMA under the Federal Response Plan. Federal assistance supplements state and local efforts. FEMA and other agencies do not take control of disasters; the governor and local officials maintain oversight.

To create a standardized emergency management approach, FEMA incorporated the results of a 1972 study known as FIRESCOPE (Firefighting Resources of California Organized for Potential Emergency).^{viii} The study was conducted after wildfires destroyed more than 600,000 acres in California. The response involved multiple jurisdictions at the municipal, county, and federal levels. The lack of coordination across jurisdictions, the inability to communicate on the scene, and general lack of preparedness greatly hampered the response. FIRESCOPE identified elements common to all disasters, regardless of size or cause. One outcome, known as the “all-hazards” approach, changed the way responders thought about disasters by portraying them as continuous cycles of four phases:

- Mitigation: actions taken to prevent or eliminate risk from hazards
- Preparedness: the development of a plan to address a disaster or emergency
- Response: actions taken to save lives, attend to basic needs, and protect property
- Recovery: returning the setting to normalcy. Recovery overlaps with response and usually involves elements of mitigation.

The cycle places all stakeholders - whether communities, farms, businesses, or individuals - in some stage in the cycle at all times. In addition, FIRESCOPE resulted in the adoption of the Incident Command System (ICS, outlined below) to manage disasters.^x

3.3 National Incident Management System and the National Response Plan

The National Incident Management System and the National Response Plan are documents intended to improve the national response capability. The NIMS was created to coordinate local, state, federal, and tribal governments in emergency response.^x It provides the technology, information, and doctrine for the response. It is not a national response plan, but it provides the framework for such a plan (the NRP) by standardizing practices in six component areas:

- Command and Management
- Preparedness
- Resource Management
- Communications and Information Management
- Supporting Technologies
- Ongoing Management and Maintenance

Of the six components, the first two are the most thoroughly developed at the time of this writing, as a consequence of regular use by jurisdictions across the United States. The first component outlines the Incident Command System, an explanation of which will be helpful for further reading.

Command and Management includes the Incident Command System through which the response is coordinated. The ICS model uses common terminology and a pre-established, manageable division of labor. An incident commander establishes a post from which to oversee the ICS hierarchy. Under the incident commander is a staff consisting of a liaison officer, who coordinates all the activities of the responding groups and defines each group’s responsibilities; a public information officer, who authorizes the release of information to the public and the media; and a safety officer, who is responsible for the safety of responders and the public. On the next level are the general staff, who oversee the functional areas of Operations, Planning, Logistics, and Finance. The ICS allows incident commanders to adapt the structure to the needs of the event or jurisdiction.

The National Response Plan emphasizes local responsibility and the coordination of agencies. It establishes emergency support functions, which categorize the kinds of assistance needed, such as firefighting and transportation, and support annexes, which categorize the administrative assistance required. For example, the “Canine Search Specialists,” or SAR dogs, are part of the National Urban Search and Rescue Response System, which is a component of the NRP.

3.4 Lessons learned from recent disasters

Hurricane Andrew in 1992 first raised public awareness of the plight of animals following disasters (see Lawson, 1992; Dee, 1993). It also represents the first efforts to shelter and rescue lost and abandoned animals and initiated the first attempts to include animals in disaster response. During Hurricane Charley in 2004, cooperation and planning in Charlotte County, Florida, saved the lives of untold animals (Irvine, 2004). Hurricane Katrina sent a strong message about the weakness of disaster plans regarding animals. One of the most poignant images is of a small white dog named Snowball being torn from the arms of a sobbing young boy by police during the evacuation of the New Orleans Superdome (Foster, 2005). The “Snowball Effect,” as it became known, brought national awareness to the situation involving companion animals. People and animals often share intense emotional bonds. Animals can have such significant roles in people’s lives that they become part of one’s sense of self (see Irvine, 2004). Separation from and concern over the welfare of animals can add additional distress to those displaced by disasters. In this respect, the lessons of Hurricane Katrina took effect quickly: During Hurricanes Rita and Wilma, residents were instructed to take their companion animals with them. A February 2006 White House report on “The Federal Response to Hurricane Katrina: Lessons Learned” acknowledged the need to include animals in disaster plans.^x

3.5 The PETS Act

On October 6, 2006, President George W. Bush signed the Pets Evacuation and Transportation Standards Act into law. The PETS Act amends the Stafford Act to require state and local emergency management agencies to include companion and service animals in their disaster response plans. The act gives FEMA the authority to assist in the creation of disaster plans for

3. The State of Emergency Management Regarding Animals

3.1 Emergency management systems overview

In planning for emergencies, jurisdictions develop Emergency Operations Plans that consist of the following (see Heath 1999, p. 166):

- A statement outlining the approach to emergency management, including policies, plans, and procedures;
- Functional Annexes addressing specific activities within emergency management, such as fire, public information, or evacuation. EOPs can address animal issues in animal care and agricultural annexes;
- Hazard-specific appendices containing technical information and resources for use in each functional annex, as needed.

EOPs can include animal response measures through mutual aid agreements with animal care agencies. Mutual aid agreements, which include the less formal memoranda of understanding, document arrangements between two or more agencies to provide assistance. For example, the American Red Cross, the American Humane Association, the American Veterinary Medical Association, and the American Veterinary Medical Foundation have agreed to work in cooperation in disaster relief efforts. Similarly, APHIS has a memorandum of understanding with the Humane Society of the United States.

3.2 The role of the federal government

The Federal Disaster Relief Act of 1950 authorizes the president to provide federal assistance at the request of a governor. The presidential disaster declaration constitutes approval of the request. The United States lacked a system for coordinating resources until 1979, when President Jimmy Carter authorized the creation of the Federal Emergency Management Agency (FEMA). In 1988, the Robert T. Stafford Disaster Relief Act gave FEMA authority to respond to all disasters. In 2003, FEMA became a component of the Department of Homeland Security.

animals; authorizes federal funds to establish pet-friendly emergency shelters; and allows FEMA to provide aid to individuals with companion or service animals, and to the animals themselves.

The anticipated benefit of the legislation is that it will facilitate evacuations. Although such organizations as the American Society for the Prevention of Cruelty to Animals, the Humane Society of the United States, and In Defense of Animals applaud the PETS Act, some within the animal welfare community remain skeptical. Critics point out that the law is not enforceable, and because state governments have little money to implement the level of assistance called for, they likely will rely on nonprofits instead of developing their own plans.

(SAR) dogs locate disaster victims in collapsed buildings and search for remains after earthquakes, fires, and other incidents. An estimated 300 dogs worked in the response to the 2001 World Trade Center attack.

In the United States, SAR dogs and handlers receive training and certification (at the handlers' expense) through FEMA's National Urban Search and Rescue System.^{vi} There are currently 28 SAR teams in the system, sponsored by fire departments in 19 locations.

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heating, cooling, and ventilating systems causes numerous animal deaths. Animals involved in studies of infectious (and potentially zoonotic) diseases pose unique risks for handlers and rescuers.ⁱⁱⁱ

Until Hurricane Katrina, the worst event to affect animals housed in research facilities was Tropical Storm Allison in 2001. Flooding destroyed one of five vivaria at the University of Texas Health Sciences Center in Houston. Seventy-five nonhuman primates, 35 dogs, 300 rabbits, and countless rodents died.^{iv}

After Hurricane Katrina, 8,000 animals housed in Louisiana State University's Health Sciences Center died of starvation, dehydration, or drowned. Those who survived the flood were euthanized. At Tulane University's Health Sciences Center, staff began euthanizing animals on August 30, the day after the hurricane made landfall. Transgenic animals were evacuated to other facilities in early September. No animals were reported to have died on the Tulane campus as a direct result of the storm.^v

2.6 Native wildlife

Birds, fish, wildlife, and marine mammals face risks from wildfires, pest and disease outbreaks, and natural disasters. The most common disasters to affect animals are oil spills. Although there are no precise figures on the numbers of birds and animals affected, the number of annual spills puts the potential figure in the billions. Oil spills are especially damaging to birds. Oil-soaked birds frequently die from malnutrition, dehydration, or become vulnerable to predators.^{vi}

A unique challenge facing wildlife rescue organizations is how to increase public awareness without prompting the involvement of untrained but well-intentioned citizen rescuers. Birds and wild animals are usually wary of humans, and handling can add stress to injuries already suffered. Moreover, because birds and wildlife must eventually be released, improper handling can have a negative impact on their ability to survive.

2.7 Search and rescue dogs

Dogs have a growing role in post-disaster search and rescue (Otto, Franz, Kellogg, Murphy & Lauber, 2002). Trained search and rescue

4. The Roles of Organizations and Individuals in Animal Response and Recovery

4.1 National animal welfare organizations with disaster response capacities

The American Humane Association and the Humane Society of the United States have disaster response services. In addition, both organizations raise public awareness about disaster preparedness.

American Humane Association

AHA first provided disaster relief to animals during by caring for horses and mules injured in World War I. Its Animal Emergency Services response capabilities include an 82-foot tractor-trailer equipped with kennels, a veterinary facility, sleeping quarters for 15 responders, and a self-contained command center. Animal Emergency Services has 100 deployable responders and another 500 who are potentially available. A letter of understanding with the American Red Cross recognized AHA as the main contact for disaster relief involving animals.

The Humane Society of the United States

HSUS has responded to disasters since its formation in 1954, but its National Disaster Services Program was formally established in 1969. Hurricane Andrew in 1992 sparked significant development of its Disaster Animal Response Team. DART cooperates with the Red Cross and FEMA, and has memoranda of understanding with the U.S. Department of Agriculture's Animal and Plant Health Inspection Service (APHIS). The global branch of HSUS, Humane Society International, responds to disasters around the world.

4.2 Emergency animal response organizations

These nonprofit organizations specialize in disaster services for animals:

Code 3 Associates

Code 3 Associates, located in Longmont, Colorado, specializes in animal rescue operations in the United States and Canada. The base of operations is a specially designed, self-contained tractor-trailer. Ten trained leaders and 35 animal welfare and public safety professionals

make up the Essential Animal Services Team, which can respond to various incidents.

Noah's Wish

The sole mission of Noah's Wish is to care for animals during disasters. Noah's Wish provides free relief assistance at the request of emergency managers or animal welfare organizations. The organization was founded in 2002 by Terri Crisp, a rescuer with experience in over 50 disasters (see Crisp and Glen, 1997). From the group's headquarters in El Dorado Hills, California, Noah's Wish assists with evacuation, transportation, temporary sheltering, rescue, humane trapping, donation coordination, grief counseling, and other aspects of disaster relief.

United Animal Nations

Trained volunteers provide disaster relief services through the Emergency Animal Rescue Service, located in Sacramento, California. EARS focuses on temporary animal sheltering, and its 2,900 volunteers can respond throughout the United States and Canada (see Crisp, 2002).

4.3 Federal and national veterinary responders

United States Public Health Service Commissioned Corps

The Corps of the Public Health Service, led by the Surgeon General, is one of the seven uniformed services of the United States.^{xii} The veterinarians among the Corps' 6,000 officers work in agencies throughout the Department of Health and Human Services, especially the National Institutes of Health, the Centers for Disease Control and Prevention, and the Food and Drug Administration.

The role of PHS veterinarians in disasters includes veterinary care, carcass disposal, bite quarantine, and monitoring and eradication of disease outbreaks and zoonoses. In disasters, the PHS coordinates with the USDA, FEMA, the American Red Cross, and Department of Homeland Security.

Veterinary Medical Assistance Teams

Veterinary Medical Assistance Teams were established by the American Veterinary Medical Association and are funded by the American Veterinary Medical Foundation. VMATs include veterinarians,

2.3 Hidden disasters: large-scale abuse and neglect cases

"Hoarding" describes situations in which individuals have unusually large number of animals and cannot provide minimal standards of care. In nearly all cases, many animals are found dead or in extremely poor health. Hoarders often deny that they cannot care for their animals and do not acknowledge the impact of their actions on the animals and any human members of their household. The medical literature increasingly relates hoarding to obsessive compulsive disorder or other mental health problems. The behavior has serious public health implications, including the spread of zoonotic diseases. Many, if not most, hoarding situations involve high levels of environmental ammonia, requiring rescuers to use protective breathing equipment. Public health hazards, combined with animal welfare issues, can escalate a hoarding case into a disaster.

2.4 Animals in zoos and aquaria

The diversity and value of species, combined with the size of some animals and their environmental and dietary needs, present unique logistical problems for facilities with captive fish and animals. The transportation requirements alone necessitate special considerations. The risks posed to any facility depend on the hazards presented by geographical location, type of structures, and other assessment factors. The Audubon Zoo in New Orleans fared well in the floods that followed Hurricane Katrina because of its location on high ground. Zoo officials reported the deaths of only two river otters.

Captive marine species require electricity to make their water environment habitable. This is often lost during disasters. Most of the 10,000 fish in the New Orleans Aquarium of the Americas died when the city lost power and the aquarium's generator failed. Penguins and other animals were transported to other facilities.

2.5 Animals in research facilities

Animals used for research and testing include numerous species, but mice and small rodents compose the majority. Accustomed to being housed and fed, they cannot seek shelter or forage on their own. Many animals in laboratories are immuno-compromised or genetically modified and require special environmental conditions. Failure of

twenty-six reunions took place there. Six weeks after Katrina, only 207 animals were known to have been reunited with their guardians at HSUS-run operations. By December 2005, HSUS estimated over two thousand reunions. Although the number of animals who died is unknown, estimates by the LA/SPCA place it in the thousands.

Saving the lives of companion animals has implications for saving human lives. Research has shown, and Hurricane Katrina verified, that people are less likely to follow evacuation orders if they cannot take their animals with them (see Heath, Beck, Kass, & Glickman, 2001a). A September 2005 Zogby poll revealed that 49 percent of all adults, but 61 percent of companion animal guardians, would refuse an order to evacuate if they could not take their animals with them. Until Hurricane Katrina, research indicated that people who left their animals behind had weaker attachment and lower commitment to their animals (Heath, Beck, Kass, & Glickman, 2001b). Katrina is the first incident in which people were forced to leave their animals behind (see Haygood and Tyson, 2005)

People will also endanger themselves and emergency personnel by re-entering evacuated areas to retrieve their companion animals. This occurred in Weyauwega, Wisconsin, in 1996 (see Heath, Voeks, and Glickman, 2001). At 5:30 a.m. on March 4, a train derailed while passing through Weyauwega. Fifteen of the train's cars carried propane, and five caught fire. At 7:30 a.m., concerns about potential explosion prompted an evacuation order. Emergency personnel anticipated that the response would take several hours. Half of the 241 pet-owning households left their companion animals behind. However, the response took much longer than expected. After the evacuation, 40 percent of guardians returned to the evacuation zone illegally to rescue their animals. Following protocol, emergency managers prevented residents from re-entering their own homes. Four days later, the Emergency Operations Center organized an official animal rescue, using the National Guard's armored vehicles.

When the human members of a home evacuate, companion animals must also leave. They can accompany guardians to temporary housing in hotels or with friends or family, or they can be sheltered in a facility designated for animals. For health and safety reasons, American Red Cross shelters do not allow animals (except service animals).

5. Planning and Preparedness Related to Animals at the State and Local Level

5.1 State-by-state assessment of existing disaster plans for animals²¹¹

State	Has disaster plan for companion animals as of 2006?
Alabama	In development
Alaska	Yes, but minimal
Arizona	Yes
Arkansas	In revision
California	Yes
Colorado	In development
Connecticut	In development
Delaware	In development
Florida	Yes
Georgia	Yes
Hawaii	No
Idaho	In revision
Illinois	In development
Indiana	Yes
Iowa	In development
Kansas	Yes
Kentucky	No
Louisiana	Yes
Maine	Yes
Maryland	In revision
Massachusetts	In development
Michigan	No
Minnesota	Yes
Mississippi	In revision
Missouri	In development
Montana	No
Nebraska	No
Nevada	No
New Hampshire	No
New Jersey	Yes
New Mexico	Yes

New York	Yes
North Carolina	Yes
North Dakota	In revision
Ohio	In development
Oklahoma	Yes
Oregon	No
Pennsylvania	Yes
Rhode Island	Yes
South Carolina	Yes
South Dakota	No
Tennessee	Yes
Texas	In development
Utah	Yes
Vermont	Yes
Virginia	In development
Washington	Yes
West Virginia	No
Wisconsin	Yes
Wyoming	In development

5.2 The State Animal Response Team Model

State Animal Response Teams are nongovernmental, nonprofit organizations through which various stakeholders can provide a coordinated response to incidents involving animals. The goal is a public-private partnership capable of responding to any animal incident within a state. SART members may include local emergency managers, animal shelter administrators, representatives from statewide veterinary organizations, state departments of agriculture, departments of public health, kennel clubs, breeders, equestrian groups, and others.

North Carolina established the first SART following Hurricane Floyd in 1999.^{xv} The previous lack of a coordinated plan resulted in the deaths of millions of farmed and companion animals. The major animal stakeholders developed a partnership that could mobilize enough personnel with sufficient training and equipment to respond to large-scale incidents. SARTs implement the ICS and other FEMA/NIMS procedures. At the time of this writing, 12 states have active SARTs; another 11 have teams in development.

2. Animal Issues in Emergencies and Disasters

Disasters differ from emergencies in that they overwhelm the capacity for local authorities to respond. Disasters fall into two categories. *Natural disasters* include hurricanes, tornadoes, blizzards, extreme heat, flood, fire, and drought. They also include geological incidents such as earthquakes and tsunamis. *Technological disasters* include hazardous material incidents, nuclear accidents, and biological and chemical weapons. In this category, too, are hazards posed by terrorist attacks, bombings, and power blackouts. Biohazards pose risks to animals through disease outbreaks, such as avian flu or foot-and-mouth Disease. Hazards often overlap in disasters; for example, a flood may create technological risks when damaged containers of chemicals seep into groundwater. Moreover, different species or categories of animals face different risks.

2.1 Companion animal evacuation and sheltering

The American Veterinary Medical Association (AVMA, 2002) estimates that 58.3 percent of U.S. households include dogs, cats, birds, and/or horses. Moreover, six out of ten households having companion animals include multiple animals. Because the status and living conditions of horses differ somewhat from that of dogs and cats, I address horses in the section on livestock, below.

The welfare of animals left behind during a disaster can be seriously jeopardized, as Hurricane Katrina demonstrated (see also Heath, Kass, Hart, and Zompoli, 1998). Estimates by the Humane Society of the United States, Animal Rescue New Orleans, and the Louisiana SPCA indicate that more than 8,500 companion animals were rescued from the Gulf Coast region. Some estimates place the number as high as 15,000 (see Bryant, 2006; Scott, 2006). Precise figures are difficult to obtain because so many organizations were involved in the rescue efforts. According to the HSUS, over six thousand companion animals were rescued from the city of New Orleans and taken to the staging area at Lamar-Dixon in Gonzales. Only 500 were reunited with their guardians. Most were transferred to more than two hundred shelters across the country. HSUS reports that 2,385 animals were rescued in Mississippi and sheltered at the Hattiesburg staging area. One hundred

By implementing existing resources and devising new ones based on unfortunate past mistakes and oversights, it is possible to create a disaster-relief program that will bring national and local agencies together for the benefit of animals and people alike.

Because disaster response begins at the local level, County Animal Response Teams are key SART components. CARTs assess hazards, provide mitigation, and coordinate response and recovery efforts.

5.3 Public relations issues

The handling of “Spontaneous Untrained/Unwanted Volunteers,” or SUVs, poses one of the most challenging public relations issues in disasters. This has been well documented as one of the emergent phenomena that regularly occur following disasters (see Wenger, 1989; Drabek and McEntire, 2003). The convergence of people can distract and overwhelm those in charge (Scawthorn and Wenger, 1990; Auf der Heide, 1989; Wenger, 1989; Quarantelli, 1986). Due to insurance regulations and disease and injury prevention measures, untrained volunteers can be a liability. However, turning them away can pose problems for animal welfare organizations that rely on public support. It is therefore essential to recruit and train interested volunteers before a disaster strikes.

Other public relations issues can be prevented by conveying timely and accurate information to the public and the media through the public information officer.

5.4 Community and household disaster plans for animals

Community planning

Developing plans for animals in any community entails generating awareness and support from government, the public, and all animal stakeholders. Divisions of animal control and public health departments provide useful starting points. Cooperation among agencies, groups, and individuals at all levels is essential. FEMA offers online courses in community planning as part of its Animals in Disaster training program.

Household planning

Many organizations offer online resources for developing household disaster plans for animals. They recommend having identification for animals and having sufficient food, water, medication, leashes, carriers, and other supplies. Most guidelines suggest having provisions to shelter in place, or remain at home, for 72 hours. In the event of evacuation, the guidelines emphasize locating pet-friendly accommodations outside the

immediate area ahead of time. Additional information on planning, as well as details specific to horses and livestock, appear on the following web sites:

American Humane Association

<http://www.americanhumane.org/site/PageServer>

The American Veterinary Medical Association

<http://www.avma.org/disaster/default.asp>

The Humane Society of the United States

http://www.hsus.org/hsus_field/hsus_disaster_center/

1. Animals in Disasters

Executive Summary

Domestic animals are integral elements of daily life in America. Approximately 60 percent of U.S. households include dogs and cats as companion animals. Billions of farmed animals (often referred to as livestock) are bred within an agriculture industry whose revenues exceed \$100 billion annually and employ thousands of people. Service animals perform complex roles in improving the quality of life for people with various disabilities, and both police dogs and search and rescue dogs routinely save human lives. In addition to being used as resources, animals have intrinsic value.

Rescuing animals from natural or human-caused disasters has both practical and moral dimensions. Any incident that poses a threat to large numbers of people is likely to put animals at risk also. The large numbers of individuals involved coupled with the logistical difficulties inherent in emergency situations makes the need for coordinated and well-planned disaster relief a considerable concern.

In 2005, Hurricane Katrina brought public attention to the plight of companion animals abandoned during the evacuation of the Gulf Coast. Effective evacuation of humans cannot occur without incorporating their animal companions. However, other types of animals face risks and other events pose threats as well. Animals raised for food are uniquely at risk in large-scale disease outbreaks, such as avian flu, anthrax, and foot-and-mouth disease. In addition, animals can suffer in human-caused disasters, such as large-scale hoarding cases. Birds and marine wildlife suffer and die from oil spills and other sources of pollution.

This paper summarizes and synthesizes the most up-to-date information about disaster response for animals in the United States. Section Two reviews the risks different types of animals face. Section Three outlines the existing response system and discusses current legislation on behalf of animals. Section Four provides an overview of organizations directly involved in animal rescue and care following disasters. Section Five provides state-by-state information and offers planning recommendations. A list of references and key readings is also provided.

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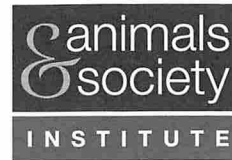
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