

National Alliance of State Animal and Agricultural Emergency Programs (NASAAEP)
Current Best Practices in Animal Emergency Management

Household Pet Evacuation and Transportation





This page intentionally left blank.



Preface

The evolution of disaster response over the last decade was the catalyst for revising animal emergency management practices. The United States Department of Agriculture's (USDA) Animal and Plant Health Inspection Service Animal Care funded a cooperative agreement with the University of Kentucky.

This agreement was to collaborate with the National Alliance of State Animal and Agriculture Emergency Programs (NASAAEP), the National Animal Rescue and Sheltering Coalition (NARSC), the American Veterinary Medical Association (AVMA), and other key stakeholders to update, consolidate, and create animal emergency management best practices.

The 2023 NASAAEP Current Best Practices in Animal Emergency Management documents are the result of extensive work by subject matter experts (SMEs) over a 24-month period. Document topics and content development were guided by the Best Practices Working Group (BPWG) Steering Committee and subjected to a rigorous external peer review process. The documents include:

- Incident Command and Coordination
- Planning and Resource Management
- Community Engagement and Outreach
- Animal Search and Rescue
- Disaster Veterinary Medical Response
- Decontamination
- Household Pet Evacuation and Transportation
- Equine Evacuation and Transportation
- Mass Care and Sheltering

NOTE: Links to external resources are denoted by underlined text.

The core planning team gratefully acknowledges the significant contributions of everyone who provided time, expertise, and resources for the development and review of these documents.

Core Planning Team

- **Kevin Dennison** – *USDA Animal and Plant Health Inspection Service (APHIS) Animal Care*
- **Andrea Higdon** – *University of Kentucky Martin-Gatton College of Agriculture, Food and Environment*
- **Melissa Morgan** – *University of Kentucky Martin-Gatton College of Agriculture, Food and Environment*
- **Kandice Williams** – *University of Kentucky Martin-Gatton College of Agriculture, Food and Environment*

Household Pet Evacuation and Transportation Working Group

- **Suzanne Brevelle, Co-Chair** – *Louisiana State Animal Response Team*
- **Tim Perciful, Co-Chair** – *American Humane*
- **Renee Poirrier, DVM, Co-Chair** – *Louisiana State Animal Response Team*
- **John and Deb Fox** – *Specialists in Animal Technique Rescue*
- **Heather Kitchen** – *Spokane County Emergency Management*
- **Rebecca (Gimenez) Husted, PhD** – *Educator, Facilitator, Consultant*
- **Karen S. Walsh** – *ASPCA*

Steering Committee

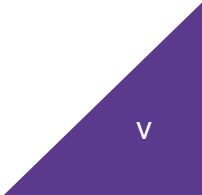
- **Minden Buswell** – *Washington State Department of Agriculture*
- **Josh Cary** – *American Humane*
- **Monty Dozier** – *Texas A&M AgriLife Extension Service*
- **Sarah Egan** – *Federal Emergency Management Agency*
- **Warren J. Hess** – *American Veterinary Medical Association*
- **Tim Perciful** – *American Humane*
- **Wanda Wilson-Egbe** – *Administration for Strategic Preparedness and Response (ASPR), National Veterinary Response Team (NVRT)*
- **Ashley Zielinski** – *Zoo and Aquarium All Hazards Partnership*

Table of Contents

Preface	ii
Core Planning Team	ii
Household Pet Evacuation and Transportation Working Group	iii
Steering Committee	iii
Table of Contents	iv
Introduction	1
Evacuation Planning	3
Public Messaging	5
Pre-Event Public Messaging	5
Evacuation Event Public Messaging	6
Post Evacuation Public Messaging	7
Collocated, Cohabitated, and Stand-Alone Facilities	9
Assisted Evacuation	9
Separation of People and Household Pets	9
Service Animals	10
Developing an Evacuation Plan for Household Pets	11
Define Roles and Responsibilities	11
Develop an Animal Evacuation Planning Committee	11
Identify Embarkation/Collection Points Within Jurisdiction	13
Identify Locations for Collocated, Cohabitated, and Standalone Shelters	14
Develop a Household Pet Registration Program	14
Develop a Return Process	14
Pet Evacuation Planning Considerations	15
Acceptable Transportation Methods	15
Special Planning Considerations	15
Modes of Transportation	17
Other Considerations for Alternative-Use Transports	17
Best Practices for Transporting Animals	17
Alternative Transports	30
References	37
Appendix A: Acronyms, Key Terms, and Definitions	A-1



Acronyms	A-1
Key Terms and Definitions	A-3
<i>Appendix B: Resources</i>	<i>B-1</i>



Introduction

According to a study conducted in 2006, there are approximately 45 million household pets in the United States (AVMA, 2018). Household pets are often considered part of the family and the bond between humans and animals can reach a point where a family is reluctant to be separated from their household pet in times of emergency.


Recent disasters have demonstrated that people may not evacuate if they cannot take their household pets and service animals with them. People may become upset if they do not receive assurances that they and their household pets will be collocated or cohabitated when seeking shelter. Those who are forced to evacuate without their household pets may attempt to re-enter the evacuated area and rescue their household pets before it is safe to do so.

In either case, this places a greater burden on the first responders that are tasked with the safety of people within the impacted area. Therefore, the need to be able to evacuate household pets and service animals is paramount and the ideal situation would be one where people and their household pets are evacuated together.

The responsibility to safely evacuate household pets and service animals lies mainly with the owner. Regardless of the type or number of animals, the owner needs to have a plan in place to evacuate and shelter their household pets and large animals. While most people will likely be able to evacuate with their household pets, some of the population will not have the resources or capability to do so. Emergency management planners must consider this population to ensure that they and their household pets and service animals will be included in emergency evacuation plans.

The Evacuation and Transportation Best Practices Working Group was tasked by the National Alliance of State Animal and Agricultural Emergency Programs (NASAAEP) to develop a document for emergency planners and animal response groups that identified best practices associated with the evacuation and transportation of animals.

The working group reviewed existing State and local evacuation plans, met with recognized subject matter experts, and collaborated with other groups and agencies to develop the following best practices. For the purpose of FEMA Public Assistance reimbursement eligibility, household pets is defined as *“A domesticated pet, such as a dog, cat, bird, rabbit, rodent, or turtle that is traditionally kept in the home for pleasure rather than for commercial purposes and can travel in commercial carriers and be housed in temporary facilities. Household pets do not include reptiles (with the exception of turtles), amphibians, fish, insects/arachnids, farm animals (including horses), and animals kept for racing purposes.”*



It is recommended that each jurisdiction develop their own definition of pets and animals to ensure proper transportation and evacuation resources are available.

The working group recognizes that, in addition to household pets, service animals also need to stay with their owners. For this document, it is assumed that emergency planners will include service animals in their evacuation, sheltering, and transportation plans. The Department of Justice recently amended its regulation implementing Title II rule of the Americans with Disabilities Act (ADA, 2011). Included in those revisions was a change in the definition of a service animal.

Under the ADA, a service animal is defined as a dog that has been trained to do work or perform tasks for an individual with a disability. The dog must be trained to take a specific action to assist the person with a disability.

The regulation states that other animals, whether wild or domestic, do not qualify as service animals. Dogs that are not trained to perform tasks that mitigate the effects of a disability, including dogs that are used purely for emotional support, are not service animals. The regulation also clarifies that individuals with mental illness, a history of seizures, or Post Traumatic Stress Disorder, among other non-physical disabilities, who use service animals that are trained to perform a specific task are protected by the ADA. The regulations also permit the use of trained miniature horses as guide animals, subject to certain limitations.

Cohabitated and colocated shelters allow people and their pets to be housed near each other to minimize the separation of people and their pets, and to decrease the resources needed to evacuate and transport both. Stand-alone shelters provide total care for those pets whose owners are unable to provide their care.

It is the responsibility of the emergency planner to consider the merits of each transportation type, and operational protocol and arrange for an appropriate means of transportation in advance of any event. With any transportation of large numbers of animals in an emergency, there is a potential risk of animal injury or death. No matter which method of transportation is chosen, the three critical factors to consider are ventilation, climate control, and the ability to monitor animals during transport.

Evacuation Planning

Evacuation planning focuses on maximizing the number of people evacuated from a dangerous area, preferably before any incident. Orderly evacuation of household pets concurrent with human evacuation could decrease the owners' resistance to evacuate or abandon an animal before or during an event. Evacuating people with their household pets will eliminate the motive to return to an unsafe incident site to rescue animals. Thus, planning for animal evacuation promotes public safety during incident response and recovery.

It is very important to have an evacuation plan for animals such as horses, livestock, research animals, and exhibition animals, which, as already noted, are not included in the definition of FEMA Public Assistance definition of household pets. Owners of animals not defined by the jurisdiction are encouraged to create a contingency plan for their animals; jurisdictions with any of these animals are, in turn, encouraged to engage these stakeholders in developing contingency plans. Refer to the *NASAAEP 2023 Current Best Practices in Animal Emergency Management Equine* document for guidance regarding the evacuation and transportation of equids.

Best Practice

Plan to include public information that encourages people to include their household pets and service animals in their family evacuation plans. Plan to provide collocated or cohabitated shelters where owners can be sheltered near their pets and can care for them.

Plan to provide evacuation transportation for people and their pets to collocated or cohabitated shelters. Plan to provide convenience transportation for people with pets.



This page intentionally left blank.

Public Messaging

Public messaging at all stages of an evacuation should include planning for a family evacuation that includes their household pets and service animals.

Pre-Event Public Messaging

Household pet owners with transport and sheltering resources should be encouraged to prepare a comprehensive family evacuation plan that includes their household pets and service animals. Household pet owners who have transportation resources but do not have sheltering resources should be given a list of pet-friendly hotels and boarding facilities in sheltering communities or be directed to collocated or cohabitated shelters.

Household pet owners that have neither transport nor sheltering resources should be identified in advance and directed to local pre-determined sites where they can be picked up and transported to collocated, cohabitated shelters or stand-alone shelters when appropriate. Pre-event public information should include which species are defined as household pets for the jurisdiction so household pet owners with non-traditional pets know they must make alternate evacuation plans.


Best Practice

Pre- identify pet owners that have neither transport nor sheltering resources. Plan and prepare to direct them to local pre- determined sites where they can be picked up and transported to collocated or cohabitated shelters or if needed stand-alone shelters.

For example, in New Orleans, residents needing transportation assistance are asked to pre-register their family including listing their pets either on the internet or by phone. Before Hurricane Gustav in 2008, there were very few people who pre-registered themselves and their pets in the New Orleans City Assisted Evacuation Plan (CAEP). By July 2009, over 70% of the estimated 30,000 people who may need evacuation assistance had pre-registered, including over 2,000 pets.

Pre-event public information should include which species are defined as household pets for the jurisdiction so pet owners with non-traditional pets know they must make alternate plans.

All pet owners should be encouraged to prepare an emergency evacuation kit with supplies to last a minimum of five to seven days for their household pets and service animals that includes documentation of vaccinations, especially rabies; a list, as well as a supply, of the pet's medications; a supply of the pet's food; and a pet collar that has the pet ID tag with owner's name and contact information and current rabies tag.



Household pet owners should have a transport carrier for their household pet that is small enough to be put in a vehicle and a sheltering carrier big enough for the household pet to stand up in and turn around.

Encourage residents to have a plan that includes all of their animals including household pets and service animals.

Household pet owners should also be encouraged to permanently identify their household pet with a microchip and register the household pet with a national database. Microchipping is the most widely accepted form of permanent identification for household pets. Identifying household pets with microchips requires a scanning device.

Most microchip companies provide tags that include the microchip number and the company's toll-free number, providing an additional method of identification if a scanner is not available. Encourage household pet owners to permanently identify their household pets with a microchip and register the household pet to the owner.

Evacuation Event Public Messaging

Public messaging should be a coordinated, consistent message about the locations of collocated, cohabitated, and stand-alone household pet shelters. Throughout the evacuation event, public messaging should encourage people to evacuate with their household pets and service animals.

Coordination between all local, state, tribal, and federal agencies to present the same message is essential. Household pet owners who do not have transportation or sheltering resources should be directed to pre-determined sites where they can be picked up and transported to collocated shelters.

Pre-event public information should include which species are defined as household pets for the jurisdiction so household pet owners with non-traditional household pets know they must make alternate evacuation plans.

Best Practice

Continue to provide information about sheltering options for household pet owners including pet-friendly hotels, collocated and cohabitated shelters, and encourage people to bring their household pets with them.

Continue to publicize which species are included as household pets for the jurisdiction to ensure residents are aware.

Post Evacuation Public Messaging

Post-evacuation public messaging should inform household pet owners of the process that will be used for retrieving household pets left behind. Communicating with household pet owners about the mechanisms in place to safely retrieve household pets left behind will enhance public as well as first responder safety. Household pet owners may put themselves in danger, along with responders who might have to rescue them, by returning to unsafe areas to retrieve their household pets.

Additional safety messaging should include that animal retrieval will only be conducted by agencies with jurisdictional responsibility. Determine when it will be safe for an evacuated household pet owner with pets remaining in their home to return to get their household pet.

If owners evacuate without their household pets and it is unsafe for them to retrieve them, provide a mechanism to register them and get permission (signed release) for later entry onto their property to rescue or care for their household pets. Communicating with household pet owners and giving them information will help keep everyone safe. For example, in the wildfires in San Diego County in 2003 and 2007, numerous people were away from their homes at the time of the fires and were prevented from entering the evacuation areas by law enforcement. Owners were directed to contact the local animal control agency which would dispatch an animal control officer to the owner's residence to rescue the pets. The animal control officer would arrange to meet with the owner at a roadblock or assembly area to return the pet to the owner. Nonetheless, some people still ran the roadblocks or found other roads that were not barricaded and entered the evacuation area. These people endangered their own lives as well as the first responders who were called to rescue them.

Best Practice

Communicate with household pet owners on procedures concerning household pets and service animals left behind.



This page intentionally left blank.

Collocated, Cohabitated, and Stand-Alone Facilities

Animal boarding facilities and pet-friendly hotels should be identified in sheltering communities and a list of these facilities should be maintained by the agency with jurisdiction. This list should be updated annually.

As with human shelters, collocated and cohabitated owner-household pet shelters including stand-alone shelters should be identified in sheltering communities as an option for people who evacuate with their household pets.

One of the main challenges in encouraging people with household pets to evacuate is the limited number of sites accepting both people and household pets. Having an adequate number of collocated and or cohabitated shelters with equipment and staffing and informing the public about these shelters will encourage people to evacuate.

Collocated household pet shelters may not be immediately adjacent to the human population shelter. Convenient transportation between the human and household pet shelters may need to be arranged.

Best Practice

Identify multiple sites where people and household pets can be sheltered together either in collocated or cohabitated shelters.

Assisted Evacuation

For people who do not have a method of transportation out of the evacuation area, develop a plan that will address the transportation needs of the community, and their household pets and service animals. Providing transportation for people and their household pets will enable more people to evacuate and get out of harm's way and thus prevent people from trying to return to unsafe areas after an event.

Best Practice

Plan to address all transportation needs starting with evacuation and including convenience transportation between human and household pet shelters, if not collocated or cohabitated.

Separation of People and Household Pets

Separation of household pets and owners should be avoided. However, human resource needs will need to be prioritized in challenging incidents. Service animals should not be separated from their owners. Keeping people and household pets together decreases the person's and the pet's stress and is less labor-intensive.

Experiences from previous Louisiana evacuations demonstrated that limited resources to transport people may make it necessary to provide separate transport for larger household pets that cannot sit on the lap or fit in a carrier under the seat of an owner.

During Hurricane Gustav, large pets were separated from their owners at the local parish collection sites. Each pet was identified with a unique animal ID that linked the pet to the owner. Large pets were then placed on pet transport trucks to be transported separately from their owners. Approximately 42% of the total pets evacuated were large pets transported in this manner.

Household pets of the medical special needs population may not be allowed in shelters that house the medical special needs human population and it may be impractical to set up colocated household pet shelters near every human medical special needs shelter. Household pets may have to be separated from their owners and cared for by shelter workers in a stand-alone shelter.

In Louisiana, one prison has been identified as a stand-alone pet shelter that can fully care for the pets of the medical special needs population and any other human population unable to accompany their household pet. Inmates are trained to care for pets along with veterinary support.

Best Practice

Prepare for the household pets of the medical special needs population and other household pets separated from owners. Limit separation of people and household pets and service animals.

Service Animals

Service animals by law are allowed to accompany their owner on public transportation and in public facilities. Responders at all levels should be aware of the laws governing service animals and should not separate service animals from their owners. If responders are unsure if an animal is a service animal, two questions for responders are suggested:

- Is the animal required because of a disability?
- What tasks or services has the animal been trained to perform?

Best Practice

Educate responders at all levels about service animals.

Developing an Evacuation Plan for Household Pets

Define Roles and Responsibilities

At the local, state, tribal, and federal levels, identify the entity responsible for household pet issues. The responsible entity at the local level should be familiar with the jurisdiction's laws on animals, animal ownership, animal bites, and dangerous and aggressive animals.

Most importantly, include the entity responsible for household pet issues in all phases of planning, training, and exercising for human evacuations. Successful household pet evacuation is accomplished when both human and animal response planning is integrated.

First and foremost, the evacuation, sheltering, and protection of animals is the responsibility of the owner. In most cases, local animal control has jurisdictional authority for household pets in non-emergency times and in many cases will be designated as the local authority for household pets during an evacuation or emergency.

At the state level, in many cases, the state Department of Agriculture, the state veterinarian's office, or the board of animal health has been identified as a supporting agency for when local communities are overwhelmed. At the federal level, FEMA has the overall responsibility for supporting the states in pet issues and the USDA Animal Care provides subject matter expertise.

Responsibilities that should be assigned include:

- Which agency declares an emergency or disaster and initiates an evacuation?
- Which agency or agencies are responsible for public messaging for household pet owners?

Develop an Animal Evacuation Planning Committee

Ideally, an animal evacuation planning committee should include emergency management, the agency with jurisdiction over animals and can include members with expertise in the following:

- Animal welfare
- Veterinary medicine
- Transportation specialists
- Emergency services

Estimate the number of household pets within the community and the number of those household pets that may need assistance with evacuation and or sheltering.

Analyze the human population and determine:

- The number of people and household pets and service animals expected to evacuate on their own without assistance from local and state governments.
- The number of people and household pets that will need assistance with sheltering.
- The number of people and household pets that will need evacuation and transportation assistance as well as sheltering.

Best Practice:

Identify the responsible entity for household pet evacuation at each jurisdictional level – local, state, tribal, and federal.

Various resources including AVMA demographics, local animal control estimations, local surveys, and special needs surveys, can be used to develop an estimation of the pet population in the area that needs evacuation and or sheltering assistance. Pre-registration of that population would facilitate an effective evacuation and transportation process.

Since enabling people with household pets to evacuate is a relatively new concept there is limited historical data. Historical data from previous evacuations and disasters may help determine the number of people needing assistance in evacuation. However, this assumes that people fit within the normal demographics of household pet ownership. It does not account for hoarders, businesses, or other animal-related industries.

In Louisiana, animal planners have used the AVMA’s animal ownership formulas to estimate the number of pets associated with a population of people. Animal planners used this formula to plan for a coastal evacuation for Hurricane Gustav.

This formula overestimated the number of pets requiring evacuation and sheltering assistance by 90%. A little over 37,000 people needed evacuation assistance for Hurricane Gustav and 12,000 animals were expected to be associated with this population of people and also need assistance. Only 1,200 pets accompanied their owners and required evacuation and sheltering assistance. Other STTL jurisdictions may differ in the percentage of people and animals needing assistance which emphasizes the importance of assessing the history of animal emergency response in each jurisdiction.

Identify locations of animal businesses, including animal shelters, humane organizations, veterinary offices, boarding kennels, breeders, grooming facilities, human hospitals, nursing hospitals, assisted-living facilities, schools, animal testing facilities, or other animal-related entities. Encourage these facilities to have an evacuation plan in the event of an emergency. Consider a local or state ordinance that requires animal businesses to have an animal evacuation plan.

PETS ACT: Louisiana-LA RS 29:726

Require animal shelters, humane societies, veterinary offices, boarding kennels, breeders, grooming facilities, hospitals, schools, animal testing facilities, and any other businesses or not-for-profit agencies that normally house household pets or service animals to create evacuation plans for such animals consistent with the provisions of this Paragraph.

Such plans shall be made available to the public upon request and shall be filed annually with the Louisiana Department of Agriculture and Forestry, the office of animal health and food safety, and their respective parish office of homeland security and emergency preparedness.

These entities should be identified according to the name of the facility, mailing address, physical address, owner's name and mailing address, manager's name, facility phone and fax as well as other emergency numbers, types of facility, types of animals at the facility, how the animals are identified, how the animals are transported out of emergencies, destination of evacuated animals and how they are sheltered.

Requesting this type of information annually encourages these animal-related entities to formulate and maintain up-to-date evacuation plans. Additionally, those in leadership positions have updated information to answer questions if the need arises.

Identify Embarkation/Collection Points Within Jurisdiction

Emergency planners must take into consideration the following: adequate parking, traffic flow, easy access for large vehicles, convenient area for loading vehicles, weather-protected areas, security, and staffing including a veterinarian, animal intake area, and animal care and/or decontamination area.

Identify points in the jurisdiction where people and household pets will be picked up and taken either to local receiving shelters, if the evacuation is from a localized event, or to a designated collection point or embarkation point to be registered and transported out of the area and possibly across county or state lines if the event is regional in scope.

Identify Locations for Collocated, Cohabitated, and Standalone Shelters

Identify multiple facilities within each jurisdiction that can be used as collocated, cohabitated including stand-alone household pet shelters. These facilities should be identified and, depending upon the nature of the emergency, publicized so people know there is a place for their pets if they evacuate.

For example, in San Diego County, the local animal control has numerous pre-approved sheltering locations but does not announce the locations until the wildfire threat has been assessed.

Develop a Household Pet Registration Program

Develop a household pet registration system for household pets that is integrated with human registration. Whenever people are separated from their household pets a system of identifying the household pet as owned and linking the household pet to the owner should be used to ensure that the household pet is reunited with the owner.

The household pet registration section, if possible, can be set up in conjunction with human registration. In many cases, jurisdictions have found it beneficial to register household pets first as they come into the registration center.

Some jurisdictions have found it useful to separate household pet and non-pet owners at registration to avoid conflicts, which will decrease the chance of pet allergy problems in non-pet owners and will facilitate transportation to collocated or cohabitated and stand-alone household pet shelters.

Develop a Return Process

A plan to return people and household pets and service animals to their point of origin should be developed and implemented when emergency management deems the area safe.

Pet Evacuation Planning Considerations

In planning for the evacuation process, consider the following:

- Pre-stage adequate resources/supplies at the embarkation point, including a supply of household pet carriers for owners who do not bring their household pets in a carrier.
- Plan to have a veterinarian at the embarkation or collection point.
- Identify a local veterinary facility willing to accept household pets if they become ill at the embarkation point.
- Identify veterinarians along the evacuation route willing to accept household pets if they need medical attention during evacuation.
- Plan to have a veterinarian at the receiving shelter when animals arrive.
- Educate and prepare first responders to assist people who own household pets.

Acceptable Transportation Methods

Determine the method of acceptable transportation for the entire evacuation process, which may include short and long hauls. Mass transit vehicles used to transport people can effectively be used to transport people and their household pets and service animals, resulting in less chance for people to become separated from their pets.

Make sure the human transportation agreements specify that household pets and service animals can accompany their owners on the vehicle during evacuation. Ensure that your evacuation plan includes a return plan that ensures that all household pet owners and household pets and service animals are returned to their point of origin or provided shelter within the jurisdiction.

Special Planning Considerations

When preparing an evacuation/transportation plan, consider the following circumstances:

- Multiple household pet households
- Animal-related business (e.g., boarding facilities and clinics that may require assistance)
- Service animals
- Vaccination requirements
- Aggressive animals
- Human bite cases
- Non-traditional and exotic pets
- Non-English-speaking households
- Owners with medical special needs and/or any other population that cannot accompany their household pet

-
- Abandoned household pets
 - Household pets with medical special needs
 - Veterinary medical emergencies during evacuations
 - Deaths during evacuations
 - Loose household pets
 - Lost household pets
 - Injury to household pet during evacuation

Modes of Transportation

Many potential modes of transportation exist for the evacuation of animals, ranging from the cars of private citizens to specialized transports. Consider inspection of maintenance records and reliability of vehicles before use. Plan to practice the transport protocols with community partners to ensure smooth execution of emergency operations.

The vehicles most used in large-scale transportation operations are:

- Purpose-built animal transports
- Climate-controlled commercial trailer
- Climate-controlled trailers
- Climate-controlled cargo vans
- Climate-controlled RV or Bus
- Animal control units (climate-controlled preferred)
- Aircraft (charter flights)
- Public transportation and commercial planes
- Equine transport trailers (open-air)
- Livestock Trailer (open air)

Other Considerations for Alternative-Use Transports

- Transport refrigeration units
- Personal vehicles driven by vehicle owners (check with your local emergency management agency for possible liability issues)
- Farm/agriculture vehicles
- Box trucks

No mode of transportation guarantees animal health and safety and even the best transport vehicle will only be as good as its operators and established operational protocols.

Best Practices for Transporting Animals

1. Requires pre-planning at local level for numbers of animals that may need transport to ensure safe transport of animals, and viability of cost in the emergency management plan.
2. Secure any transportation management contracts prior to the incident if possible. Some agencies and/or organizations may be able to assist with their vehicles rather than hiring a transport company. These agreements should be put in place prior to the incident.
3. Have transporter provide specifics on vehicles including size, configuration, capacity, built-in kennels or removable transport crates, ability to sanitize

between loads, available generators, animal monitoring capability (remote/cameras), climate control, water sources, exterior lighting, sleep compartment, etc.

4. Rigid plastic airline pet crates are the suggested animal containment for transport vehicles without built-in units.
5. To determine what type of licensing and regulations apply to your vehicle always check with STT and the federal Department of Transportation
6. Predetermine general routes and ensure that this is sent to all needed parties.
7. Investigate any limitations on the transport of animals in local jurisdictions and within jurisdictions on the pre-determined transport route.
8. When possible, identify loading and off-loading sites that offer loading docks or other areas suitable for loading and unloading.
9. Assign a dedicated and experienced team to oversee animal loading, care, inventory, and paperwork. This may require two separate teams: one for loading and one for unloading at a different location and/or time.
10. Provide transport groups with handheld two-way radios so that they can communicate within the incident command structure (ICS).
11. Establish a two- or three-deep contact information list for drivers, senders, and receivers.
12. Animals with special needs may need additional monitoring.
13. Safely secure the animal crates (e.g., load bars, ratchet or tarp straps, e-track, floor D rings)
14. Perform safety checks of vehicles before transport and at regularly prescribed intervals during operation.
15. Perform safety checks to ensure that crates are secured properly before and during the trip.
16. Have contact information for emergency repair services in case the vehicle breaks down.
17. Have contact information, address, and hours of operation for veterinary services and how many animals they can support at one time, along the projected route.
18. Provide emergency food, water, and supplies in case of breakdown or extended trips.
19. Be aware of routing limits including bridge heights, weights, weather conditions, etc. Trucking GPS may be good to use and knowing the limitations of the vehicle/trailer.
20. Ensure that the vehicle and supplies are cleaned and disinfected between use. Items or supplies that cannot be cleaned and disinfected should be limited to one-time use.
21. Consider security and escort for the transports.

The following strengths and weaknesses are based on collective experience and consultation with subject matter experts but weather, time, animal species/breed, terrain, airflow, climate control, temperature monitoring, accessibility, and vehicle operation, among other variables, can affect vehicle effectiveness.

The single most important issue facing transporters is the environmental conditions during transport. Adequate airflow, climate control, temperature, and air quality monitoring are critical features when considering long-range animal transport options.

	LEGEND		A-ADVANTAGE		D-DISADVANTAGE								
	Cost	Pre-Planning/Contract	Licensing/Regulations	Availability	Capacity	Limitations of Vehicle Size	Driver/Support Person Required	Ventilation	Climate Controlled	Temperature Control	Monitoring	Communications	Cleaning/Disinfecting
Purpose Built Animal Transport Vehicles													
Climate Controlled Commercial Animal Hauler	D	D	D	D	A	D	D	A	A	A	A	A	A
Climate Controlled Trailer	A	A	A	A	A	A	A	A	D	D	A	A	A
Climate Controlled Cargo Van	A	A	A	A	A	A	A	D	D	D	D	A	D
Climate Controlled Bus	A	A	A	A	A	A	A	A	A	A	D	A	D
Animal Control Unit	A	A	A	D	D	A	A	A	D	D	D	A	A
Climate Controlled Box Truck	A	A	A	D	A	A	A	D	D	D	D	A	D
Charter Flights	D	D	D	D	A	D	D	A	A	A	A	A	D
Public Transportation	A	A	A	D	A	A	D	A	A	A	A	A	D
ALTERNATIVE USE *OTHER CONSIDERATIONS													
Personally Operated Vehicles	A	A	A	A	D	A	A	A	A	A	A	A	D
Transport Refrigeration Units	D	D	D	D	A	D	D	D	D	D	D	A	D
Farm/ Livestock Vehicles	A	D	D	D	A	D	D	A	D	D	D	A	D
Box Vans	A	A	A	A	A	A	A	D	D	D	D	A	D

Purpose-Built Animal Transport Vehicles

These vehicles are custom-built for the transport of animals and the design should include disinfectable surfaces, removable enclosures (or a plan to remove all animals quickly in case of a road emergency), and the ability to securely fasten all equipment and animal housing. National non-governmental agencies, local/state animal rescue, and for-profit groups have a variety of custom-built vehicles.

They can maintain a consistent environment with regulated temperature control and ventilation. Given their relatively large hauling capacity and the safety features of an automated system for climate control, they are a model that should be considered for the evacuation of large numbers of animals.

Climate-Controlled Commercial Animal Hauler

In many of these vehicles, ventilation is provided through intake fans at the front of the trailer (usually on the ceiling) and exhaust fans in the floor area at the back of the trailer. These trailers can range in size from 20 to 53 feet and typically are 8 feet in width. Many of these custom-built units use a gooseneck hitch system that allows the tractors to be used for other purposes when disconnected.

Advantages

1. Many companies design and build these custom units.
2. Ventilation is designed specifically for animal transport with appropriately sized intake and exhaust fans.
3. Units should be designed to provide monitoring (built-in or portable) and alarms to advise the driver if temperature or carbon dioxide reaches dangerous levels.
4. Depending on the size of the trailer and the configuration of kennels, relatively large numbers of animals may be safely and quickly moved.
5. In most cases, purpose-built vehicles typically have lower loading heights and drop-down rear doors that can be used as ramps. This design can make loading and unloading animals easier and safer.
6. A tractor can be used as a rescue vehicle when not towing a trailer.
7. Depending on the unit it may be cost effective for larger loads.
8. Typically it has a side door that provides easier access and fewer variations for the internal temperature of the vehicle.
9. These units are often staffed with experienced animal welfare workers who will be able to assist in the loading and care of animals during transport.

Disadvantages

1. A Commercial Driver's License (CDL) may be required.
 - a. Check with current DOT requirements and the Federal Motor Carrier Safety Administration.
2. Units that are not large enough to require any class of CDL may require drivers with a Department of Transportation Medical card, depending on jurisdictional requirements.

Recommendations

1. Requires pre-planning at the local level for numbers of animals that may need transport to ensure safe transport of animals and viability of cost in the emergency management plan.
2. Secure a transportation management contract before the incident.
3. Have the transporter provide specifics on vehicles including size, configuration, capacity, built-in kennels or removable transport crates, ability to sanitize

between loads, available generators, animal monitoring capability (remote/cameras), climate control, water sources, exterior lighting, sleep compartment, etc.

4. To determine what type of licensing and regulations apply to your vehicle always check with STT and the federal Department of Transportation.
5. When possible, identify loading and off-loading sites that offer loading docks suitable for ramp- style loading.
6. Assign a dedicated, experienced team to oversee animal loading, care, and inventory.
7. Provide transport groups with handheld two-way radios so that they can communicate within the incident command structure (ICS).
8. Establish a two- or three-deep contact information list for drivers, senders, and receivers.
9. Be aware of the need for safely securing the kennels with load bars, ratchet or tarp straps, e-tracks, floor D rings, etc.
10. Perform safety checks of vehicles before transport and at regularly prescribed intervals during operation.
11. Perform safety checks to ensure that crates are secured properly before and during the trip.
12. Have contact information for emergency repair services in case the vehicle breaks down.
13. Have contact information for veterinary services and how many animals they can support at one time, along the projected route.
14. Provide emergency food and water supplies.
15. Be aware of routing limits including bridge heights, weights, weather conditions, etc.
16. Ensure vehicles have highway GPS devices.

Climate-Controlled Trailer

These vehicles are typically operated by local, state, and/or national animal welfare groups. The pictured unit from LSART is self-contained and has radio and satellite communication systems as well as video and temperature monitoring. The trailer has no built-in units and can be reconfigured for many uses. It can transport 30 to 40 animals depending on the



Photo Courtesy: Louisiana State Animal Response Team

configuration. Units are typically custom-built and may vary in configurations and features.

The advantage of having an open cargo trailer is versatile and adaptable. Most of these vehicles come with multiple air conditioning units, heaters, generators, interior and exterior lighting, drop-down ramps, and side-entry doors. They can be pulled easily with a one-ton vehicle and generally utilize a gooseneck hitch system.

Advantages

1. Many companies design and build these custom units.
2. Pull vehicle can be used as a tow/rescue vehicle when not towing trailer.
3. Generally, well-ventilated and temperature-controlled.
4. Generally easier to access difficult areas.
5. Generally multi-purpose, easier to configure cargo bay for different sized species and/or crates.
6. In most cases, purpose-built vehicles typically have lower loading heights and drop-down rear doors that can be used as ramps. This design can make loading and unloading animals easier and safer.
7. Typically have side doors that provide easier access and temperature control.

Disadvantages

1. Vehicles may or may not come with personnel experienced in animal handling.

Recommendations

1. To determine what type of licensing and regulations apply to your vehicle always check with STT and the federal Department of Transportation.
2. Provide transport groups with handheld two-way radios so that they can communicate within the incident command structure (ICS).
3. Determine the availability of vehicles from other agencies/jurisdictions before the incident.
4. Provide transport groups with handheld two-way radios so that they can communicate within the incident command structure (ICS).
5. Establish a two- or three-deep contact information list for drivers, senders, and receivers.
6. Have the transporter provide specifics on vehicles including size, configuration, capacity, built-in kennels or removable transport crates, ability to sanitize between loads, available generators, animal monitoring capability (remote/cameras), climate control, water sources, exterior lighting, etc.
7. Be aware of the potential need for load bars, straps, etc.
8. Pre-plan at the local level for the number of animals to ensure cost-effectiveness.

9. Secure a transportation management contract before the incident.
10. Perform safety checks of vehicles before and during operation.
11. Have contact information for emergency repair services in case the vehicle breaks down.
12. Have contact information for veterinary services along the projected route.
13. Provide emergency food and water supplies.
14. Perform safety checks to ensure that crates are secured properly before and during the trip.
15. When possible, identify loading and off-loading sites that offer loading docks suitable for ramp-style loading.
16. Have a dedicated team oversee animal loading, care, and inventory.
17. Check ingress and egress routing and bridge heights to ensure vehicles will be able to access intake and export sites.
18. May want to consider and escort for the transports.

Climate-Controlled Cargo Vans

These vehicles are standard cargo vans or multi-passenger vans with the seating removed. Size will vary depending on the amount of cargo space or passenger room. The most common dimensions for the cargo area interior are 108" x 67" x 53".

The climate control systems for the drivers of the vehicle are rarely adequate for the animals housed in the cargo area. These vans should be fitted with supplemental climate control and temperature monitoring for the rear of the vehicle. This mode of transportation has been used extensively for emergency transportation as cargo vans are readily available, easy to drive, and, when safely loaded can provide an appropriate environment for emergency transport.

They are ideal for smaller species/crates but not ideal for double, or triple-stacking which reduces airflow. Loose crates in the back of a cargo van that does not have a bulkhead create a hazard to the drivers as they can become projectiles in an accident. The van shown above was the type of vehicle used following the Deepwater Horizon oil spill for transporting birds. In that case, the number of animals needing transport was small, and medium-to-large crates were used, making the cargo van the preferred, cost-effective vehicle.

Advantages

1. Readily available in most larger communities.
2. Easy to drive and does not require any special license.
3. Driver/passenger can with a remote thermometer easily monitor temperature and animals.

-
4. Ideal for small loads and typically “comfortable” for longer hauls.
 5. Cost-effective for small loads
 6. Easier to access most areas and generally not affected by height and length restrictions.

Disadvantages

1. Can only carry a limited number of animals.
2. Driver exposed to animals.
3. Do not have communications capabilities.
4. May be challenging to safely secure animals.
5. May have to remove seats to increase cargo size.

Recommendations

1. Recommended for transport of animals with special needs that need to be monitored.
2. Provide transport groups with handheld two-way radios so that they can communicate within the incident command structure (ICS).
3. Establish a two- or three-deep contact information list for drivers, senders, and receivers.
4. Be aware of the potential need for safely securing the kennels with load bars, ratchet or tarp straps, e-track, floor D rings, etc.
5. Requires pre-planning at the local level for numbers of animals that may need transport to ensure safe transport of animals and viability of cost in the emergency management plan-effectiveness.
6. Perform safety checks of vehicles before and during operation.
7. Have contact information for emergency repair services in case the vehicle breaks down.
8. Have contact information for veterinary services along the projected route.
9. Provide emergency food and water supplies.
10. Perform safety checks to ensure that crates are secured properly before and during the trip.
11. Assign a dedicated team to oversee animal loading, care, and inventory.
12. Whenever possible, thoroughly clean inside the bay before hauling animals.

Climate-Controlled Animal Control Unit

Animal control units are typically utilized by animal control agencies or humane societies. These vehicles come in a variety of styles and sizes, ranging from fully outfitted vehicles to vans with either built-in or temporary caging. For this document, pick-ups with or without a canopy and caging in the bed are not considered “animal control units.”



San Diego Co. Animal Services

Capacity for these units will range from 4 to 8 animals and storage bays will be ventilated and may come with climate control. The vehicles are typically on a 1/2T frame but may be available in 3/4T and 4WD. Many of these vehicles are outfitted with emergency lights, sirens, and communication equipment.

In many cases, they are part of local government and thereby highly recognizable as an emergency vehicle. Some animal control units/teams may be available for state-to-state mutual aid through the Emergency Management Assistance Compact.

Advantages

1. Usually available locally.
2. Immediately accessible.
3. May be available through mutual aid or intergovernmental agreements.
4. Recognized within a jurisdiction and easily seen as an emergency vehicle outside the jurisdiction.
5. Typically equipped with emergency lights.
6. Normally comes with an Animal Control Officer and animal control equipment.
7. Ideal for small numbers of animals and short-distance trips.
8. For small numbers, more economical than trailered units.
9. Animal cages may be climate-controlled.
10. Most units have communication capabilities.
11. Cost is often borne by the local jurisdiction.
12. May be able to pull a trailer.
13. Better accessibility than trailered units and typically not restricted on any roadways.

Disadvantages

1. Can only transport a small number of animals. For small animals, multiple crates can be stored in each bay.

-
2. May not be climate-controlled and inappropriate for extreme weather and long hauls.
 3. Typically, cannot monitor conditions or animals in the animal cages. Some units may come equipped with sound monitoring.
 4. May not be available in the affected community due to involvement in the response efforts.
 5. Communications equipment will have designated frequencies that might not be compatible outside their jurisdiction.
 6. In most cases, animals will need to be picked up and loaded into bays which may be challenging with large and/or fractious animals. Some vehicles will come with loading ramps.

Recommendations

1. Establish mutual aid agreements in advance for the provision of vehicles and personnel.
2. Determine the availability of vehicles from other agencies/jurisdictions before the incident.
3. Provide transport groups with handheld radios so that they can communicate directly with emergency services.
4. Establish a two- or three-deep contact information list for drivers, senders, and receivers.
5. Have the transporter provide specifics on vehicles including size, configuration, capacity, monitoring capability, exterior lighting, temperature control, etc.
6. Require pre-planning at the local level for numbers of animals to ensure cost-effectiveness.
7. Have the Safety Officer perform safety checks of vehicles before and during operation.
8. Have contact information for emergency repair services in case the vehicle breaks down.
9. Have contact information for veterinary services along the projected route.
10. Provide emergency food and water supplies.
11. Have a dedicated team assigned to oversee animal loading, care, and inventory. Due to the height of the bays, care should be taken when loading and off-loading animals.

Climate-Controlled Box Trucks

Purpose-built climate-controlled box trucks can be utilized for animal transport. Box trucks are typical rental vans commonly used to move equipment, furniture, or supplies, and should never be used for live animal movement. Mass mortality incidents have occurred from transporting animals in unventilated compartments.

Charter Flights

Transport for pets via air is possible through airplane charters typically utilized for moving large cargo. Aircraft vary in size, capacity, shape of cabin, access for load/unload, and pressurized/non-pressurized cabins. Typically, a determination of the capacity of an aircraft is done as a “by weight” calculation. Volume is almost always a constraint.

The use of a chartered aircraft can be a reasonable way to move unowned, homeless pets out of crisis so that community animal welfare professionals can focus on the needs of their constituents and displaced pets. Airplane charter should be done by professionals familiar with the large-scale animal movement and not solely with an aircraft charter company.

Considerations

1. Efficiently move, on average, a larger number of animals out of harm’s way, and perhaps longer distances than ground transport and international movements.
2. Opens opportunities for support around or across the country for homeless animal placement.
3. Could potentially move in critically needed supplies on inbound flights, while the outbound flight with pets on board can free up space in community animal shelters.
4. Speed of transport- reducing stress.
5. Not suitable for birds, rabbits, or pets with special needs that require consistent monitoring.
6. During load/unload, there are periods with limited to no air exchange so the temperature on the plane should be remotely monitored during load.
7. In flight, depending on the aircraft, animals will not be able to be individually monitored.
8. Can be cost-prohibitive depending on the number of animals moved and the destination.
9. Requires a relationship or contractual agreement with an airplane charter company and/or a professional animal welfare transport organization.
10. Will require IATA approved animal transport crates that are in good condition for travel and have been disinfected, if necessary, and assembled appropriately.
11. Will require knowledge of and adherence to USDA Animal Welfare Act regulations.
12. Specialized equipment may be needed for loading/unloading - scaffolding, forklifts, etc.
13. Seek assistance from organizations that routinely provide these services.

-
14. Will require other modes of ground transport to get animals to the airport. Ensure these are available and that they can support the number of animals that will be moved.
 15. Requires pre-planning at the local level for numbers of animals to ensure cost-effectiveness.

Public Transportation

Public transportation includes a wide range of vehicles including local school and metropolitan buses, long-distance buses, planes, and trains. Several jurisdictions list these modes of transport in their emergency plans as they are generally easy to access, can hold large numbers of animals, and may allow animals to travel with their owners.

The primary considerations for determining which of these modes would best fit a community's needs are configuration and loading. Public transportation is designed to hold large numbers of seated humans and is not generally configured in a way to handle crated animals. Doorways may provide limited access and aisle ways may offer challenges for moving large crates.

Bench seats typically are not conducive for strapping down crates. Some jurisdictions allow animals to board a vehicle with their owner which works reasonably well as long as the animals are properly secured. It is not recommended to load animals in commercial vehicles tethered by their leash. Unexpected movement can cause the dog to be thrown off the bench seat and hung up by its leash.

Commercial passenger planes are typically not cost-effective or designed to carry large numbers of pets. In a few cases, following Hurricane Katrina, flights were dedicated to moving animals, including some large dogs in seats, with approximately 125 animals on each flight. These flights were expensive and labor-intensive to coordinate and load, but the short flight time can dramatically reduce a cross-country trip.

In general, public transportation vehicles have effective environmental and ventilation features. The exception might be some school buses which may rely on opening windows for ventilation during hot weather.

Advantages

1. Readily available in most jurisdictions depending upon transportation type.
2. Recognizable in the jurisdiction.
3. May be climate-controlled.
4. Convenient for people and animals to travel together.
5. Can move large numbers of animals.
6. Easy to monitor climate and animals.

7. Comes with an experienced driver.
8. May have a local communications system.

Disadvantages

1. Due to the priority of evacuating people, public transportation may not be available.
2. School buses may not be climate-controlled and thus not suitable for hot climates and/or long hauls (range, seat construction/arrangement).
3. It is difficult to load large crates through the doorways of most buses and airplanes.
4. Difficult to secure animal crates in seats.
5. Concerns over allergies may preclude animals from being transported with people.
6. Vehicles may be privately owned and not cost-effective (commercial buses, airplanes, trains).
7. Planes and trains are limited to rail routes or flight paths and runways which will require another mode of transportation for loading and off-loading.
8. Requires additional planning/logistics.
9. May be cost-ineffective (planes, trains).
10. Buses may be restricted in access due to their length and/or height.
11. Diesel fuel may be difficult to find in some communities.

Recommendations

1. Investigate the local availability of transportation types and any limitations regarding the transport of animals before the incident.
2. Only licensed, qualified drivers should be permitted to operate vehicles.
3. Establish a two- or three-deep contact information list for drivers, senders, and receivers.
4. Provide transport groups with handheld two-way radios so that they can communicate directly with emergency services.
5. Have the transporter provide specifics on vehicles including size, configuration, capacity, built-in kennels or removable transport crates, ability to sanitize between loads, available generators, animal monitoring capability (remote/cameras), climate control, water sources, exterior lighting, etc.
6. Be aware of the potential need for safely securing the kennels with load bars, ratchet or tarp straps, e-track, floor D rings, etc.
7. Requires pre-planning at the local level for numbers of animals that may need transport to ensure safe transport of animals and viability of cost in the emergency management plan-effectiveness.
8. Secure a transportation management contract before the incident.

-
9. Perform safety checks of vehicles before and during operation.
 10. Have contact information for emergency repair services in case the vehicle breaks down.
 11. Have contact information for veterinary services along the projected route.
 12. Provide emergency food and water supplies.
 13. Perform safety checks to ensure that crates are secured properly before and during the trip.
 14. When possible, identify loading and off-loading sites that are conducive to the mode of transportation.
 15. Assign a dedicated team to oversee animal loading, care, and inventory.
 16. Check ingress and egress routing and bridge heights and weight limits to ensure vehicles will be able to access intake and export sites (buses).

Alternative Transports

The alternative transport mechanisms listed in this section are not best practices, but in some circumstances, these methods may be the only option. Alternative transports are not recommended and are provided for awareness only.

Personally Operated Vehicles

Personal vehicles are sometimes used to transport animals in the climate-controlled cabin of the vehicle. Personal vehicles should only be used as a last resort given the limited capacity and inability to separate animals from drivers.

Advantages

1. Readily available and usually comes with a driver.
2. Easy to drive.
3. Usually, climate controlled.
4. Easy to monitor animals.
5. No special license is required beyond a driver's license.
6. The driver is generally aware of maintenance records and vehicle limitations.
7. Easy access to most areas.
8. Generally, fuel-efficient.

Disadvantages

1. May not be adequately insured.
2. Proof of ownership may be lacking.
3. Difficult to secure transport crates.
4. May not be climate-controlled.
5. Inability to transport large numbers of animals.
6. Drivers are exposed to animals that might not be their pets during transport.

7. Difficult to decontaminate

Recommendations

1. Require proof of current driver's license, registration, and insurance before use
2. Recommended for transport of a small number of animals with special needs that need to be monitored regularly
3. Provide transport groups with handheld two-way radios so that they can communicate within the incident command structure (ICS)
4. Establish two or three-deep contact information between drivers senders and receivers
5. Perform safety checks of vehicles before and during operation
6. Have contact information for emergency repair service in case the vehicle breaks down
7. Have contact information for veterinary services along the projected route
8. Provide emergency food and water supplies

Transport Refrigeration Units

Commonly referred to as “reefers,” transport refrigeration units (TRU) are commonly used to haul perishable freight at specific temperatures. A refrigeration unit at the front of the trailer circulates the air in the trailer. Cooling units are designed to maintain the entire cargo area at a constant temperature. Trailers are available to cool at a wide range of temperatures, from slightly cool for transporting items like produce, to freezer units for keeping items frozen through transport.

Refrigerated trailers range from 28 to 53 feet in length and 96 to 102 inches in width. The most common units are 48-53' long. TRUs have been used extensively over the years in the state of Louisiana for short hauls of animals. The current practice is to stack two rows of large crates along each side of the trailer and secure them to the existing structure so that they cannot slide while in transit. The state of Louisiana uses a protocol to stop the vehicle every two hours to ventilate the trailer for thirty minutes, as animals produce gases, moisture, and heat.

Most TRUs have front and rear vents of varying size which will assist in bringing in fresh air and removing harmful air, but they are not effective in maintaining ventilation with large loads. At rest, such as in traffic jams, the compartment does not significantly ventilate. Typically, it is more difficult to haul animals than produce as the cooling and ventilation systems work overtime to deal with respired gases and require the drivers to have a level of focus, training, and expertise to transport safely.

Advantages

-
1. Available from commercial sources.
 2. Ability to move a large number of animals, primarily dogs and cats (average 90 to 100 dogs).
 3. Cost-effective for large numbers of animals.
 4. Multi-purpose and easy to configure.
 5. Ability to monitor the temperature inside the trailer from the tractor.
 6. Effective for large numbers of animals in hot weather

Disadvantages

1. Only suitable for dogs and cats.
2. Not suitable for birds, rabbits, or pets with special needs that require consistent monitoring.
3. Inadequate ventilation is a concern and can be partially mitigated by loading only two stacks of crates and stopping the vehicle for thirty minutes every two hours to ventilate the trailer and check the animals.
4. Extended time to fill the trailer with animals may require the closing of one or both doors to moderate temperature.
5. May have inadequate airflow.
6. When idling, two motors will be running, decreasing efficiency, and increasing potential carbon monoxide exposure for animals.
7. Inability to monitor air quality in the trailer from within the cab.
8. Not cost-effective for small loads.
9. Requires a Commercial Driver's License to operate.
10. Can be difficult to safely secure crates without the correct equipment and/or tie-downs.
11. May be difficult to clean and disinfect trailers with wooden floors.
12. No direct access from the cab to the trailer.
13. May not be able to access remote areas due to height and length restrictions.
14. Will require loading ramps or docks or multiple people to lift crates due to the height of the trailer.
15. May not have communication capabilities that are interoperable with emergency services.
16. Heated units are not readily available.
17. Noise from idling motors and cooling systems may not be suitable for some neighborhoods.
18. Professional transport companies may not have any experience handling animals or be able to inspect animals while en route.


While funding these Best Practices Working Group documents, USDA APHIS Animal Care does not endorse or recommend the use of non-ventilated refrigerated trailers for animal transportation.

Recommendations

1. Request trailers with aluminum floors for easier cleaning/disinfecting.
2. Be aware of the potential need for load bars, straps, etc.
3. Requires pre-planning at the local level for numbers of animals to ensure cost-effectiveness.
4. Secure a transportation management contract before the incident.
5. In cold climates, provide bedding/blankets to keep animals warm.
6. Ventilate the trailer and check animals every two hours – more frequently if transporting special- needs pets.
7. In warm climates, close doors every 15 minutes to stabilize the temperature in the trailer.
8. Perform safety checks of vehicles before and during operation.
9. Have contact information for emergency repair services in case the vehicle breaks down.
10. Have contact information for veterinary services along the projected route.
11. Establish two or three-deep contact information between drivers and senders and receivers.
12. Provide emergency food and water supplies.
13. Perform safety checks to ensure that crates are secured properly before and during the trip.
14. When possible, identify loading and off-loading sites that offer loading docks suitable for the height of the trailer or sites where ramps will be usable.
15. When possible, provide a handheld radio for the driver to communicate with emergency services.
16. Have a dedicated team assigned to oversee animal loading, care, and inventory.
17. Have the transporter provide specifics on vehicles including size, configuration, capacity, refrigeration settings, exterior lighting, etc.
18. Check ingress and egress routing and bridge heights and weight limits to ensure vehicles will be able to access intake and export sites.
19. May want to consider security and escort for the transports.

Farm/Livestock Vehicles

Farm/livestock vehicles are used to transport various types of livestock and can range from anything as small as a one-horse trailer to large livestock haulers. Commercial cattle transporters range from 48-53 ft. in length by 8.5 ft. in width. Other livestock (hogs, pigs) may be transported in 7 ft. X 32-40 ft. gooseneck trailers. Typically, beds



are open. They are not climate-controlled though some come with sprinkler systems for summer transport. Ventilation is generally adequate and provided the vehicle is moving, conditions in the back are tolerable in summer. Livestock trailers can be used in emergencies to carry pets in transport crates, depending on environmental conditions.

Advantages

1. Readily and immediately available.
2. Cost-effective for transporting large numbers of animals.
3. May be used for a variety of species.
4. Horse and small livestock trailers will have better ground clearance than other trailers.
5. May come with an operator experienced with livestock and other animals.
6. Most effective in temperate settings (60-70 degrees Fahrenheit).
7. Easy to load and generally easy to secure crates through tie-downs and side slots.
8. Commercial haulers can hold approximately 100 large crates if double-stacked.

Disadvantages

1. Maintenance records on vehicles may be unavailable.
2. May need to be cleaned/sanitized before use during the incident.
3. Will likely not have any climate control capabilities.
4. May lack protection from the elements.
5. Possible traumatic ride conditions could cause stress on uncrated animals.
6. May require a special vehicle to tow the trailer.
7. Some larger units may require an experienced CDL driver.
8. Many are privately owned.
9. Do not have communications capabilities.
10. Unable to monitor the conditions of the animals while driving.
11. If pets escape their primary containment crate during transport, they may be able to escape the trailer, including exiting while the trailer is at highway speed.

Recommendations

1. Investigate the local availability of transportation types and any limitations regarding the transport of animals before the incident.
2. Only licensed, qualified drivers should operate vehicles.
3. Provide transport groups with handheld two-way radios so that they can communicate within the incident command structure (ICS).
4. Establish two or three-deep contact information between drivers and senders and receivers.
5. Have the transporter provide specifics on vehicles including size, configuration, capacity, exterior/interior lighting, etc.

6. Be aware of the potential need for safely securing the kennels with load bars, ratchet or tarp straps, e-track, floor D rings, etc.
7. Requires pre-planning at the local level for numbers of animals that may need transport to ensure safe transport of animals and viability of cost in the emergency management plan-effectiveness.
8. Secure a transportation management contract before the incident.
9. Perform safety checks of vehicles before and during operation.
10. Have contact information for emergency repair services in case the vehicle breaks down.
11. Have contact information for veterinary services along the projected route.
12. Provide emergency food and water supplies.
13. Perform safety checks to ensure that crates are secured properly before and during the trip.
14. When possible, identify loading and off-loading sites that are conducive for ramp off-loading.
15. Assign a dedicated team to oversee animal loading, care, and inventory.
16. Check ingress and egress routing and bridge heights to ensure vehicles will be able to access intake and export sites.
17. When in doubt, thoroughly clean inside the bay before hauling animals.
18. Be aware of weather forecasts for the projected route.
19. Monitoring systems that provide temperature and visual capabilities.

Box Vans

Box vans are typical rental vans commonly used when people are moving from one residence to another. They come in a variety of sizes and capacities, with the most common lengths ranging from 14 to 26 feet. The interior cargo bay height typically runs between seven and eight feet. For this document, a box van is open from the driver's compartment to the cargo area whereas a box truck has a completely separated compartment. Box vans have larger compartments than cargo vans. While they do have some ventilation from the driver's compartment, they are not designed to transport live animals and should be used with caution. They have been used in the past in disaster response as a last line of defense for short hauls. This is not recommended for animals because safer modes of transportation are available.



This page intentionally left blank.

References

- ADA. (2011, March 15). *Highlights of the Final Rule to Amend the Department of Justice's Regulation Implementing Title II of the ADA*. Retrieved from: https://archive.ada.gov/regs2010/factsheets/title2_factsheet.html
- AVMA. (2018). *AVMA Pet ownership and Demographics Sourcebook*. Retrieved from: <https://www.avma.org/sites/default/files/resources/AVMA-Pet-Demographics-Executive-Summary.pdf>
- GovTrack.us. (2023). H.R. 3858 — 109th Congress: Pets Evacuation and Transportation Standards Act of 2006. Retrieved from: <https://www.govtrack.us/congress/bills/109/hr3858>



This page intentionally left blank.

Appendix A: Acronyms, Key Terms, and Definitions

Acronyms

An asterisk indicates the term has a more complete definition in the following section.

AAR	After Action Report
ACO	Animal Control Officer
ADA	Americans with Disabilities Act (defines service animals)
AHJ	Authority Having Jurisdiction
APHIS	Animal and Plant Health Inspection Service (USDA)
ASAR	Animal Search and Rescue
CART	County/Community Animal Response Team*
CBRN or CBRNE	Chemical, biological, radiological, nuclear (explosive)
CERT	Community Emergency Response Team (Citizen Corps program)
CONOPS	Concept of Operations
DHS	Department of Homeland Security
DOD	Department of Defense
DOI	Department of Interior
EIEIO	The chorus from “Old MacDonald Had a Farm”
EMA	Emergency Management Agency
EMAC	Emergency Management Assistance Compact*
EOC	Emergency Operation Center* (also termed Coordination Center)
EOP	Emergency Operations Plan (may be preceded by jurisdictional identifier)
ESF	Emergency Support Function*
ESF6	Emergency Support Function 6 (Mass Care, Emergency Assistance, Housing, and Human Services)
ESF8	Emergency Support Function 8 (Public Health and Medical Services)
ESF9	Emergency Support Function 9 (Search and Rescue, SAR)
ESF11	Emergency Support Function 11 (Agriculture and Natural Resources)
FEMA	Federal Emergency Management Agency
HAZMAT	Hazardous Materials
HHS or DHHS	Health and Human Services (U.S. Department of)
HVAC	Heating, Ventilating, and Air Conditioning
IA	Individual Assistance (FEMA)
IAP	Incident Action Plan*
IC	Incident Commander
ICC	Incident Command and Coordination

ICP	Incident Command Post
ICS	Incident Command System*
IMT	Incident Management Team*
IMAT	Incident Management Assistance Team (FEMA)
IOF	Interim Operating Facility (precursor to Joint Field Office)
IT	Information Technology
JFO	Joint Field Office (FEMA)
JIC	Joint Information Center
JIS	Joint Information System (multiple locations)
MA	Mission Assignment*
MAA	Mutual Aid Agreement
MAC Group	Multi-agency coordination group (policy level)
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
MRC	Medical Reserve Corps (a program within Citizen Corps)
NARSC	National Animal Rescue and Sheltering Coalition
NASAAEP	National Alliance of State Animal and Agricultural Emergency Programs
NDMS	National Disaster Medical System
NGO	Non-Governmental Organization
NIMS	National Incident Management System
NRCC	National Response Coordination Center
NRF	National Response Framework
NSS	National Shelter System
NVRT	National Veterinary Response Team
OSHA	Occupational Safety and Health Administration
PA	Public Assistance (FEMA)
PAPPG	Public Assistance Program and Policy Guide (FEMA)
PETS Act	Pets Evacuation and Transportation Standards Act (amendment to the Robert T. Stafford Act of 1974)
PIO	Public Information Officer
POC	Point of contact
PPE	Personal Protective Equipment
RRCC	Regional Response Coordination Center (FEMA)
RRF	Resource Request Form (FEMA)
RSF	Recovery Support Function
SAHO	State Animal Health Official
SAR	Search and Rescue
SART	State Animal/Agricultural Response Team*

SME	Subject matter expert
SOG	Standard Operating Guidelines
SOP	Standard Operation Procedures
STT	State, Tribal and Territorial
STTI	State, Tribal, Territorial and Insular
STTL	State, Tribal, Territorial and Local
THIRA	Threat and Hazard Identification and Risk Assessment
USAR or US&R	Urban Search and Rescue
USDA	United States Department of Agriculture
VOAD AND NVOAD	(National) Voluntary Organizations Active in Disasters
VERT, VRC or VMRC	Veterinary Emergency Response Team, Veterinary (Medical) Reserve Corps
Web EOC	Software platform for EOC management (used by FEMA and many other jurisdictions)
ZAHP	Zoo and Aquarium All Hazards Partnership

Key Terms and Definitions

Legal definitions of different types of animals vary across jurisdictions. To provide consistency across the Animal Emergency Management Best Practice Working Group documents, animal classifications and definitions are provided as common-use definitions.

For a specific legal definition, refer to jurisdictional definitions. These definitions are generally accepted in the US and are sourced from global, state, and/or federal guidelines. Other key terms are used in animal emergency practices. This list addresses some common terms used during emergency response.

• Animal Definitions

- **Animals:** Animals include household pets, service and assistance animals, working dogs, livestock, wildlife, exotic animals, zoo animals, research animals, and animals housed in shelters, rescue organizations, breeding facilities, and sanctuaries (source: [National Preparedness Goal](#)).
- **Assistance animals:** an assistance animal is not a pet. It is an animal that works, provides assistance, or performs tasks for the benefit of a person with a disability or provides emotional support that alleviates one or more identified symptoms or effects of a person’s disability (source: [Section 504 of the Fair Housing Act](#)).
 - Note – service animal definitions under the Americans with Disabilities Act (ADA) and assistance animal definitions under the Fair Housing

Act only differ by the exclusion of emotional support from the service animal definition.

- **Livestock:** The term livestock may have a specific definition within individual states and Federal programs. In the broadest use, including general ESF #11 use, livestock includes domestic livestock typically kept on farms and such as cattle, sheep, goats, swine, poultry, and other animals raised for food or fiber, as well as horses, donkeys, and mules. “Alternative livestock” may include wild cervids (elk, deer, etc.) as well as bison, ostrich, emu, or other wild species kept for food production. When discussing “livestock,” it is essential for all parties to work from the same definition.
- **Non-commercial livestock or “backyard” livestock:** This is another flexible term that may have a specific definition in local, State, Tribal, Territorial and/or Insular (STTI) emergency plans. In its broadest use, non-commercial livestock would include animals kept at residences for pleasure, companionship, sport (not commercial racing) or household food production which does not generate food or products intended to enter commerce.
- **Pets/Household pets:** Summarizing from the FEMA Public Assistance Policies, household pets are domesticated animals that:
 - Are traditionally kept in the home for pleasure rather than commercial purposes
 - Can travel in common carriers
 - Can be housed in temporary facilities
 - Examples are dogs, cats, birds, rabbits, rodents, hedgehogs, and turtles
 - FEMA Public Assistance excludes these species as household pets: farm animals (including horses), racing animals, reptiles (other than turtles), amphibians, fish, insects, and arachnids
 - *Note: This definition applies to expense eligibility under the FEMA Public Assistance Grant Program and in no way limits STTI, Local, and non-governmental entities from defining and managing all animal types per their own policies.*
- **Service animals:** Under the ADA, a service animal is defined as a dog that has been individually trained to do work or perform tasks for an individual with a disability. The task(s) performed by the dog must be directly related to the person's disability. In addition to the provisions about service dogs, the Department’s ADA regulations have a separate provision about miniature horses that have been individually trained to do work or perform tasks for people with disabilities (U.S. Department of Justice Civil Rights Division, 2020).

- **Working animals:** The term working animal can vary considerably within the situational context, but within an emergency management context, ESF #11 considers this group to include animals (typically dogs and horses) working in law enforcement (detection, patrol, apprehension, etc.) and animals working in search and rescue (primarily dogs used in search and recovery missions). Working dogs may include dogs used in hunting, guarding and for agriculture tasks.
- **Animal Emergency Management Annex:** A component of a jurisdictional emergency operations plan that provides information on how animals will be managed in disasters, including organizational responsibilities.
- **Biosecurity:** Measures that prevent the spread of disease to, from, or within a premises containing animals.
- **Community or County Animal Response Team (CART):** An organization developed to implement the animal elements of the jurisdictional emergency operations plan. The exact title and format vary considerably (a team of organizations, direct volunteers, etc.) The critical element is that the CART must be under the control of, or have an agreement with, the local government.
- **Coordination Center:** *FEMA EMI ICS Glossary* – A facility that is used for the coordination or agency or jurisdictional resources in support for one or more incidents.
- **Emergency Management Assistance Compact (EMAC):** EMAC is a national interstate mutual aid agreement that enables states to share resources during times of disaster. The thirteen (13) articles of the Compact sets the foundation for sharing resources from state to state that have been adopted by all 50 states, the District of Columbia, the U.S. Virgin Islands, Puerto Rico, and has been ratified by Congress (PL-104-321).
- **Emergency Operations Center (EOC):** See Coordination Center definition above.
- **Emergency Support Function (ESF) (Federal):** Some states, but not all, use ESF terminology. Some states use more than 15 ESFs and do not necessarily align with Federal ESFs.
- **Disaster Declaration:** A Disaster Declaration is a formal statement by a jurisdiction that a disaster or emergency exceeds the response and/or recovery capabilities.
- **Disaster/emergency:** An occurrence of a natural catastrophe, technological accident, or human-caused event that has resulted in severe property damage, deaths, and/or multiple injuries. Except for use in certain declarations, the terms are commonly used interchangeably.
- **Emergency manager:** The jurisdictionally appointed position that conducts analysis, planning, decision-making, and assignment of available resources to prevent/mitigate, prepare for, respond to, and recover from the effects of all hazards.

- **Emergency Operations Plan (EOP):** A document maintained by various jurisdictional levels describing the plan for responding to a wide variety of potential hazards.
- **Incident Action Plan (IAP):** *From the FEMA ICS Glossary* – An oral or written plan containing incident objectives which reflect the overall strategy for managing the incident. It may include the identification of operational resources and assignments. It may also include attachments that provide direction and important information for management of the incident during one or more operational periods.
- **Incident Command System (ICS):** *From the FEMA ICS Glossary* – A standardized on-scene emergency management construct specifically designed to provide for the adoption of an integrated organizational structure that reflects the complexity and demands of single or multiple incidents, without being hindered by jurisdictional boundaries. ICS is the combination of facilities, equipment, personnel, procedures, and communications operating within a common organizational structure, designed to aid in the management of resources during incidents. It is used for all kinds of emergencies and is applicable to small as well as large and complex incidents. ICS is used by various jurisdictions and functional agencies, both public and private, to organize field-level incident management operations.
- **ICS forms:** Nationally standardized forms used to manage or document incident response under the Incident Command System. Forms can be found on FEMA's website.
- **Incident Management Team (IMT):** The Incident Commander and appropriate Command and General Staff personnel assigned to an incident. Key IMT positions include (source: FEMA ICS Glossary):
 - **Incident Commander (IC)** – assigned by jurisdictional authorities to oversee all aspects of the incident response
 - **Command Staff:** Safety Officer (SOFR), Liaison Officer (LOFR), Public Information Officer (PIO)
 - **General Staff:** Operations Section Chief (OSC), Planning Section Chief (PSC), Logistics Section Chief (LSC) and Finance and Administration Section Chief (FASC)
- **Isolation:** Segregation of animals to prevent disease exposure or spread.
- **Mission Assignment (MA):** A work order issued by FEMA to another Federal agency directing the completion of a specific task, and citing funding, other managerial controls, and guidance. There are two general types of MAs:
 - **Federal Operations Support (FOS)**—Requested by a Federal agency to support Federal operations.
 - **Direct Federal Assistance (DFA)**—Resources requested by and provided to affected State and local jurisdictions when they lack the resources to provide specific types of disaster assistance.

-
- **Mutual aid:** emergency assistance provided from one jurisdiction or organization to a peer (local-local, state-state, NGO-NGO, etc.).
 - **Quarantine:** Isolation of animals that may have an infectious disease for a specified period to allow for testing or extended observation.
 - **Resource typing and credentialing:** Resource typing is defining and categorizing, by capability, the resources requested, deployed, and used in incidents. Resource typing definitions establish a common language and defines a resource's (for equipment, teams, and units) minimum capabilities.
 - **State Animal/Agricultural Response Team (SART):** SART organizations vary considerably in their structure, mission, and nomenclature (many don't use the SART name). In general, SART-type organizations provide a framework for State stakeholders to support the State animal emergency management plan. SART-type organizations generally are under the control of the state or have an agreement with the state.
 - **State veterinarian/animal health officials (SAHO):** The veterinary officer/official for a particular State or territory of the U.S. in charge of animal health activities (exact title varies).
 - **Zoonoses:** Disease that can be transmitted between animals and humans.



This page intentionally left blank.

Appendix B: Resources

ADA Requirements: Service Animals: <https://www.ada.gov/resources/service-animals-2010-requirements/>

American Veterinary Medical Foundation (AVMF) Saving the Whole Family Booklet: <https://ebusiness.avma.org/ProductCatalog/product.aspx?ID=140>

Louisiana State Animal Response Team Evacuating and Sheltering Manual (scroll to the bottom of the page to access the manual): <https://www.lsart.org/>

Pets Evacuation and Transportation Standards Act of 2006 (PETS Act): <https://www.congress.gov/109/plaws/publ308/PLAW-109publ308.pdf>

PETS Act FAQs: <https://www.avma.org/pets-act-faq>

Prepare Your Pets for Disasters website: <https://www.ready.gov/pets>