Animals in Disasters—Are we prepared?
Gatlinburg Tennessee
October 1, 2013
Some of the major Tennessee disasters in the past 5 years.

Macon Tornado February 2008

April 27, 28, 2011 Tornado outbreak plus

April 2011 Mississippi River Area Flooding the 6 western TN counties

April 25-28 tornado outbreak, was the largest tornado outbreak ever recorded.

April 27 had the most tornado-related fatalities in the US in one day since March 18, 1925.
Macon County Tornado
Feb. 5, 2008

![Image of tornado damage with emergency vehicles]
Macon County Tornado
Feb. 5, 2008
Macon County Tornado
Feb. 5, 2008
Outbreak of Tornadoes
April 27 & 28, 2011
Outbreak of Tornadoes
April 27 & 28, 2011
Outbreak of Tornadoes
April 27 & 28, 2011
20 ton cement walls
picked up and dropped
40,000 lbs. cement walls picked up
April 27, 2011 Tornadoes in Tennessee
The May 2010 possibly

THE WORST DISASTER IN TENNESSEE SINCE 1864
The May 1,2 2010

Nashville Video

http://www.youtube.com/watch?v=pFjaQoOdJvl
May 2010 Tennessee Flood

A weather system brought very heavy rain and severe thunderstorms plus 14 tornadoes from Saturday, May 1 through Sunday morning, May 2.
Interstate 40 connects Memphis to Nashville

Many locations along I-40 corridor across western and middle Tennessee reported in excess of 10 to 15 inches, with some locations receiving up to 20 inches according to Doppler radar estimates.
Number of counties affected by the flood:

48 of Tennessee’s counties were declared disaster areas.
My Front yard in the fall
My front yard Saturday afternoon May 1, 2010
Weekend Rainfall Totals - May 1st & 2nd, 2010
Tennessee

Source: CoCoRaHS

This map is an interpolation of actual reported values, but should be considered an estimation only.

Created by the National Weather Service Forecast Offices Nashville, Tennessee & Louisville, Kentucky

Precipitation Contours

<table>
<thead>
<tr>
<th>In Inches</th>
<th>Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.01&quot; - 2.00&quot;</td>
<td>Light Green</td>
</tr>
<tr>
<td>2.01&quot; - 4.00&quot;</td>
<td>Light Yellow</td>
</tr>
<tr>
<td>4.01&quot; - 6.00&quot;</td>
<td>Yellow</td>
</tr>
<tr>
<td>6.01&quot; - 8.00&quot;</td>
<td>Orange</td>
</tr>
<tr>
<td>8.01&quot; - 10.00&quot;</td>
<td>Red</td>
</tr>
<tr>
<td>10.01&quot; - 12.00&quot;</td>
<td>Red</td>
</tr>
<tr>
<td>12.01&quot; - 14.00&quot;</td>
<td>Red</td>
</tr>
<tr>
<td>14.01&quot; - 16.00&quot;</td>
<td>Red</td>
</tr>
<tr>
<td>16.01&quot; - 20.00&quot;</td>
<td>Red</td>
</tr>
</tbody>
</table>
A 100 year flood is an event that statistically has a 1% chance of occurring in any given year.

A 500 year flood has a .2% chance of occurring.

A 1000 year flood has a .1% chance of occurring.
Tennessee Extreme Event of May 1-2, 2010
Average Recurrence Intervals (ARI) for 48-Hour Duration

Created by Hydrometeorological Design Studies Center
Office of Hydrologic Development
National Weather Service
National Oceanic and Atmospheric Administration
Animal Care during Emergencies
The Tennessee Plan
TEMA’s Concept of Operation. (Emergency Support Functions (ESF))

ESF 1 Transportation
ESF 2 Communications
ESF 3 Infrastructure
ESF 4 Fire fighting
ESF 5 Information & Planning
ESF 6 Mass Care

ESF 7 Resource Support
ESF 8 Health & Medical Services
ESF 9 Search & Rescue
ESF 10 Environmental Response
ESF 11 Food
ESF 12 Energy

ESF 13 Law Enforcement
ESF 14 Donations & Volunteers
ESF 15 Recovery
ESF 16 Animal Housing & Care Services
Tennessee Emergency Management Plan (TEMP)

Emergency Support Function 16 (ESF 16) Care and Housing of Animals during Emergencies and Disasters

Tennessee Department of Agriculture lead agency
Tennessee Emergency Response Plan

- Emergency Support Function 16
  - Purpose: animal care.

- ESF 16 establishes procedures for coordinating local, state and non-governmental agencies response for animal care during disasters, including disease outbreaks.
Emergency Support Function 16

- Developed as an “all hazard - all animal” working document for use at the County and State level.
Each County has an ESF 16
Disaster Animal Response Teams

- County DART TEAM activation is through the local office of Emergency Management.
The Role of Emergency Support Function 16 in Nashville during the flood

- **Metro-Nashville -Davidson County**
  - ESF-16 Metro Animal Control and Housing Responsible Department/Agency

  - **Primary**-Metro Public Health-Metro Animal Care and Control

  - **Support**-Nashville Humane Association, American Red Cross, Police Department, Public Works Department, Davidson Co. Academy of Veterinary Medicine, TWRA & Ellington Agricultural Center.
The Role of DART

- Nashville Humane Association has a MOU with the Nashville chapter of the American Red Cross to assist with pet friendly shelters for pet owner evacuees in the Red Cross shelters.
- NHA is mobilized by OEM in Davidson County.
The Role of Emergency Support Function 16

- Nashville Humane Association has (2) mobile vehicles for providing emergency animal sheltering in close proximity to Red Cross Shelters.
The Role of Emergency Support Function 16

The Nashville Humane Association Facility was also activated as an Emergency Animal Shelter.
During the May 2010 Flood in Davidson County

Nashville Humane Association set up and manned two sheltering areas for ARC.

Metro Animal Care & Control transported animals from flooded areas and collected stray animals.
Brief Summary from May 2010

- Nashville Humane Association and Metro Animal Care and Control (MACC) provided shelter for 132 animals belonging to people displaced by the flood.

- They also provided food & supplies for 1037 animals.

- MACC received 218 stray animals, 70 of these animals were reunited with their owners within 3 weeks of the flood. (MACC transferred 40 shelter animals to North Shore in New York to make room for the stray animals).

- Animal Control officers brought in 77 stray animals from the flooded areas, 70 animals were claimed and returned to owners.
Brief Summary from May 2010

Nashville Humane Association and Metro Animal Care and Control (MACC) also assisted numerous other county agencies, shelters and rescue groups in flood areas of the state.
Other help during the May 2010 Flood

The American Society for the Prevention of Cruelty to Animals (ASPCA) response team helped rescue more than 70 dogs, cats, chickens and exotic birds in Dyersburg.

They were assisted by the two local humane officers and Chandra Davis (Lake Co. animal control officer and DART member).
Others helping during the flood

- Davidson County DART - Nashville Humane Association had two mobile Animal Emergency Sheltering Units at the Red Cross Shelter at Lipscomb University.

- Wilson County DART members assisted the evacuation of the New Leash On Life shelter on Saturday May 1, 2010
Williamson County

- Williamson County Extension/DART rescued horses from Brownland Farms and the Leipers Fork area.

- 200 horses boarded at the Williamson Co. Ag Center from a few hours up to one week.
Cheatham County DART provided temporary shelter for companion animals; helped several victims transport their pets as rescue boats brought them out of flooded areas. Plus helped with animal assessment after the flood.
Negative Lessons Learned

Rogue Rescue groups removed animals from the flood area. They told the owners they would transport them to NHA or Metro Animal Control.

During the flood and for three weeks after the flood, rumors were that hundreds of the flood victim’s animals were being euthanized.

Need to maximize the uses of all available resources.
Positive Lessons Learned

You can never be “to prepared” for a disaster of this magnitude. Have all MOUs in place and equipment ready.

Communications—keep everyone updated. Continue the updates after the event. We had more phone calls three weeks after the flood because rumors circulating.

If your sheltering facility has a 14 day boarding policy and you experience a disaster like a flood, extend the policy to at least 28-30 days.
Positive Lessons Learned

Have a contingency plan.

Nashville Petfinders.com was a good asset for registering found animals. Also the *Tennessean*, the local newspaper offered free classified ads for lost pets.

- Need training for swift water rescues (recommended cross training for humans and animals)
While there were casualties of both human and animal, many volunteers helped our community evacuate with their pets thus reducing the potential for more deaths.
Heifer on the roof in Bellevue
Name some reasons why there is a need for Disaster Animal Response Teams in your county?
Why is there a need for County DART in Disasters?

- Public Safety
- Risk for human health
- Abandoned animals
- Disasters are a local Event, you may not have Assistance for 72 hrs.
Why is there a need for County DART in Disasters?

Pet Evacuation and Transportation Standards Act (PETS)

- Federal PETS laws for household pet
- State Emergency Plans (TEMP)

* ESF-16

** The “DOG”

** The “CAT”

Incorporates evac, shelter & transport
Animals in Disaster: Addressing the needs of animals

**WHY THE NEED FOR DART**

**Companion Animals**

- Dogs
- Cats
- Other pets

Source: USDA Statistics Branch
Animals in Disaster: Addressing the needs of animals

Livestock as a Tennessee:

- Cattle: @ 1 million
- Meat Goat:
  - TN is #2 in the US
- Horses and all equines:
  - TN is #2 in US with 210K

Source: UT College of Vet Med
Why is there a need for County DART in Disasters?

Public Health Risk Posed by Abandoned Animals

- Injury (bites to humans)
- Spread of Infectious Disease (zoonosis)
- Number of Homeless Animals
Animals in Disaster: Zoonotic Disease

Diseases transmissible from animal to human

- Of the infectious organisms known to be pathogenic to humans, approx. 60% are zoonotic*
- Of the recent emerging and reemerging diseases, 75% have originated in animals:
  - West Nile
  - SARS
  - HPAI

*Source: CDC National Center for Zoonotic & Emerging Diseases

County DART
Animals in Disaster: Who are our community partners?

- Animal Related Business
- Industry Partners
- Animal Welfare Orgs
- Professional Orgs
- Governmental Entities
- Private Citizens
- Volunteer Groups

DART
Animals in Disaster:
Specific examples of partners

- Feed & Supply stores
- HSUS, ASPCA & AHA
- Veterinary Orgs
- Animal Control
- Wildlife Rehab
- Animal Rescue
- State & County EMA
- TN Dept. of Agriculture
- TWRA
- DART
Animals in Disaster: Coming together with partners

- Build community involvement
- Raise awareness
- Identify resources
- ID Subject matter experts
- Facilitate organization
Animals in Disaster: Resources

ReadyTN

Shelter Information
No Red Cross Shelters open in Tennessee
3 Red Cross Shelters are open nationwide

TDOT Smartway
3 Roadway Incidents Reported

National Weather Service
Tipton Flood Advisory issued January 31 at 11:00AM CST until February 11 at 2:00PM CST by NWS

DO NOT ENTER BIOSECURITY IN EFFECT

Alert Emergency Recover
Animals in Disaster: Promote Pet Owner Preparedness

• Pre-Plan at home
  • Supplies, records, communication
  • Documents, where to stay
  • Contact Info, picture of self + pet

• Pet “Fly-Away Kit”
  • 3-day supply of everything (food, water, meds, etc.)
  • Leash, collar and harness
  • Crate or carrier w/ food pans and litter
  • Medical records, shots, extra pictures

**TAG**
Animals in Disaster: Organizing Community Partners

The DART Concept:
Disaster Animal Response Team

• Coordination with County EMA
• Integration into overall ICS and response structure
• Trained and TN-Credentialed volunteers

County DART
Animals in Disaster: DART

- County DART linked to State DART framework (T-DART)
- comparable to SART in about 20 states
- coordinated county and state plans
- participation in exercises and drills
- eventually link DARTs through state-wide communications

County DART
Animals in Disaster: DART Goals

- Decrease threat to health & safety of humans & animals
- Minimize economic impact of emergencies
- Prevent/Decrease spread of disease during an animal emergency
- Minimize unnecessary loss of animals
- Provide for humane treatment
- Minimize separation of animal and owner
- Arrange for shelter during recovery

County DART
Animals in Disaster: Potential DART Members

- Animal Control
- Dog Breed Clubs
- County Extension
- Vet-Technicians
- Wildlife Re-hab
- Farmers
- Volunteers
- Emergency Services
- 4-H Groups
- Humane Associations
- Horse Assoc
- Cattle Assoc
- Livestock Groups
- Veterinarians

County DART
Animals in Disaster:
Help the Partnership Thrive

- Hold frequent meetings
- Provide training and outreach events
- Conduct table-tops, drills and full-scale exercises
- Involve partners in planning
- Recognize their participation, input and contributions

County DART
Animals in Disaster: Available Training

- TN Credentialing
- FEMA Independent Study
  - ICS courses 100, 200, 700, 800
  - IS-10A; Animals in Disaster Part A
  - IS-10B; Animals in Disaster Part B
  - IS-111; Livestock in Disaster
- American Red Cross
- Humane Society of the US
- American Humane

County DART
Animals in Disaster: Addressing the needs of animals

Formula to estimate # of animals in a community:

Multiply total # of household by a factor:

- $0.361 \times \text{total} = \text{number of dog-owning households} = \frac{1}{3}$
- $0.316 \times \text{total} = \text{number of cat-owning households} = \frac{1}{3}$
- $0.017 \times \text{total} = \text{number of horse-owners} = \frac{1}{50}$

Source: University of Albany
School of Public Health
DART
Animals in Disaster: How You Can Help

- Be personally prepared at home or the farm
- Volunteer with your DART
- Become credentialed by the state
- Have equipment, or facilities available in case of an emergency
- Donate your time and support

County DART
Animals in Disaster: Resources

- http://www.tennessee.gov/agriculture/regulate/animals/dart
- http://emergencypreparedness.cce.cornell.edu/
- www.SARTUSA.org
- www.redcross.org
- www.aspca.org
- www.hsus.org
- http://www.utextension.utk.edu/
- http://wemadart.googlepages.com/

County DART
Animals in Disaster: Questions?

- For DART information:
- E-mail: animal.health@tn.gov
- Doug Balthaser, DVM
- Tennessee Department of Agriculture
- Animal Health
- P.O. Box 40627, 436 Hogan Rd. Nashville, TN
- Office Phone: (615) 837-5120
- Cell Phone: (931) 698-8703
Disaster Animal Response Teams

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Tennessee Department of Agriculture

- ESF 4 - Firefighting - Forestry
- ESF 9 – Search and Rescue
- ESF 10 – Environmental Response
- ESF 11 – Food
- ESF 12 – Energy
- ESF 13 – Law Enforcement
- ESF 14 – Donations and Volunteers
- ESF 15 – Recovery
- ESF 16 – Animal Care and Housing
## The Role of Emergency Support Function 16

<table>
<thead>
<tr>
<th>Estimated Population of Animals in Davidson County</th>
<th>Estimated Households that Own Pets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dogs 160,707</td>
<td>Dogs 94,594</td>
</tr>
<tr>
<td>Cats 181,304</td>
<td>Cats 82,388</td>
</tr>
<tr>
<td>Birds 24,920</td>
<td>Birds 9,917</td>
</tr>
</tbody>
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