



## Animals in Disaster

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### Did you know?\*

- ❑ Only 57% of people report that they have readiness items set aside in their homes for use in disaster
- ❑ Just 34% of people have readiness supplies in their car
- ❑ Less than half of households have an emergency plan
- ❑ and yet...
- ❑ 42% of individuals report that they would need help during a disaster

\*2009 Citizen Corps National Survey

### Outline

- ❑ Introduction
- ❑ General “common sense” animal precautions
- ❑ Animal issues during a disaster
- ❑ Sheltering with animals
- ❑ Basic First Aid (for animals)
- ❑ Be responsible-prepare your own
- ❑ Questions....



### Why are we even discussing this?

What is all the fuss about?

- ❑ **Human Animal Bond-**
- ❑ “Mutually beneficial and dynamic relationship between people and animals influenced by behaviors that are essential to health and well being of both”



### Human Animal Bond Examples





**Pet owners feel less afraid of being a victim of crime when walking with a dog or sharing a residence with a dog. (Serpel, 1990).**

Visits with a therapy dog helps heart and lung function by **lowering pressures**, diminishing release of harmful hormones and **decreases anxiety** with hospitalized heart failure patients. (Cole, 2005)



**Pet owners have lower blood pressure. (Friedmann, 1983, Anderson 1992).**



**US Animal Statistics\*:**



- ▣ 72-77.5 m dogs
- ▣ 81.7-93.6 m cats
- ▣ 11.2-15 m birds
- ▣ 7.3-13.3 m horses
- ▣ 13.6 m reptiles
- ▣ 15.9 m sm animals
- ▣ 183 million fish (FW/SW)

\*AVMA 2007 US Pet Ownership and Demographics Sourcebook and APPA 2009-2010 National Pet Owners Survey

**US Household #s**

- ▣ 62% US households own one pet (71.4 million homes)
- ▣ Average 3.2 pets/pet owning household
- ▣ 60% consider pet to member of family
- ▣ 50% consider pet to be companion
- ▣ >60% pet owners buy presents for their pets



**Animal Handling Precautions**



**Common sense**  
Get water!

## Special equipment



- Snare pole
- Crates
- Gloves
- Muzzles
- Leashes
- ID bands
- Live traps
- Dart guns(?)

## Dogs

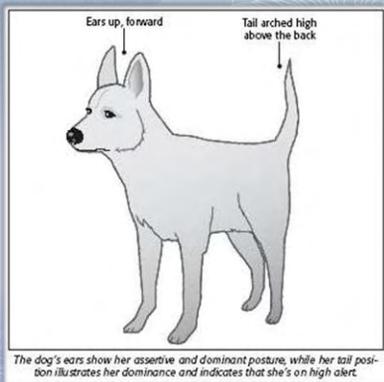
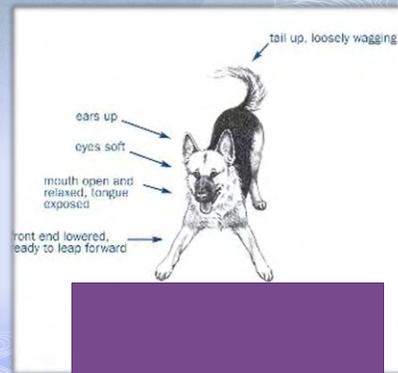


## Myth

- Wagging tail-
  - Alertness
  - Rate: slow/fast
  - Height of tail
- Nervous/Frightened dogs



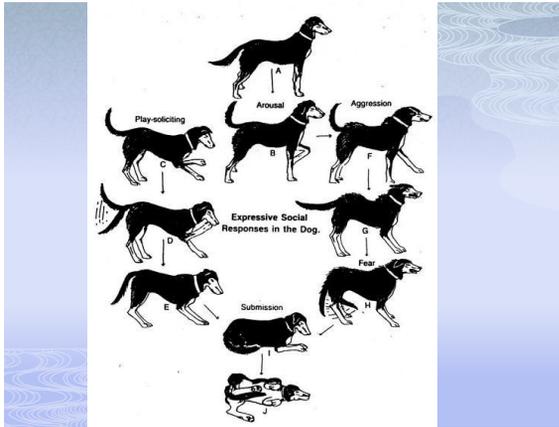
Come on Dad, I know you're not really mad at me: You're wagging your tail...



The dog's ears show her assertive and dominant posture, while her tail position illustrates her dominance and indicates that she's on high alert.



MYT, A. Revised; Baskin B. Shave; C. Poirier; D. Threlton; E. Jeffrey; Shuman F. T. Ross



## Signs of aggression

- ❑ • Barking or growling
- ❑ • Baring teeth
- ❑ • Snarling/pulling back lips
- ❑ • Hackles up
- ❑ • Stiff posture
- ❑ • Intense staring
- ❑ • Lunging
- ❑ • Snapping
- ❑ • Yawning\*
- ❑ • Flattened ears\*
- ❑ • Lowered head\*
- ❑ • Flipping/whipping head around toward anyone's hands when touched\*
- ❑ • Whale eye: showing the whites of the eyes/dilated pupils\*

## Signs of fear

- ❑ • Physically avoiding the person
- ❑ • Furtive glancing around
- ❑ • Flicking tongue
- ❑ • Cringing
- ❑ • Cowering
- ❑ • Hiding
- ❑ • Whining, pacing
- ❑ • Yawning\*
- ❑ • Flattened ears\*
- ❑ • Lowered head\*
- ❑ • Flipping/whipping head around toward anyone's hands when touched\*
- ❑ • Whale eye: showing the whites of the eyes/dilated pupils\*

## "Common Sense" guidelines\*

- ❑ Do not approach an unfamiliar dog without precautions.
- ❑ Do not run from a dog or scream.
- ❑ Remain motionless (e.g., "be still like a tree") when approached by an unfamiliar dog.
- ❑ If knocked over by a dog, roll into a ball and lie still (e.g., "be still like a log").
- ❑ Avoid direct eye contact with a dog.
- ❑ Do not disturb a dog that is sleeping, eating, or caring for puppies.
- ❑ Do not pet a dog without allowing it to see and sniff you first.
- ❑ If bitten, immediately report the bite.

\*CDC: Dog bite prevention

## To get out of a potentially aggressive situation:

- ❑ • Immediately break eye contact
- ❑ • Look to the ground
- ❑ • Lower shoulders
- ❑ • Relax arms to the side
- ❑ • Slowly and deliberately turn and move away
- ❑ • If possible, move somewhere where something is between you and the dog

### How to Use a Control Pole

**1: Easy Does It**  
Approach the dog slowly, holding the control pole loosely. Avoid thrusting it toward the dog with the collar end. Keep the pole parallel to the ground. Hold the collar end with your right hand. Use a relaxed, steady grip. Do not swing the pole. Do not use the pole to touch the dog.

**2: It's All in the Wrist**  
Hold the pole with your right hand. Keep the pole parallel to the ground. Use your wrist to guide the pole. Do not swing the pole. Do not use the pole to touch the dog.

**3: Lead by Following**  
Keep both hands on the pole. Follow the dog. Do not swing the pole. Do not use the pole to touch the dog.



## Cats



## Cat nature

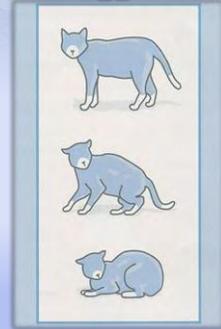
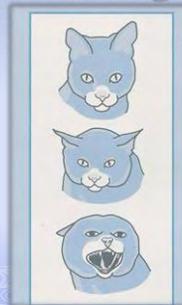
- ▢ Secretive
- ▢ Cautious
- ▢ May only see evidence of cats



## Live Traps best option



## Postural signs of fear/aggression



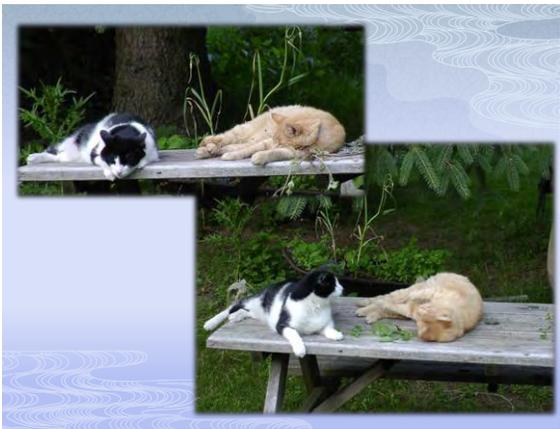
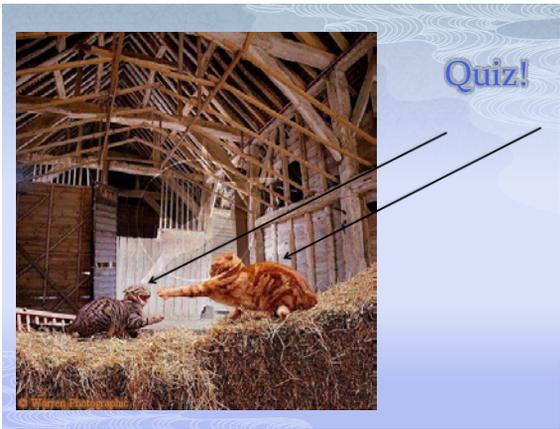
## Ways to recognize a contented cat:

- ▢ • Relaxed muscles
- ▢ • Seated quietly with ears erect, indicating that he/she is alert and carefully watching what is going on, but comfortable
- ▢ • Soft purring (Cats are known to purr if severely injured or in extreme stress. Using other body signs is an important part of determining what the cat is thinking and feeling.)
- ▢ • Washing with long, slow strokes, as opposed to short, quick strokes when a cat is nervous or stressed
- ▢ • Greeting a human with head lowered, hindquarters raised, tail held straight up, tail tip slightly bent and moving from side to side
- ▢ • Rubbing cheeks, whiskers and tail against human – scent marking
- ▢ • Winding between human's legs or jumping on lap
- ▢ • Pupils bright and normal
- ▢ • Whiskers relaxed

## Ways to recognize a frightened cat:

- ▢ • Tense muscles
- ▢ • Remaining in a frozen, fixed position while assessing the situation
- ▢ • The cat's eyes will remain fixed on what is frightening him/her
- ▢ • Dilated pupils
- ▢ • Eyes darting from side to side looking for an escape route
- ▢ • May assume a submissive body position – crouching down, ears flattened sideways, tail held low and chin drawn in
- ▢ • May roll on side with paw raised in defensive position
- ▢ • Bottle brush tail





**Handling stressed/frightened cat**

- ▣ Less is more!!!
- ▣ Move very slowly
- ▣ Put in crate/carrier ASAP



## Aggression or play?



CleanFurry (TM)

## Other Species



## Unique "pets" in our area

- ❑ Dogs/cats
- ❑ Wolves and w-hybrids
- ❑ Big cats and small wild cats
- ❑ Exotic small mammals
- ❑ Birds including chickens, penguins, parrots....
- ❑ Pigs, kangaroos, deer
- ❑ Herps-some very large monitors and snakes



- ❑ Best for experienced personnel
- ❑ Special equipment may be required
- ❑ Be aware of animals' defenses (nails, teeth, venom, etc.)
- ❑ Do not approach



## Animals Issues in Disasters



## Disaster Concerns

- Failure to evacuate
- Safety including animal bites
- Food and water safety
- Disease outbreak
  - Zoonotic disease
  - Animal disease
- Loss of local veterinary capacities
- Accidental/purposeful release of animals from homes
- Mental health impact of pet and economic animal losses



## ESF\* relevant to animals

- Animal Evacuation
- Transportation of animals and animal support materials
- Animal sheltering, feeding, water
- Animal search and rescue
- Veterinary medical care
- Animal decon
- Animal control/capture
- Animal and zoonotic disease mgmt
- Animal mortality mgmt
- Owner and animal reunion



(\*ESF #'s 11, 6, 8, 9, 14)

## ESF 11 Ag/Nat'l Resources

- Control/eradicate outbreak of highly contagious +/- economically devastating animal/human disease
- Provide safety/well being household pets during emergency response/disaster



## Safety/well being pets-ESF 11

- Animal evacuation and sheltering occur in conjunction w/ human sheltering
- Near owners when possible
- Owners are responsible for their own animals care in shelter



## ESF #6: Mass Care, Emergency Assistance, Housing & Human Svcs

- Coordination of evacuation/shelter/emergency assistance for pets and service animals beyond scope of traditional mass care services



## ESF # 8: Public Health/Medical Services

- Ensures health/safety livestock, pets, and service animals
- Ensures safety animal feed
- Ensures safety of animal therapeutics



## ESF # 9- Search and Rescue

- Integrates animal search and rescue services



## ESF #14 Long Term Recovery

- Coordinates with animal welfare, agricultural stakeholders, and service providers in long term community recovery efforts



Indonesian hotel following tsunami

## Why bother with this at all?



## Evacuation Failure:



- People will not leave their pets behind -25%
- People will attempt to rescue pets left behind -50-70%
- Decision making impaired – safety concern

How has this been addressed?

## History of the problem.....

- 1984 - Liquid sulfur spill, Ohio → traffic jams
- 1992- Hurricane Andrew, FL-pets lost/displaced
- 1994- Flooding in GA- refusal to evacuate
- 2005-Katrina -finally an understanding: **Need a system for pet evacuation**  
-44% of people who did not evacuate stayed because of their pets



Photo by Mark Wilson

## Evacuation Problems



- An estimated 600,000 pets were displaced, injured, killed as a result of Hurricane Katrina
- 134 people and numerous animals died during the evacuation process (Katrina/Rita)

## "Snowball"



## PETS Act 2006

- Pets Evacuation and Transportation Standards Act
- State and local emergency preparedness plans address needs of individual households with pets and service animals
- Authorizes FEMA to provide rescue, care, shelter, and essential needs
- Catalyst for improving/changing preparedness plans at state and local levels
- Operational during federal disaster declaration

<http://www.fema.gov/pdf/government/grant/pa/policy.pdf>

## Per PETS ACT : Emergency Plans need to address:

- Sheltering household pets and other animals
- Working animals (not specifically covered in PETS act)
- Dangerous Animals (zoo animal escapes.....)



- NO change in status of service animals (ADA Act 1990)
- Service animal ≠ therapy animal
- Legally defined
- Effective March 15, 2011-only dogs can be service animals



## Plans need to include:

- Estimate of pet numbers and species
- Evacuation/Transportation
- Facilities available
- Care of injured/sick animals
- Identification
- Abandoned/dead animal handling



Lamar Dixon Animal Shelter, La : August 2005

## Pet Animal Census

- Not feasible to count
- Use known statistics for US pet owners
- Ex 2007 AVMA demographic sourcebook-59.5% households own pet
- 2000 census data Erie County -380,873 households = 226, 619 pets!!!
- Can further break down into species
- Important to know for planning purposes



## Available Facilities?

- Veterinary hospitals
- Animal shelters
- Boarding kennels
- Barns, fairgrounds
- Pet stores??
- Prevent fight for space by planning ahead
- Close to human shelter best option



Scott Weber, VMD  
VMAT-2, Louisiana Katrina Response

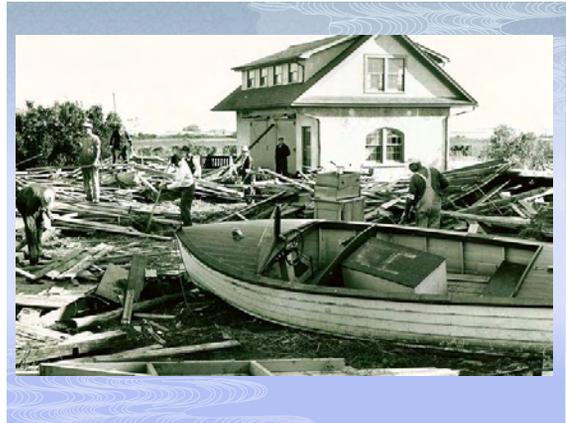
- The majority of emergency shelters physically separate humans and animals
- State and local health regulations
- Health risks to humans
- Service animals stay with owners



## Transportation of animals



- Personal responsibility for household pets
- Crate or carrier for each pet
- Train each pet with crate/carrier



## Animal shelter issues

- Identification
- Physical/temperament examination
- Health history
- Health maintenance
- Facility sanitation
- Animal safety
- Euthanasia/disposal



1938 Hurricane in NY

## Need Occupational Health/Safety Plan

- Addresses:
  - Prevention of zoonotic diseases in caretakers
  - Bite/scratch avoidance
  - Health profile caretakers
  - Safety training of caretakers



## Further training

- Understanding of animal welfare practices and procedures
- Understanding of bond between caretakers and animal patients



## CDC Guidelines for Animal Shelters

- Intake/Triage
  - Identification
  - Create health record
  - Get history
  - Health exam
  - Temperament exam
  - Housing
- Disease prevention
- Facility Mgmt



## Identification

- Microchips
- Temporary neckband
- Tattoo
- Collar tag
- Waterproof pouch on collar
- Photograph (w/owner when available)



## Animal Disease Prevention

- Parasite prevention/treatment
- Vaccination
- Isolate those with diarrheal/respiratory disease
- Reduce stress when possible (noise, location, personnel access)
- Euthanasia



## Zoonotic/Nosocomial Disease Prevention

- Vaccinations
  - Rabies
  - Leptospirosis (floods)
- Giardia
- Campylobacter
- Salmonella
- Parvovirus, panleukopenia, intestinal parasites



## Diseases encountered during Hurricane Katrina

- Heat stress/stroke
- Dehydration
- CHF
- HW disease
- Eye/skin irritation
- Skin problems
- Fractures



## Caretakers PP

- Hand washing
- Gloves
- Facemasks/shields
- Change of clothing
- Rabies vaccination series
- Immunocompromised people should not volunteer in areas with direct animal contact



## Exotic Animal Sheltering Considerations

- Reduce stress
- Temperature requirements
- Specialized equipment, food, bedding may be needed



## Avoid bites and scratches!!!



## Facility Mgmt

- Separation of animals
  - From food areas
  - Quarantine at intake
  - No mingled species
  - Different households
  - Sick from healthy
- Cleaning and Disposal
  - Waste-animal, feed....
  - Carcass storage and disposal
- Environmental security
  - Prevent wildlife access



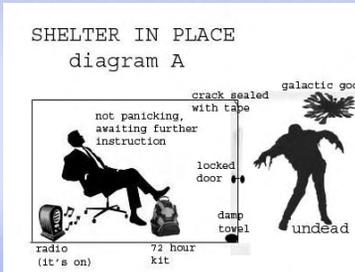
And....

**A PET SHELTER IS NOT A  
PETTING ZOO!!! LIMIT  
ACCESS-PREVENT SPREAD  
OF DISEASE**

- Why? (Human Animal Bond)
- Animal Handling Basics
- Animal Issues in Disasters
- Sheltering Animals



## Break!



## Basic First Aid



## Further resources

- Veterinarypartner.com-**FREE** book chapters
  - Enter first aid in search box
- Hands on training:
  - Red Cross Course
  - BART-Basic Animal Rescue Training (for first responders) [www.basicanimalrescuetraining.org](http://www.basicanimalrescuetraining.org)



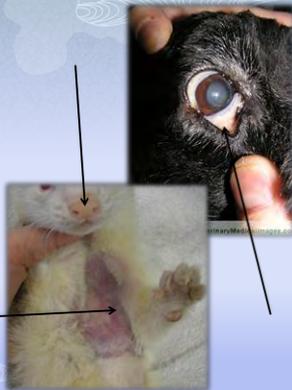
## Safety First

- Muzzles
- "Rabies" Poles
- Blankets/Towels-for restraint/warmth
- Practice safe handling techniques
- Transport to veterinary hospital ASAP



## Initial triage

- Observation-ABC
  - Airway
  - Breathing
  - Circulation/Color
- Posture
- Overall appearance



## Posture? Normal?



## Examination

- Nose
  - Moist
  - Free of discharge
- Eyes
  - Clear, no discharge
  - Pupils-appearance and response to light
  - Color surrounding tissue
- Ears
- Hair coat
  - Shiny, dry, smooth
  - Unbroken skin



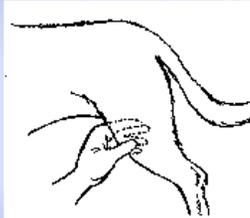
## Assess hydration

- Pull the skin over the chest or back into a tent and release it quickly
- Avoid the neck
- Observe the skin as it returns to its resting position.



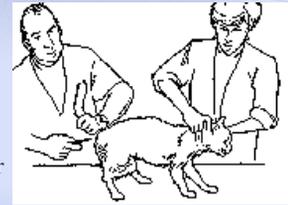
## Pulses

- Femoral artery-the groin area
- Cats: 100 to 160 breaths per minute (bpm). A relaxed cat may have a slower pulse.
- Small dogs: 90 to 130 bpm
- Medium dogs: 70 to 110 bpm
- Large/giant dogs: 60 to 100 bpm. A relaxed dog may have a slower pulse.
- Pulse is easily palpated, strong, and regular.



## Temperature

- Rectal is best
- Use two people
- Caution!
- Lubricate thermometer
- Normal 101-102.5 for dogs and cats



## Oral exam



- Gum color
- Teeth-fractured.....
- Odor??
- CRT
- Gum feel- dry, tacky, moist?
- Pain??

## Chest/Thorax

- Respiratory rate
- Respiratory noise(s)
- Respiratory effort?
- Use hands if no stethoscope
- Inducible cough?



## Abdomen

- Start just behind the ribs and gently press your hands into the abdomen, feeling for abnormalities.
- Proceed toward the rear of the body
- Tense?
- Use caution



## Prevention of problems

## Simple ideas

- Have control of pet
  - Prevent traumatic injuries
  - Prevent financial issues
- Diet/water
- Exercise regularly
  - Not right after eating
- Temperature control
- Identification
- Do not tie out!
- Preventive care
- Try not to quack on your own pet



## CPCR (Cardiopulmonary Cerebral Resuscitation)

- Be sure animal is not conscious or in a deep sleep
- Be sure there is an open airway
- Pull tongue out
- Can use finger to check airway-do not pull on hyoid bones!!!
- Check for spontaneous breathing before giving rescue breaths



## Rescue breaths

- Cover the nose with your mouth
- Blow 3-5 full breaths, stop and check for spontaneous breathing and heart beat
- Continue -
  - 20-25 bpm cats/sm dogs
  - 12-20 bpm med/lg dogs
- Apply pressure to stomach occasionally to reduce air build up



## Chest compressions

- Check airway, **then** check for pulse
- Small dogs and cats-Compress 100-150x/min
- Large/med dogs- Compress 80-100x/min
- With one person-compressions only, no rescue breaths
- Can do two breaths: 12 compressions
- Continue until regular heart rate detected



## Specific conditions

## Traumatic Injuries

- **DO NOT:**
  - Flush wound
  - Attempt to set fx or push bone back into place
  - Give any meds
- Fractures
  - Use muzzle
  - Stop bleeding-direct pressure
  - Cover open fx with clean cloth/sterile pads
  - Immobilize when possible
- Sprains/strains/dislocation can present with similar signs
- Need X-Rays to diagnose



## Impalement/penetrating injuries



- Stick, arrows, gunshot wounds, bite wounds
- Muzzle, calm animal
- **DO NOT REMOVE OBJECT-Immobilize**
- Chest wounds
- Abscesses
- Place on board/stretcher

## Shock

- Reduced circulation
- Reduced oxygen delivery
- Early signs:
  - **May be very subtle!**
  - Hyper/quiet
  - Pulse difficult to find
  - Elev HR
  - Gums normal or pale
- Later stages:
  - Pale/blue gums
  - HR/RR- N, Incr/decr
  - Weak pulse, irregular
  - Cool extremities
  - Glazed eyes
  - Mental status deterioration

## Shock First Aid

- CPR if needed
- Warm blankets
- Immobilize
- Protect fractures/injuries
- Do not give food/water
- Transport ASAP



## Heat stress/Hyperthermia

- Temp > 105 = Emergency !!!!
- Predisposing factors:
  - Obesity (>50% pets)
  - Short nosed breeds
  - Airway diseases
  - Seizure disorders



## Heat Stroke



- Can only disperse heat by:
  - Sweat glands on foot pads
  - Insulated coat
  - Panting

- Sequelae/complications
  - Seizures
  - Kidney failure
  - Respiratory failure
  - Cardiac failure
  - Coma
  - Intestinal lining sloughs
  - DIC
  - Hypoglycemia

## Heat Stroke Triage

- Move to shaded/cool environment
- Check temperature
- Wet ear flaps/paws/belly with cool moist towels
- Alcohol on foot pads
- Fan on pet
- Do not use cold or ice water
- Transport ASAP
- Do not overcool



## Personal Pet Preparedness



## Early on in a disaster

- Personal responsibility for self, family, and pets for at least 72 hours
- Plan ahead, plan for specific events
- Practice the plan



## Preparation

- Identify/consider potential hazards in your area
- Prepare for disruption of services
- Prepare for either sheltering in place or evacuating
- Prepare first aid kits
- Prepare evacuation kits for pets
- "Pets Inside" stickers





## Other factors in pet evacuation failure

- ❑ Low attachment
- ❑ Low level of commitment by owners
- ❑ Outdoor pet
- ❑ No carrier(s) for cat(s)



## Evacuation with pets

- ❑ Pet Evacuation Kit
  - See list given
  - Make a personalized health record with vaccine history including rabies, current test results (HW), microchip info, allergies
  - "Lost " pet sign with photo
  - **Proof of ownership!**-photo, etc.
  - List of emergency contacts
  - List of pet friendly shelters
  - Label, label, label
  - Pre-signed treatment authorization -w/vet and in kit



## Evacuating

- ❑ Have a prepared lists of hotels/kennels/pet friendly shelters/ friends/family
- ❑ Emergency contact info
- ❑ Emergency care for animals (personal DVM, emergency clinic close and neighboring region)
- ❑ Mark "evacuated" on home



## In case you are not home

- ❑ Designated neighbor
- ❑ List pets/species
- ❑ Instructions/location of evacuation kit for responders
- ❑ Pre-signed liability release in case of injury during evacuation
- ❑ Pre-arranged meeting place



## After the disaster

- ❑ Monitor pets for abnormal behavior (stress, fear, disorientation...)
- ❑ Allow for uninterrupted rest
- ❑ Check fence, gates, etc.
- ❑ Check area for hazards
- ❑ Evaluate response and change accordingly



## Further Resources:

- ❑ [http://www.ready.gov/america/toolkit\\_pets/index.html](http://www.ready.gov/america/toolkit_pets/index.html)
- ❑ <http://www.bt.cdc.gov/disasters/animalhealth/guidelines.asp>
- ❑ <http://www.empiresart.com/>
- ❑ <http://www.aspcapro.org/disaster-preparedness.php>
- ❑ <http://www.avma.org/disaster/default.asp>
- ❑ [www.uan.org](http://www.uan.org) (United Animal Nations)

