



Colorado Animal Emergency Response Training

1. Colorado Veterinary Medical Reserve Corps (COVMRC)
2. Animal Response and Emergency Management
3. Animal Emergency Response Planning
4. Emergency Preparedness
5. Basic Sheltering
6. Health and Safety
7. Animal Behavior
8. Animal Handling
9. Euthanasia

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1. Colorado Veterinary Medical Reserve Corps (COVMRC)

- Veterinary professionals and animal emergency responders with the training and credentialing necessary to support animal health and public health emergency response.
- Available to support local animal emergency response efforts, animal disease outbreaks and planned events with veterinary medical services, sheltering, animal evacuation and search and rescue.
- East and West Units

Who are we?



- By **local emergency management** to provide veterinary and animal emergency response support during emergency situations.
- By the **State Veterinarian** during an animal health emergency or other state-level incident where veterinary and animal response personnel are needed.
- By the **Unit Coordinator** to support a planned event where service animals are utilized and are in need of care or a large scale criminal seizure.



Deployment



2. Animal Response and Emergency Management

- **People will risk their lives to protect animals**
 - Can put themselves and responders at risk
 - Redeployment of law enforcement resources
 - This is not just a companion animal issue



An issue of public safety

The **Weyauwega derailment** was a railroad accident that occurred in Weyauwega, Wisconsin (1996). The derailed train was carrying a large quantity of hazardous material, which immediately caught fire and resulted in the emergency evacuation of 2,300 people for 16 days. Residents who were worried about pets that they left behind started re-entering the evacuation zone within two days of the derailment to rescue them. Just over half the population evacuated without their pets. The acting fire chief declared the situation too dangerous to the public and emergency personnel to mount a pet rescue. Fearing a worse disaster, his decision was overruled by the Governor's office; the Emergency Operations Center organized an official pet rescue. The National Guard was activated to help with the recovery efforts. Using flak jackets and armored personnel carriers, they escorted pet owners to their residences to rescue their pets, then stayed to help fire crews with the accident

Operation Pet Rescue

A Historical Perspective





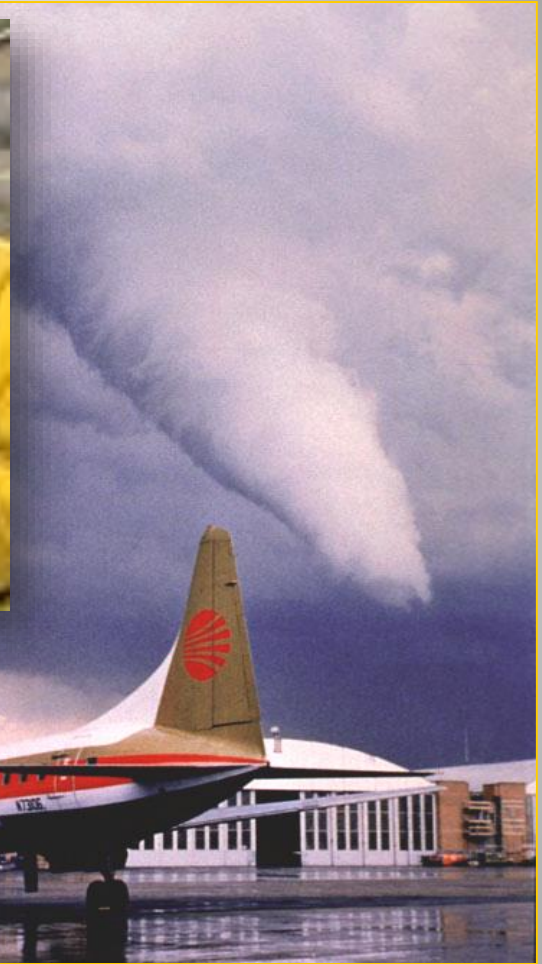
Hurricane Katrina

Laid the foundation for current response operations

- Pet Evacuation and Transportation Act (PETS Act), October 2006
 - Requires state and local plans for household pets and service animals
 - Allows FEMA cost-sharing for services in support of people with household pets and service animals
 - Allows FEMA director to make contributions for preparedness



Response Authority



The context in which we operate

A **disaster** is the tragedy of a natural or human-made hazard (a hazard is a situation which poses a level of threat to life, health, property, or environment) that negatively affects society or environment.

A disaster results in departments or agencies being unexpectedly torn from their standard operating procedures or are required to obtain resources outside their normal authority.



What is a disaster?

1. Protection of human life/health
2. Protection of property
3. Protection of the environment

For many people, animals are the top **property** priority



Providing animal emergency response services allows all of these priorities to be achieved.

Emergency Management Priorities

1. Prevention, protection and mitigation
2. Preparedness
3. Response
4. Recovery



Missions of Emergency Management

- Flexible to adapt to all emergency situations
- Standardized to improve overall response and interoperability.



New York City, NY, September 15, 2001 -- Urban Search and Rescue workers with their dogs to uncover victims following Tuesday's attack on the World Trade Center.

Photo by Andrea Booher/ FEMA News Photo

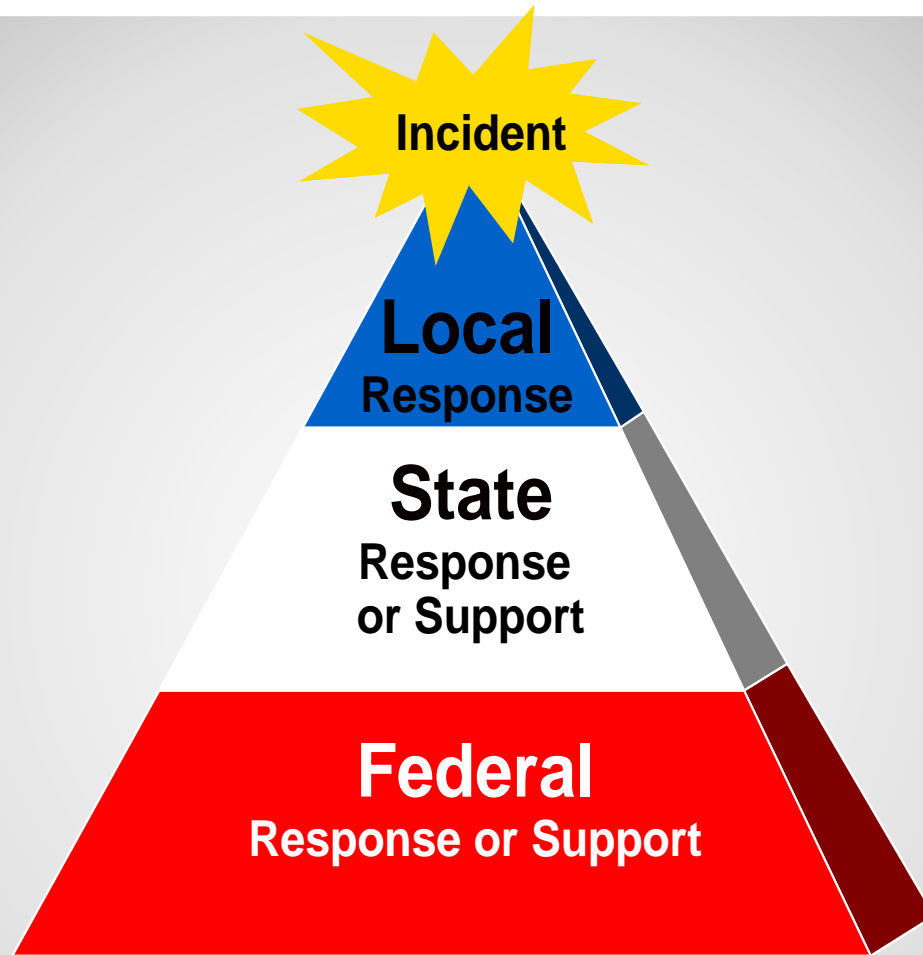


All-Hazards Emergency Management

- Emergency Manager
 - Coordinate planning/preparedness efforts
 - Manage local emergency operations center
- Emergency Operations Plan
 - Responsibilities, key policies
 - Government & Non-Governmental Organizations (NGO)
 - Mechanisms for outside assistance
- Emergency Operations Center (EOC)
 - Information gathering
 - Priority setting
 - Resource coordination



Local Emergency Management



**National Incident Management
System (NIMS)**

ESF1: Transportation

ESF2: Communications

ESF3: Public works and engineering

ESF4: Firefighting

ESF5: Emergency management

ESF6: Mass care

**ESF 6a: Companion & Service
Animals**

ESF7: Resource support

ESF8: Public health & medical services

ESF9: Urban search & rescue

ESF10: Oil and hazardous materials
response

ESF11: Agriculture & natural
resources

ESF12: Energy

ESF13: Public safety & security

ESF14: Long term community
recovery & mitigation

ESF15: External affairs

Emergency Support Functions

- A standardized, on-scene, all-hazards incident management approach that:
 - Allows for the integration of facilities, equipment, personnel, procedures, and communications within a common organizational structure;
 - Enables a coordinated response among various jurisdictions and functional agencies, both public and private; and
 - Establishes common processes for planning and managing resources.

Incident Command System (ICS)



ICS Structure



ANIMAL EMERGENCY RESPONSE PLANNING TOOLKIT

A step-by-step guide to building an animal emergency plan and developing the necessary response capacity for your community.

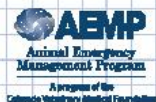


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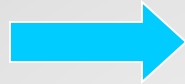
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3. Animal Emergency Response Planning

- Hazards
- Vulnerabilities
- Consequences



Risk Assessment



- Resources
- Gap Analysis
- Mitigation

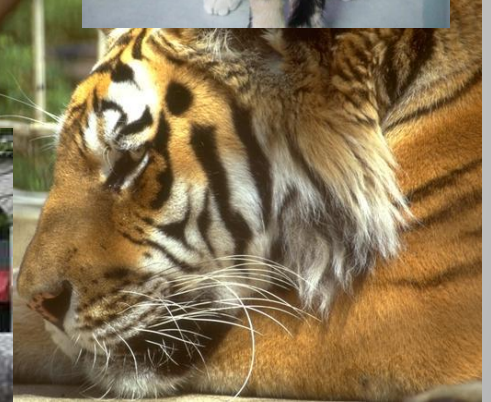


Animal Emergency Plan



Planning for All-Hazards

- Public safety
- Public and animal health
- Animal welfare
- Service animals
- Captive animal populations
- Food security
- Wildlife



Animal Concerns in Disasters

- What.....
 - Types of animals?
 - Companion
 - Service
 - Equine
 - Livestock
 - Captive
 - Working
 - Wildlife



Identify Animals



Assess Service Needs

- Livestock Operations
- Veterinary Facilities
- Animal Shelters
- Kennels/Stables
- Feed/Support Services
- Biomedical Facilities
- Wildlife/Zoological Facilities



**Must plan WHO will perform assessments
and what they will assess.**

1. Rapid Needs Assessment

- At Risk Populations:
 - Companion Animals
 - Service Animals
 - Equines
 - Backyard Livestock
 - Small Operations Livestock
 - Commercial Livestock
- Animal facilities:
 - Veterinary
 - Animal Care and Control
 - Boarding Facilities
 - Bio-Medical Facilities
 - Zoos and Sanctuaries



2. Animal Evacuation



- ***Owners have primary responsibility***
- Responder Safety & Accountability
- Transportation
- Credentialing & Identification
- Vehicle Prioritization
- Communication
- Mapping
- Animal Identification

Evacuation Issues

- Animals
 - With or Without People
 - Transport Standards
 - Ventilation
 - Temperature Control
 - Sanitation
- Animal Support Materials
- Donations



3. Transportation

- Concurrent rescue of people with animals
- Removal of animals from evacuated areas
 - Owner request or area search
 - Coordination with law enforcement
 - ***Animal control authorized and trained teams***
 - Dead animal recovery/ID
- Technical Rescue
 - Specialized training required



4. Animal Search & Rescue (ASAR)

- Pets Sheltering in Place
 - Distribution to owners
 - Delivery to properties where animals are stranded
- Livestock Feeding
 - Air drop of hay
- Wildlife Feeding
- Zoological and Research Facilities



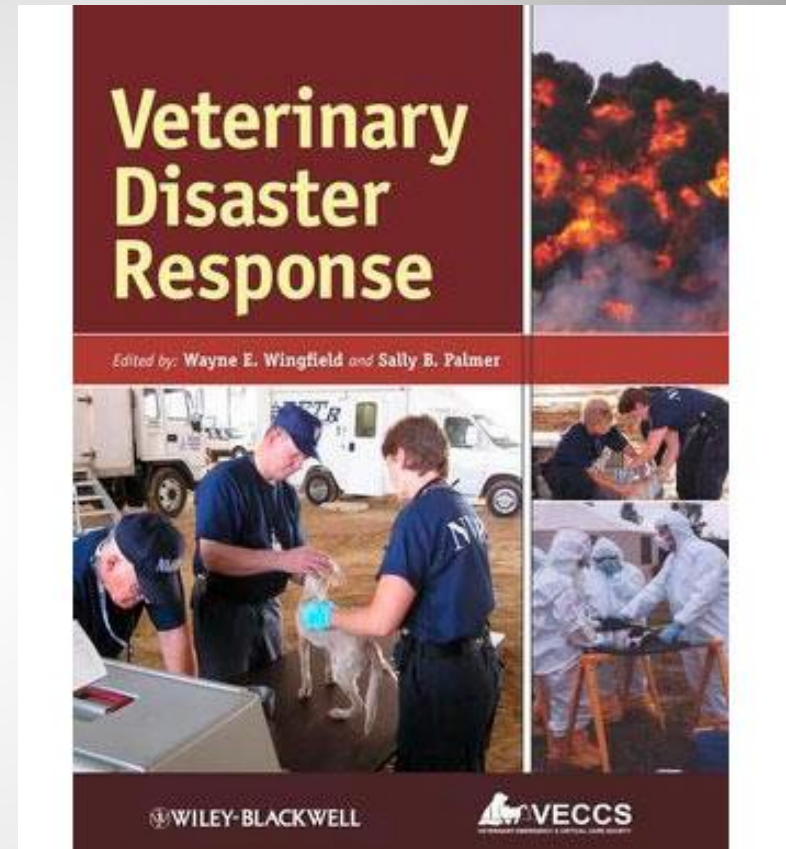
5. Animal Feed and Water

- Service Animals
 - Extension of the Person
 - Not “pets”
 - Sheltered with the Person
 - Support in human shelter
- Companion animals
 - Extension of the Population
 - When possible, sheltered where owners can help care for their animals (co-location)
- Equines/Livestock



6. Animal Sheltering

- In Field
 - Triage
 - Stabilization
 - Transport
- In Shelter
 - Initial examination
 - On-going basic medical care
 - Bio-security
 - Support of personnel



7. Veterinary Services

Personal Property Receipt
Evidence Tag *413730*

Destination _____
Via _____ *413730*

TRIAGE TAG

S L U D G E
Status Location Location Location Location Location

AUTO INJECTOR
1 2 3 4 5

First Aid Gross Decontamination
Secondary Decontamination
Solution _____

Blunt Trauma _____
Burn _____
C-spine _____
Chest _____
Crushing _____
Fracture _____
Laceration _____
Penetrating Injury _____

Age _____
☐ Male ☐ Female

Other: _____

VITAL SIGNS			
Temp	B/P	Pulse	Respiration

Time	Drug Solution	Dose

MORGUE
Pulseless/Non-Breathing *413730*

IMMEDIATE
Life Threatening Injury *413730*

DELAYED
Serious, Non Life Threatening *413730*

MINOR
Walking Wounded *413730*

- General medical triage nomenclature
 - Green: Minor (walking wounded)
 - Yellow: Delayed treatment OK
 - Red: Needs immediate care
 - Black: Dead
- Triage personnel do not stop to treat
- Treatment teams address RED first
- OK for veterinary technicians

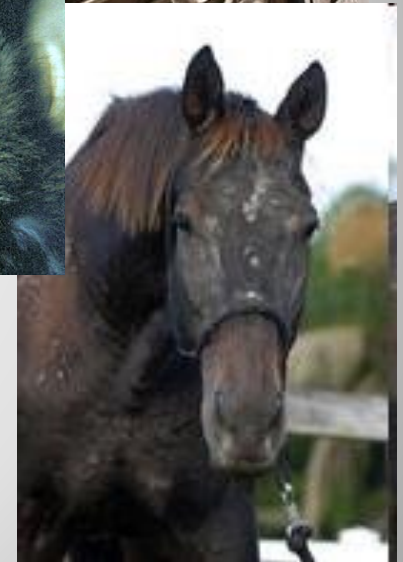
Principles of Veterinary Triage

- Companion Animal ID
 - Microchip
 - Tag
 - Tattoo
 - Photograph (pet and owner)
- Livestock ID
 - Brands
 - Microchips
 - Ear Tags
 - Duct Tape Collars
 - Spray Paint
 - Auction Tags
 - Labeled Halters
- Accuracy of Records
 - Origin of Animal
 - Owner Information
 - Destination



8. Owner-Animal Reunification

- Colorado response
 - Department of Agriculture
 - Division of Animal Industry (State Veterinarian)
- Federal response
 - USDA-APHIS Veterinary Services
- Local communities provide resources into established incident command



9. Animal Disease Management



10. Decontamination

- Coordination through ICS/EOC
- Clear public messaging
 - What's needed
 - What's not needed
- Best
 - New, palletized, shrink wrapped



11. Donations Management

- Spontaneous Unaffiliated Volunteers
- Spontaneous Untrained Volunteers
- Spontaneous Unwanted Volunteers
- Scary Unstable Volunteers
- Sincere & Unselfish Volunteer



12.Volunteer Management

- Animal “hoarders” and large-scale cruelty
 - Dozens or even hundreds of animals kept under terrible conditions
 - May exceed local capacity to provide care



13. Animal Welfare

- Animal Control Agencies
- Humane Organizations
- Veterinary Professionals
- Kennels and Pet Service Providers
- Pet Breed Rescue and Associations
- Equine Facilities
- CSU Extension
- Animal Related Industry
- Fairgrounds Staff
- Livestock Associations
- Brand Inspectors
- Livestock Producers
- Wildlife Agencies and Zoos
- Local Emergency Managers
- Community Public Health
- Concerned Individuals



Who might participate?

- Table of functions versus community resources
- Combine with risk assessment
- Basis for building a written plan

- lead (L)
- unified lead (U)
- support (S)

Animal control
Animal shelter
Veterinary Prof.
CSU Extension
Livestock Assn.

	Evacuation	Rescue	Sheltering	Disposal	Veterinary
Animal control	L	L	S	S	S
Animal shelter	S		L		S
Veterinary Prof.	S	S	S	S	L
CSU Extension		U		L	S
Livestock Assn.		S		S	

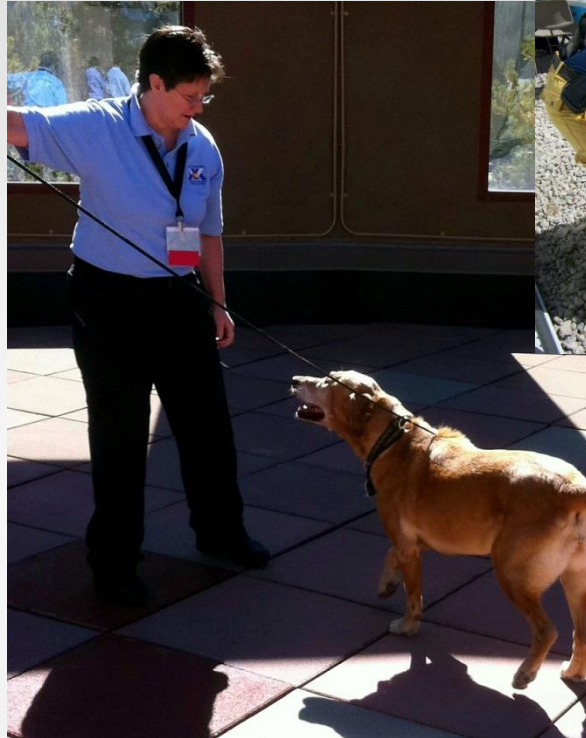
Local Planning Matrix

➤ Identify Assets

- Equipment
- Personnel
- Facilities

➤ Identify Gaps

- Training
- Exercise
- Procurement
- Mutual Aid Agreement
- Memorandum of Understanding



Assess Resources

- 1. Identify the agencies/groups in your community that are important to include in animal response**
- 2. From this list, designate the primary and support agencies for each capability identified in the previous activity**

Team Activity



**RIDERS ON THE STORM
ANIMAL RESCUE TEAM**



**Animal Emergency
Management Program**

A program of the
Colorado Veterinary Medical Foundation



Emergency Response Journal

Who else can help?

- Supports local response with personnel to meet an identified need
 - Evacuation
 - Animal Search and Rescue
 - Sheltering
 - Veterinary Services
- Recent deployment
 - Waldo Canyon Fire/Teller
 - High Park Fire
 - Clear Creek County Seizure



**Colorado Veterinary Medical
Reserve Corps (COVMRC)**

- Veterinary Medical Supplies
 - Support veterinary services in:
 - Field
 - Shelter



COVMRC Mobile Clinic

- Veterinary Cache Trailers
- Agriculture Response Trailers

- Other needs can be facilitated by the Colorado Veterinary Medical Foundation's Animal Emergency Management Program (AEMP)
 - Responsible for supporting ESF 6a
 - Assist whether or not State EOC has been opened



Response Equipment

- Can provide resources and trained personnel
- Requested and mobilized through a local request or CO Emergency Operations Center (EOC)
- Need specific mission assignment



National Animal Welfare Organizations



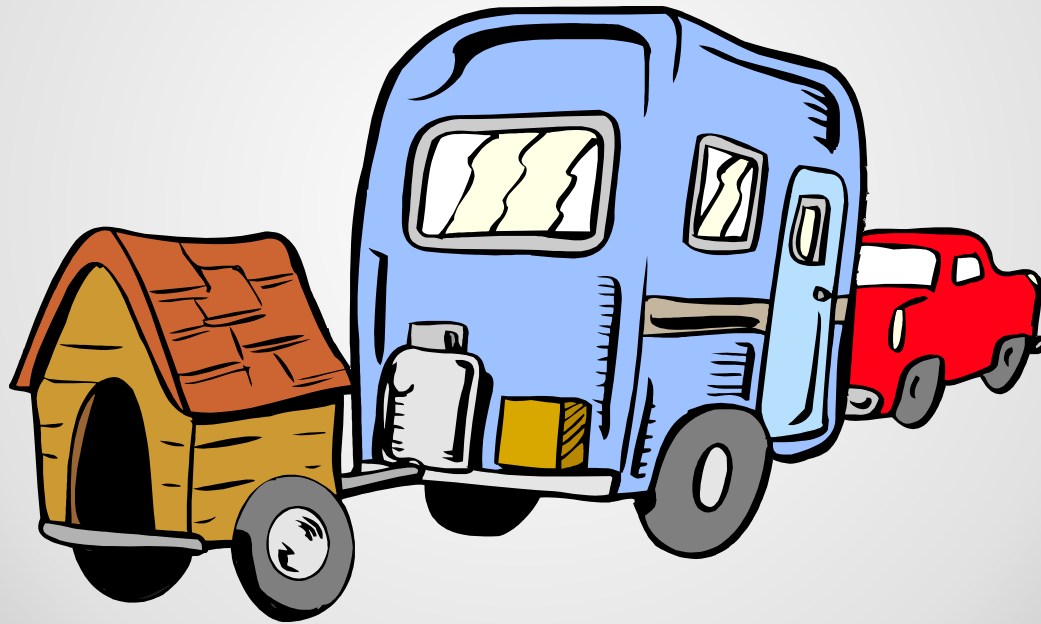
4. Emergency Preparedness

- Preparing citizens directly results in decreased demand for animal emergency response services
- For 72 hours, you need to:
 - Take care of yourself
 - Take care of your family
 - Take care of your animals
 - Take care of your business
- Make plans to evacuate
- Be ready to shelter in place
- Be available to help your neighbors and community



Community Preparedness

- Have pet carriers for pets
- If you own horses, have a trailer
- Train your horses to load



Evacuation Plans



- Bedding/towels
- Food, water, bowls
- Prescription medications
- Grooming tools, toys
- Litter box, litter
- Trash bags, paper towels
- Veterinary records
- Leashes, collars

Pet Go Kit

- Halters, lead ropes
- Veterinary records
- Medications
- Feed/water
- Water/feed pans
- Grooming/hoof care
- First aid kit
- Blankets
- Tack and accessories



Livestock Go Kit

- Arrange for people to shelter or evacuate your animals should you not be at home
 - Shelter in Place
 - Include additional cleaning supplies
 - Evacuation
 - Location of your pet “go kit”
 - Reunification plan



Surrogate Caregivers

- Pack/duffle bag, sleeping bag
- Clothing, boots, rain gear, coat, hat, work gloves
- Personal toiletries, sunscreen, sunglasses
- Prescription/non-prescription medications
- Flashlight, batteries, pocket knife, watch
- Scrubs, stethoscope
- Cell phone/charger
- Water/snacks for emergency



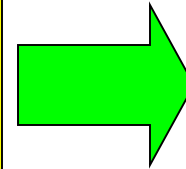
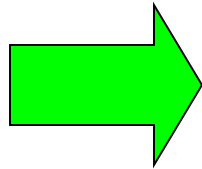
Be Prepared to Deploy



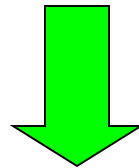
5. Basic Animal Sheltering

Information courtesy of the American Humane Association and Louisiana SART

- Owner evacuated
- Stray (animal control)
- Owner surrendered (permanent)
- Animal facilities (kennels, vet hosp, zoos, sanctuaries, farms and others)
- ASAR



- Reunion
- Transfer to other facility or foster care
- Adoption
- Died
- Euthanasia
- Escape



Transfer of adoptable animals

Animal Experience

- Adequate lighting
- Ingress and egress through all doorways
- Readily available fire extinguishers
- Functioning water and power
- Functioning restrooms
- Non-carpeted floors
- Operational ventilation
- Scratches, scuffs, and damages to floors, windows, walls, and doors



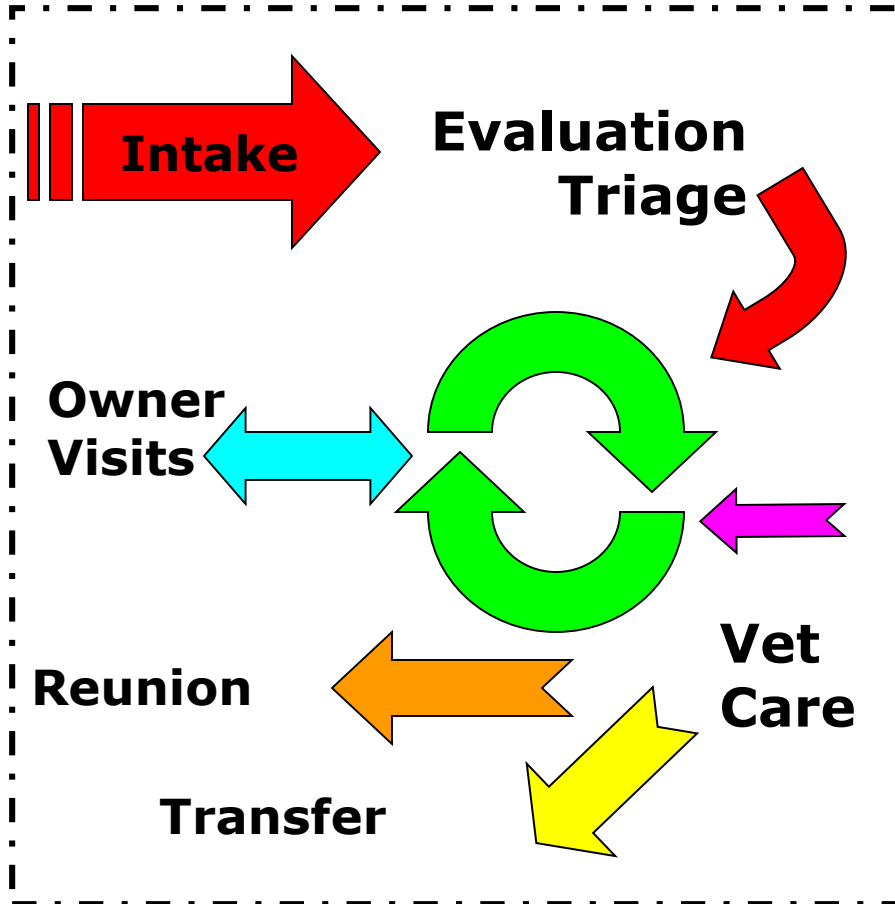
Identify Viable Locations

- Co-located is adjacent to the human shelter and provides an opportunity for owners to care for their pets
- Temporary is a stand-alone location and volunteers are pet caregivers



Co-located or Temporary Shelter?

Planning → Setup



1. Setup (Plans/Ops/Log)
2. Site Safety and Security
 - Physical and Biological Intake
3. Intake
4. Evaluation/Triage
5. Ongoing Animal Care
6. Owner Visitation
7. Veterinary Medical Care
8. Animal Discharge
 - Reunion or Transfer
9. Closure

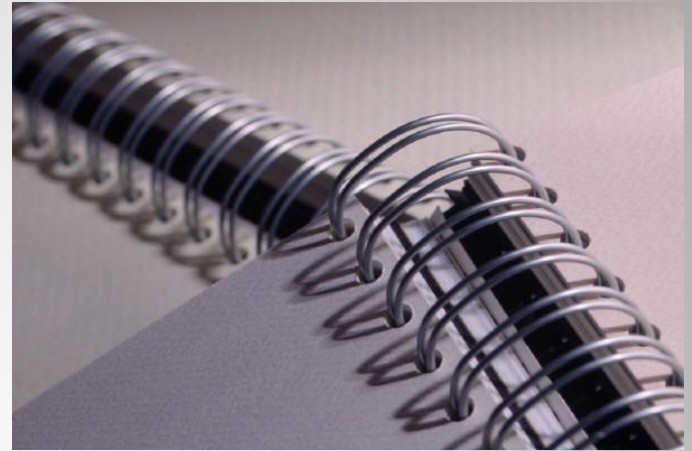
Shelter Flow

- A general best practice to achieve a result
- What you need to do (checklist)

**Samples may be found at
www.petaidcolorado.org/aemp**

**Standard Operation Guidelines
(SOG)**

- Location and situation specific series of actions to achieve a consistent result
- Directions for accomplishing the tasks step by step
- Developed by the responding agency responsible for the associated task



Standard Operating Procedures (SOP)

- Facility checks before and after shelter operations
- Animal registration and intake
- Shelter rules
- Providing security to staff and animals
- Owner visitation policies
- Staff management and organization
- Animal care and handling procedures
- Roles and responsibilities
- Copies of required forms and documentation

Suggested SOP's

- 1. Identify a task associated with one of the sheltering capabilities**
- 2. Create a list of *considerations* to think about when developing a guideline for that task**
- 3. Write a guideline for your identified task**

Team Activity

- Identify needed positions
 - Command
 - Veterinary
 - Advanced Animal Handling
 - Animal care
 - Administrative
- Develop a structure following ICS
- Identify training requirements
 - Including just-in-time training
- Review staffing patterns to assure meeting needs of animals in care



Shelter Staffing

- Administrative supplies
- Animal care supplies (e.g. food, litter, bowls)
- Cages or crates
- Cleaning supplies
- First aid/medical supplies
- Signage to guide evacuees



Necessary Supplies

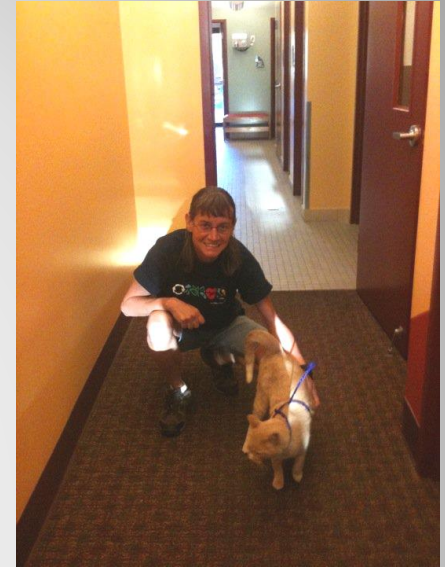
- Animal Care Record
- Animal Rescue Notice
- Animal Rescue Request
- Bite Report
- Co-Shelter Admission/Discharge
- Co- Shelter Agreement
- Day Care Admission/Discharge
- Euthanasia Form
- In-Field Animal Tag
- Large Animal Shelter Admission/Discharge
- Large Animal Shelter Admission Log
- Temporary Shelter Admission/Discharge



**Forms may be downloaded at
www.petaidcolorado.org/aemp**

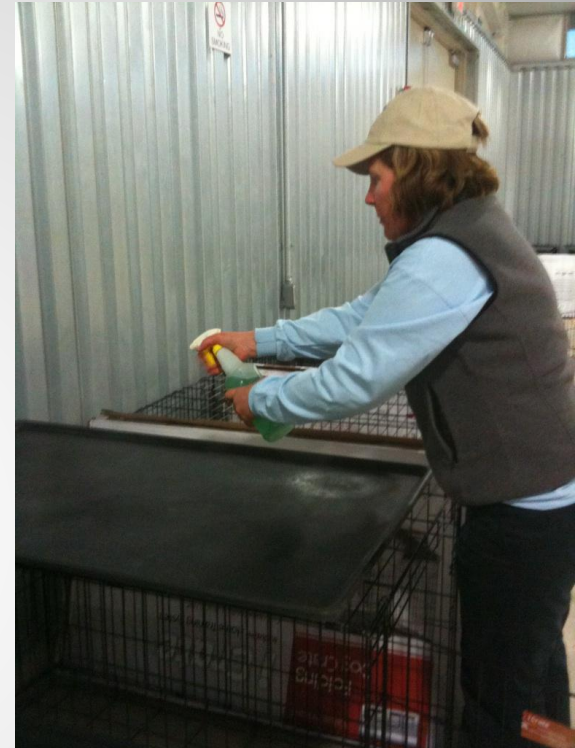
Identification and Record-Keeping

- Determine what animals will be allowed at shelter
- Create multiple areas for the animals housed at the pet shelter
 - Cats and other small animals should be housed in the quietest available sections of the shelter.
- Separate housing areas for dogs and cats, so the dogs' barking will not stress and agitate the cats.
- Consider establishing separate areas for:
 - Elderly animals and animals sensitive to noise
 - Animals that are too aggressive to handle
 - Sick and injured animals; and
 - Animals in heat
 - Mothers and babies



Animal Housing

- Food and water
- Cage cleaning
- Medications
- Exercise
- Aggressive animal handling
- Shelter access



What tasks should be performed by owner?

Animal Care

- Hazards during shelter operations, including:
 - obstructed corridors and fire exits
 - electrical shock
 - hazardous chemicals
- Security of shelter staff
- Veterinary medicines
- Nighttime operations



Safety and Security Concerns

- **Cleared with incident Public Information Officer**
- Incident Information must go through ICS/EOC Joint Information Center
- Non-Conflicting Messages
- Organizational Information
- Interviews



Public Information

- Reunification of animals with owners
 - Animal ID
 - Microchips, tags, tattoos, photographs (with owner)
- Continued sheltering of owned animals in permanent facilities
 - Transport arrangements
- Options for animals whose ownership is unconfirmed



Disposition of Animals

- Inventory remaining supplies
- Identify replacement needs
- Assure all paperwork is complete (volunteer hours, equipment and supply costs)
- Return site to original condition
- Hot Wash
- After Action Review

Demobilizing the Shelter



6. Health and Safety

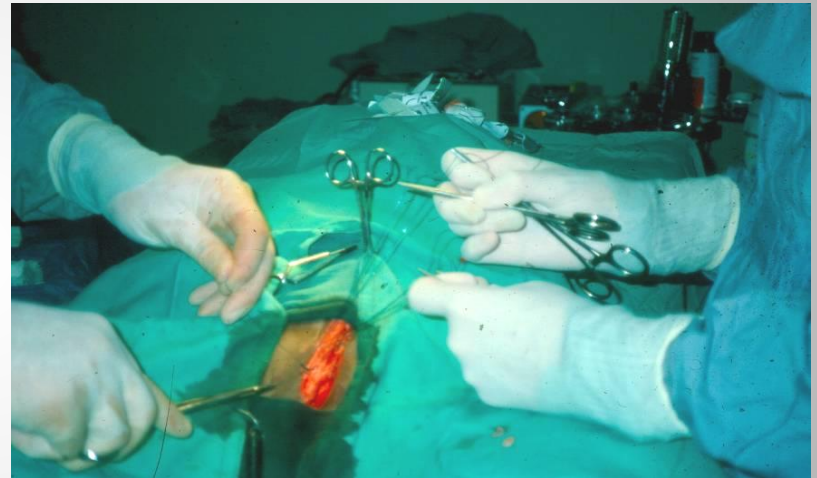
- **Bio-Security**

- Steps taken at a facility or operation to prevent the introduction, export, or internal spread of disease agents



Bio-Security

- Bio-Safety (infection control)
 - Procedures to limit spread of infectious agents to both people and animals
- Practices
 - Risk recognition
 - Traffic flow
 - Isolation procedures
 - Hand hygiene policies
 - Barrier protection
 - Sanitation procedures
 - Bite procedures
 - Rabies prophylaxis (vaccine)



Bio-Safety

- Droplet contact - coughing or sneezing on another person
- Direct physical contact - touching an infected person, including sexual contact
- Indirect contact - usually by touching soil contamination or a contaminated surface
- Airborne transmission - if the microorganism can remain in the air for long periods
- Fecal-oral transmission - usually from contaminated food or water sources
- Vector borne transmission - carried by insects or other animals



Some diseases may use multiple routes of transmission

Disease Transmission Routes

- *Which diseases do we worry about recognizing early?*
 - Zoonoses
 - Highly contagious
 - Highly persistent
 - Significant clinical consequences
 - Regulatory concern
- Manage with:
 - Keeping high risk animals separated
 - Traffic flow and isolation

Biologic Risk Recognition

- Major challenge is compliance
- Reasons for noncompliance include
 - Lack of time to do the “right thing”
 - Impact of hand hygiene practices on skin condition
- Improve compliance by adding hand sanitizing gels to program



May be the single most important bio-safety practice!

Hand Hygiene

- Those involved in care of animals should:
 - Develop a minimum level of hand hygiene
 - Based procedures on the risk
 - Use hand hygiene as a routine or habit
- If risk of contagious disease is high:
 - Use examination gloves along with other needed barrier precautions
 - Perform hand hygiene after removal of examination gloves



Hand Hygiene Summary

- An extension of facility procedures
 - Veterinary hospitals
 - Animal shelters
 - Kennels
 - Fairgrounds
- Veterinary planning and implementation role



Disaster Bio-Safety Procedures

- **Cleaning:**
 - Removal of visible contaminants
 - Must precede disinfection
- **Disinfection:**
 - Application of a suitable chemical agent for an appropriate amount of time to destroy specific infectious agents

Cleaning and Disinfection

1. Assess the areas to be cleaned
2. Remove all visible debris
3. Clean with water and detergent or soap
4. Thoroughly rinse the cleaned area
5. Allow the area to dry completely



Steps in Cleaning and Disinfection

6. Select and apply disinfectant
7. Allow the proper contact time
8. Rinse
9. Leave the area free of animals for a sufficient amount of time
10. Evaluate/monitor the effectiveness of the disinfection plan



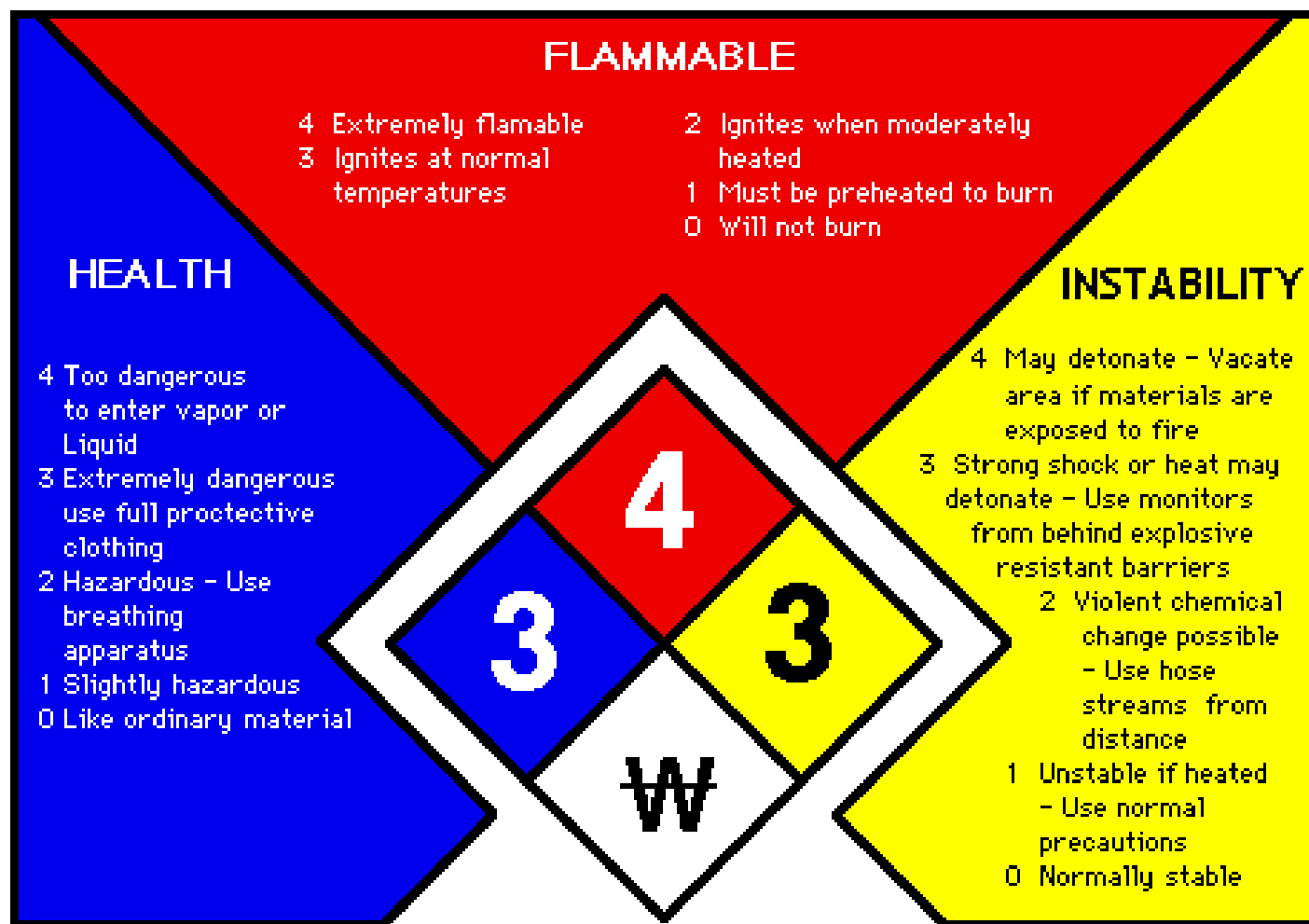
Designated food
storage, preparation,
and eating areas



Designated specimen
storage and handling
areas



Other Health & Safety Considerations



NFPA Hazardous Material Diamond

Section 1 - Product and Company Identification	Section 9 - Physical & Chemical Properties
Section 2 - Composition/Information on Ingredients	Section 10 - Stability & Reactivity Data
Section 3 - Hazards Identification Including Emergency Overview	Section 11 - Toxicological Information
Section 4 - First Aid Measures	Section 12 - Ecological Information
Section 5 - Fire Fighting Measures	Section 13 - Disposal Considerations
Section 6 - Accidental Release Measures	Section 14 - MSDS Transport Information
Section 7 - Handling and Storage	Section 15 - Regulatory Information
Section 8 - Exposure Controls & Personal Protection	Section 16 - Other Information



RTKC03

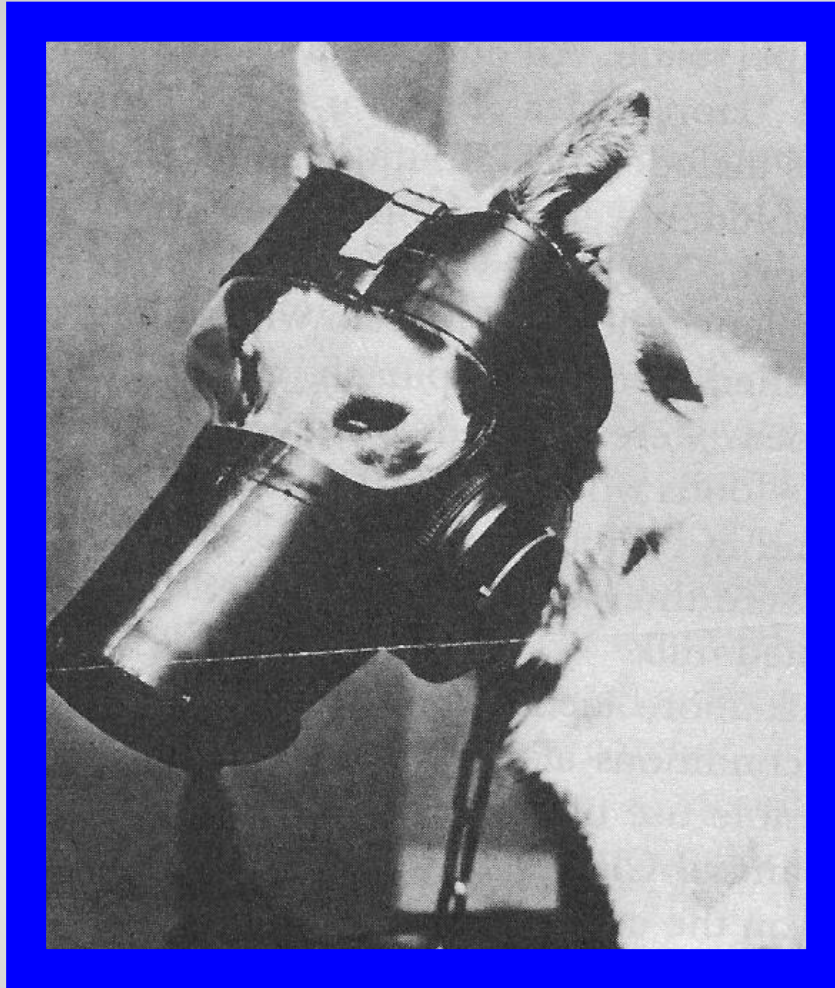


RTKC01



RTKC01S

Material Safety Data Sheets (MSDS)



Personal Protective Equipment (PPE)



- Equipment and training mandated by the Occupational Safety and Health Administration (OSHA) and other agencies
- For all personnel who have a recognized risk of exposure to hazardous materials

- Personal Protective Equipment (PPE) are articles worn or equipment used in order to protect wearer from recognized threats.
- Provides a shield between you and agent
- Must prevent/reduce exposure to airborne or surface agents
- 4 Levels listed by OSHA (A-D)



What is PPE?

Level D is the type of protection that will be used in most veterinary practices and in many foreign animal disease emergency response incidents.

- Ranges from a work uniform to basic biological barrier protections
- Respiratory protection:
 - None or dust mask
- No vapor protection
- Simple barrier skin protection

Level D



Risk assessments are the key to providing appropriate personal protective equipment during an animal emergency response.

- Determine hazards
 - Mechanical
 - Animal handling
 - Noise
 - Kennels, swine
 - Chemical
 - Disinfectants, pharmaceuticals
 - OSHA “Right to Know” requirements
 - Biological
 - Radiological

Risk Assessment

- Barrier apparel
 - Tyvek, apron, etc.
- Footwear
- Gloves
- Head gear
- Goggles
- N-95 or better respirator when needed



Basic Veterinary Bio-Protection



Barriers



- Barrier, chemical and mechanical protection consideration
- Latex allergies common
- Challenges related to duct tape and disposable gloves
- Work gloves added for mechanical protection

Gloves



- Non-vented (fogging)
- Direct vented (limited disease agent protection)
- Indirect vented (best for zoonotic risk)

Goggles



- Considerations
 - Water resistance
 - Mechanical durability
 - Traction
 - Cleanable vs. disposable
- Disposable shoe/boot covers
 - Not durable, may be very slick
 - May need to double

Foot Protection

- Options
 - Hooded coveralls
 - Bouffant caps
 - Hard hats
 - Other
- Cold weather may necessitate combining with stocking cap underneath



Head Covers



- Provide splash/barrier protection
- Currently not OSHA approved for respiratory protection (although may provide limited protection)

Surgical Masks

1. Cost of PPE, medical clearance and training
 - Inventory of needed make/model/size
2. Heat/humidity/medical risks
 - Limits for time in PPE based on temperature, humidity, person's physical limits
3. Restricted dexterity
 - 30% decrease in productivity
4. Enforcement of policy
5. Public perceptions

Challenges Related to PPE



Decontamination

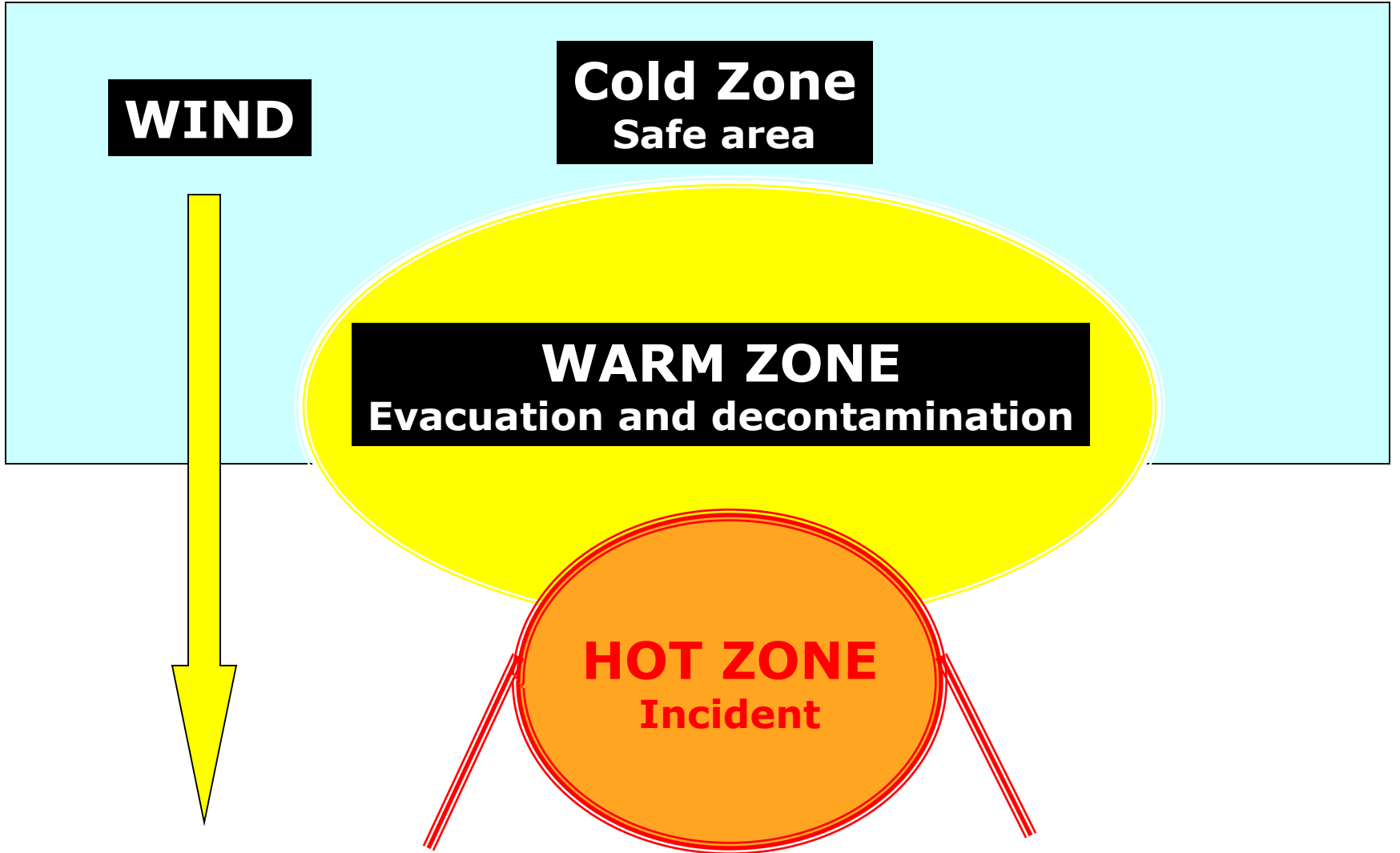
WIND

Cold Zone
Safe area

WARM ZONE
Evacuation and decontamination

HOT ZONE
Incident

Decontamination Zones



Vehicles and Premises

- Two step process
 - Cleaning
 - Remove visible debris, feed, manure, junk, etc.
 - Application of suitable disinfectant or detoxifying agent as needed

- Considerations:
 - Location
 - Corrosion
 - Environmental concerns (run-off)
 - Temperature/humidity (workers)



Decontamination

- HAZMAT equipment
- Fire-fighting equipment
- Food/agricultural operations may have decontamination equipment
- Limiting factors:
 - Personal protective equipment
 - Trained responders
 - Supplies



Decontamination Resources

Considerations

- Chemical, radiological, biological
- Susceptible versus non-susceptible
- Food animals versus companion animals
- Human health impacts
- Animal health impacts
- Resource availability
- Restraint, sedation



Euthanasia may be a reasonable decision in some cases

Animal Decontamination

- Portable decontamination showers/HAZMAT resources
- Scale
 - Limited
 - Major
 - Catastrophic



Decontamination of People

- Debris removal
 - Manure, bedding, feed
 - Non-cleanable materials
 - Junk
- Cleaning
- Disinfection
- Environmental testing



Decontamination of Premises



1. Public health and safety
2. Responder health and safety
3. Regulatory issues
4. Public information
5. Environmental conditions
6. Social values and animal welfare
7. Language and cultural barriers
8. Disposal issues

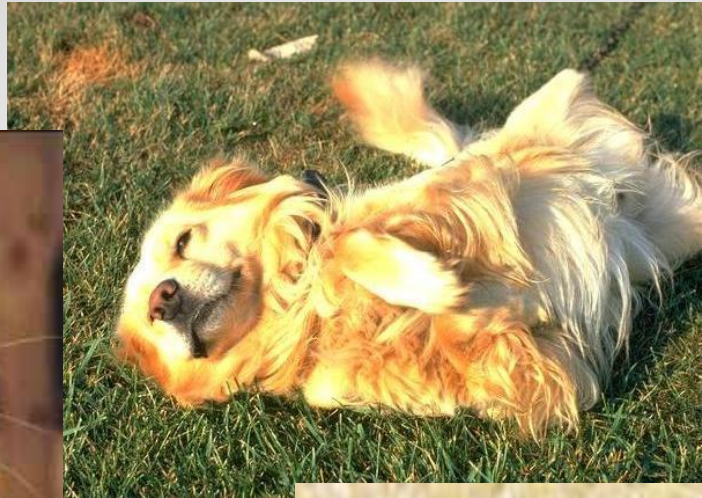
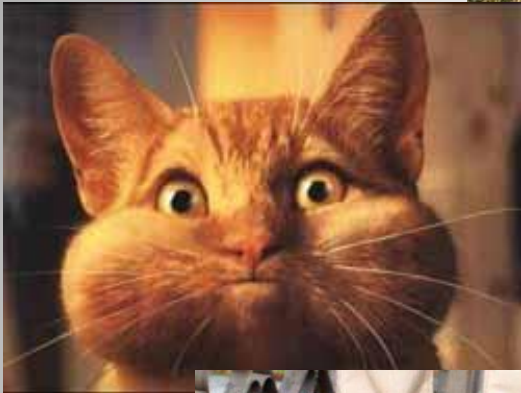
Decontamination Challenges

- Detailed information on Canine Decontamination may be found on the Pet Aid Colorado website.

Guidelines for Emergency, Gross, and Technical Decontamination of the Urban Search and Rescue Canine by Lori E. Gordon, DVM



http://petaidcolorado.org/associations/10138/files/K9%20Decon%20Guidelines%20%20Lecture%20_Emerg%20Gross%20Tech_%20Oct%202008.pdf



7. Animal Behavior

Information courtesy of Lori Swenson

- Vision
 - Binocular (both eyes used together)
 - Depth Perception
 - Tracking/Focus
- Instincts
 - Hunt
 - Chase
 - Kill
 - Individual or Small Pack/Pride



Predators

- Vision
 - Wide Field
 - Maximum Field
 - Defense
- Instincts
 - Herd
 - Escape
 - Protect Young



Prey

- Domestication occurs over a long period of time (generations or eras).
- Process of breeding and caring for animals resulting in physical and behavioral changes to benefit humans.
- Wild animals have not been domesticated as a species.
- Tameness is a measure of comfort around humans.
- Feral animals are ones which are considered domesticated but have little individual "tameness".



Domestication

- Males are more aggressive in general
- Female aggression may be maternal or hormone influenced
- Neutering has more effect on males than females with respect to offensive aggression
- Defensive aggression may not be affected by spay/neuter

Gender Effects



Breed Characteristics



- Soft mouthed
- Trainable
- High energy
- Social
- Can be destructive if bored

Sporting Breeds



- Very high energy
- Nip and run
- Typically approach from rear
- Lower leg bites
- Stare and stalk

Herding Breeds



- Slower moving
- High endurance
- Sight hounds
- Scent hounds
- Prey drive
- Difficult to read

Hounds



- Prey driven
- Hold and shake
- Dominant
- Tenacious

Terriers



- Often difficult to read
- Strong
- High prey drives in Husky types
- Often used for guard dog purposes
- Independent and aloof

Working Breeds



- Most vicious of all
😊
- Small and fast
- Can inflict multiple bites quickly
- Often display defensive aggression

Toy Breeds



- Diverse group
 - Chow Chow
 - Dalmation
 - Lhasa Apso
 - Poodle
- “Stoic” breeds

Non Sporting Dogs

- Defined behavioral development periods
- Younger animals more “malleable” in general
- Exploratory and learning behaviors in puppies may be mistaken for aggression
- Dogs may become more aggressive with age
 - Increase in pain, decrease in tolerance
 - Decrease in cognitive and sensory function
 - Increase in anxiety related disorders
 - Habituation and learned aggression

Age and Aggression

Dominant Behaviors

- Demanding
- Assertive
- Controlling
- Offensive



Subordinate Behaviors

- Yielding
- Submissive
- Appeasing
- Defensive



Social Roles and Behaviors



- Not the same as human body language
- Some breeds harder to interpret



Canine Body Language



- No sustained direct eye contact
- Ears relaxed
- Tail wagging
- Natural stance
 - Not crouched
- Small pupils



Calm/Relaxed Signs



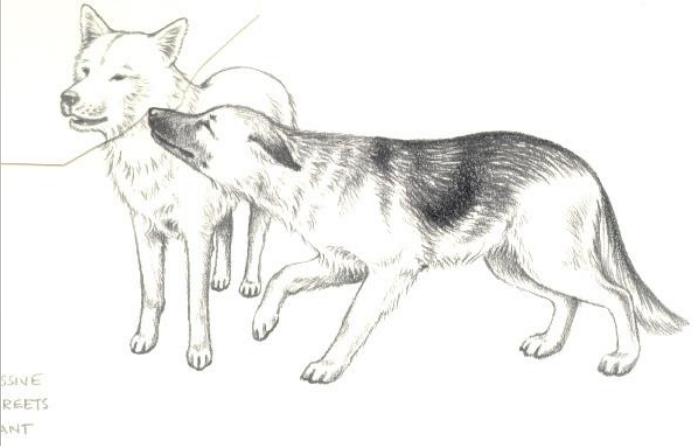
- Wagging tail
- Play bows
- May bark and jump around



Happy/Playful



Normal Male Greeting



Submissive dog greeting
another dog

*Must allow time for canine
formalities to proceed*

Canine Greetings



- Crouched (may roll over completely)
- Tail tucked, ears pinned back
- Hackles may be up
- Whining/vocalization
- Urination, defecation
- Shaking, panting
- Same signs as pain

Fearful

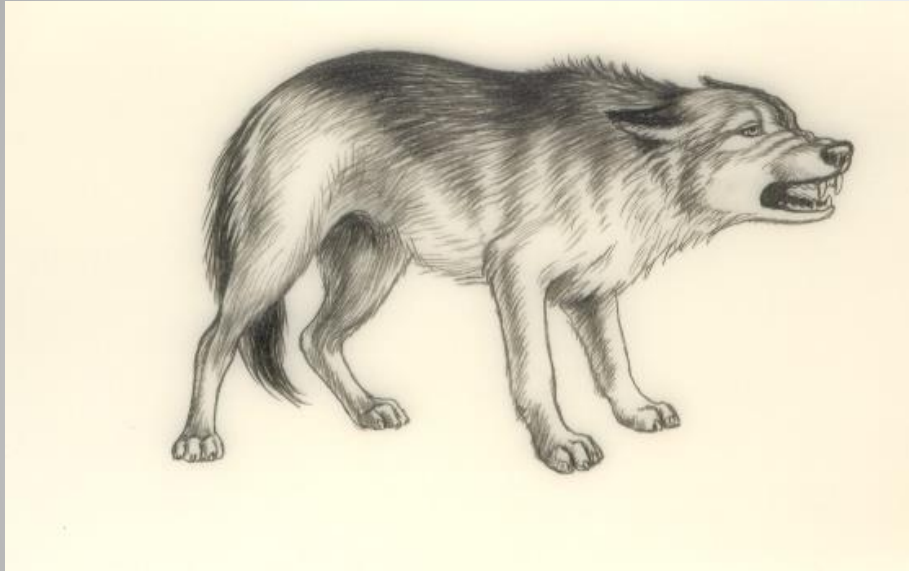


Full canine submission

- Very important in K-9 social interactions

- Ears folded
- Inferior position
- No sustained eye contact
- Urination or even defecation
- On back for full submission

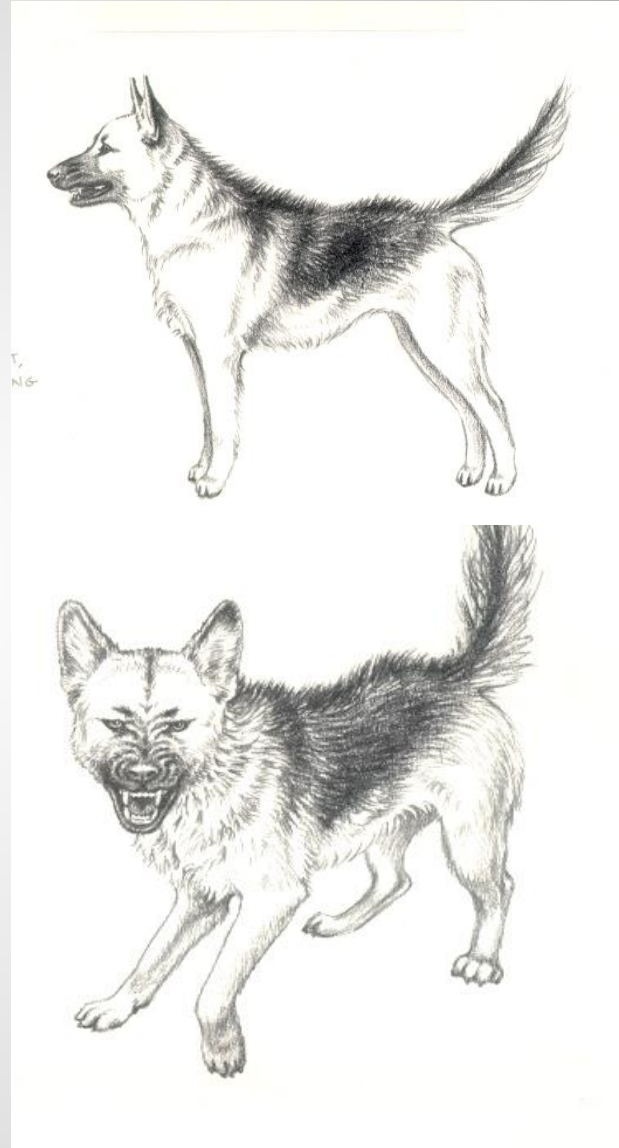
Submission



- Fearful, but showing willingness to bite
- Dangerous, but often can diffuse fear with calm, and very gradual approach

Fearful and Aggressive

- Eyes-locked stare
- Pupils dilated
- Erect ears
- Hackles up
 - Hair standing on end
- Growling/snarling
- Attacks are to front of body
- Dominant aggressive dogs will make very clear signals that about to attack
- VERY DANGEROUS



Dominance Aggression

- **Offensively threatening cats will show:**
 - Standing, rear higher than front, tail down
 - Direct eye contact or staring
 - Ears out to side of head
 - Growls or hisses
 - Salivating
 - Claws/whiskers forward
- **Fearful cats will show:**
 - Crouched body posture or lying down
 - Ears flat against the head
 - Looks away or avoids eye contact
 - Tries to get away or hide



Cats do not show submissive behavior

Feline Body Language

- Display mostly defensive aggression towards humans
 - Pain elicited
 - Overstimulation
 - Fear motivated
 - Avoidance failures
- Offensive
 - Predatory
 - Territorial
 - Redirected



Feline Aggression



8. Animal Handling

- Sunglasses: Looks like big, dilated, aggressive eyes
- Hats: Makes your head look bigger
- Uniforms: Not sexy to the animals
- Bulky coats: Makes you appear bigger
- Heavy boots: More of an issue for small animals



Appearance

Size up the situation

1. Look for presence of owner
2. Look for evidence of animals
3. Consider local environment
4. Be prepared for illegal animal activity
5. Perform damage assessment



Encountering Animals



Dogs

- Ear position
 - Upright, flat, forward, back
- Eye condition
 - Dilated pupils, “whale eye”
- Body stance
 - Squared off versus crouched
- Tail position and movement
 - Flagging, sweeping, tucked
- Hackles up?



Visual Clues

- High pitched yelps and barks
 - Looking for attention
 - Pain elicited
- Low growls and vibrations
 - Offensive warning
- No vocalization
 - Trained dogs and feral cats often don't vocalize at all

What do you hear?

- Expect the unexpected
- Do not let dog block your escape
- Do not show fear
- Maintain relaxed posture
- Control environment if possible
- Avoid direct eye contact
- Do not get near dog's face



Approaching An Unknown Dog

- Less is best
 - Start by coaxing with voice
 - Add treats
 - Slip leads and gloves
 - Cable leads and Snappy snares
 - Tongs and Nets
 - Control Pole
 - Traps, squeeze cages, squeeze boards
 - Muzzle
 - Chemical Restraint



Interventions

- **B**ark- realize a dog is present
- **S**top- halt all forward movement. Do snapshot.
- **D**rop your eyes so you are not staring.
- **R**oll your shoulder so you are sideways to the dog.

This says "no fight" to the dog.

BSDR Technique



- COMMANDS: "SIT"
- Questioning: "Do you want to go for a ride?"
- Tone: Authoritative vs. complacent
- Pitch: Higher pitch less threatening
- Cadence: Slow down
- Volume: Quiet is good for coaxing, calming, loud is good for getting attention and subduing

Voice

Don't

- Stare at a dog
- Use a loud voice
- Move rapidly towards them
- Loom over them
- Grab them by the collar

Do

- Avoid prolonged direct eye contact
- Use a soft voice
- Turn sideways
- Make yourself smaller
- Use a slip leash

For Dogs Not Showing Aggression



- If not an experienced handler, seek assistance
- Don't approach them without having help in the immediate area
- Go slow
- If possible, get them to come to you
- Typically does not offensively attack- instead will make lots of noise (barking, growling)
- Nip and run when back is turned

For Dogs Showing Fear

- Call animal control or law enforcement
 - Control stick (rabies pole)
 - Chemical capture
 - Lethal force may be justified in some circumstances
- Amateur misconceptions
 - "Dogs really love me"
 - "I really relate to animals"
 - "A dog would never bite me"



For Dogs Showing Overt Aggression



Carrying Dogs

- Make sure dog crates are adequate size
- Allow only one dog per crate
- Clean and disinfect crates between animals
- If not in cage, leash or tether dog inside vehicle
- Control climate within vehicle
- Keeping dogs in stationary vehicles in hot weather can result in death

Transporting Dogs

- ***Easiest when the owner is present***

- May have a favorite hiding place
- Speak softly and move slowly
- See if they will come to you
- Tap a cat food can with a spoon



Cats

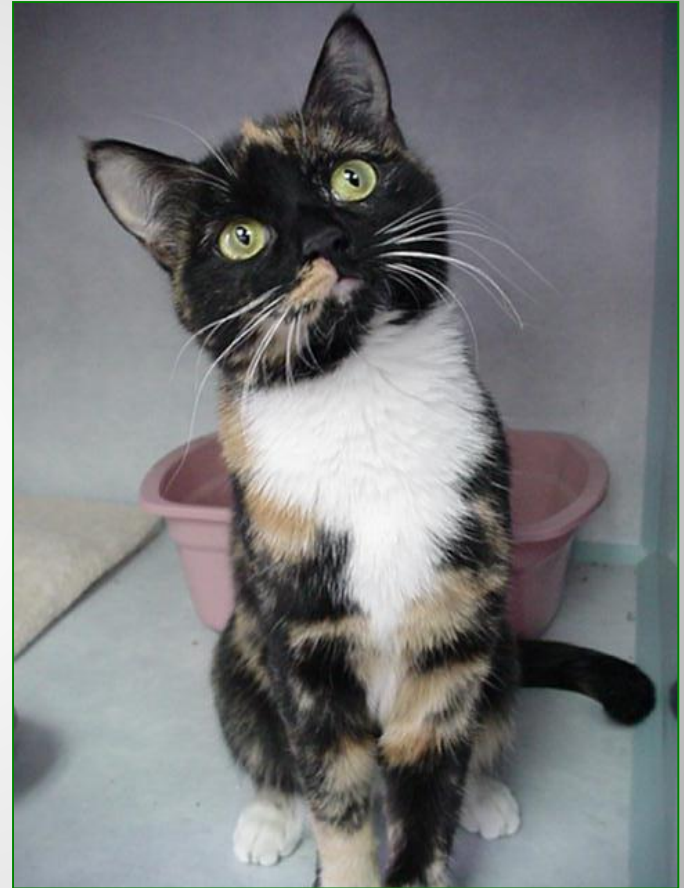


5 POINTS of CONTACT

- Weapons
 - Four feet with multiple razors
 - Mouth full of teeth
 - Lightning speed
- Cat bites almost always become infected

Unhappy Cats

- Speak slowly and softly
- Approach with your side facing cat
- Move slowly
- Work with a partner



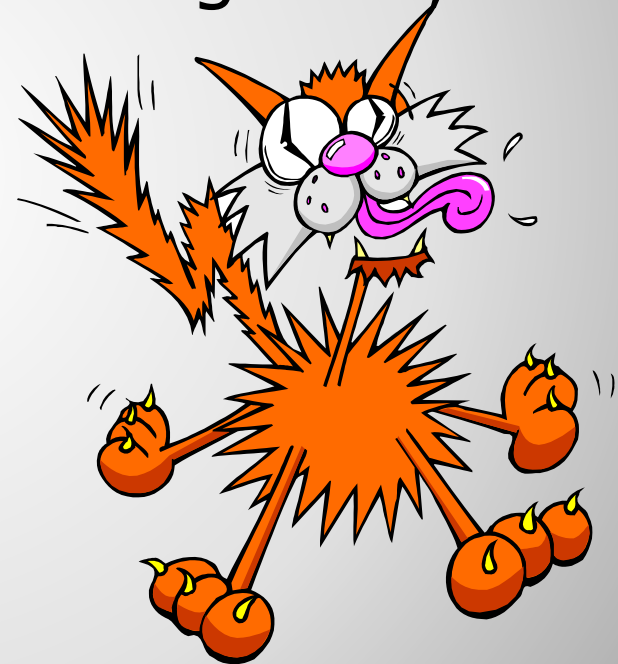
Approaching Cats



- The left hand and arm are used to cradle the body, control the hindquarters and press the cat into the body of the restrainer.
- The right hand can be used to scruff or just rested on the neck to reassure the cat.

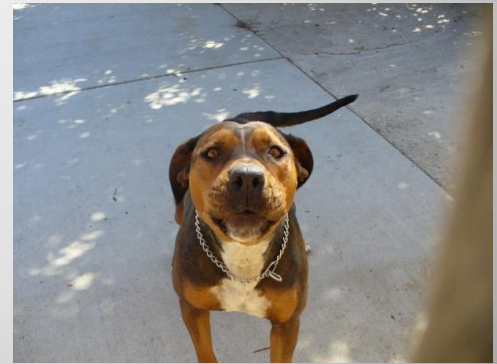
Gentle Cat

- Back off and allow cat to calm down
- Use double thick or armored gloves and eye protection
- Attempt capture with fishing nets, blankets, or traps



Out of Control Cats

- Slip leads, soft leashes, gloves. Easy to use, minimal control.
- Cable leads and snappy snares. Special circumstances, minimal control.
- Tongs and nets. More control, more stress. Less effective for large animals.
- Control Poles. More control, can be stressful, not good for small animals.
- Traps, squeeze apparatus. Control and confinement without direct contact.



Hardware and Tools

- Biohazard repellant
- Slash resistance
- Puncture resistance
- Wrist length to Gauntlet
- Disposable slip leads
- ACO leads
- Cable leads
- Snap leads



Gloves and Leads

Cat Snafflers



Snake Tongs



Tongs

- Throwable
- Launchable
- Collapsible



Nets

- Fixed length
- Telescoping
- Inflexible



Control Poles



Squeeze Cages and Panels

- Basket, nylon, lead



Muzzles

- Contact Sedation
 - Squeeze Panels
 - Squeeze cages
 - Clamshell nets
- Chemical Capture
 - Non contact



Chemical Restraint

- Small (less than 120 grams)

Hold with one hand. The head is maintained between the forefinger and middle finger as the bird rests in dorsal recumbency in the palm of the hand with the thumb, ring finger, and pinkie loosely holding the body.



- Large

Should always use a towel. The towel allows you to hide your hand as you maneuver around the back of the birds neck.



Birds

- Small

Small specimens place your thumb and index finger on each side of the mandible and allow the animal's body to rest in the palm of your hand.



- Large

Large lizards—place your index finger and thumb on the corners of the mandible and use your second hand to hold the rear legs against the tail.



NEVER hold a lizard by the tail.

Lizards

Never handle a snake if you don't know what kind it is.

Place your index finger and thumb under the mandible and use your additional hand to support the body.

One person can handle a snake 2-3 foot long

Larger constrictors should never be handled without assistance.



Snakes

Can be safely restrained by scruffing.

This is accomplished by grasping the skin over the dorsal cervical area with the index finger and the thumb



Ferrets

- Do not hold a rabbit by the ears.
- When removing a rabbit from a cage grasp the scruff with one hand, placing the other hand under its tail, supporting the rear legs.
- Bunny “burrito”



Rabbits

- Restrained by grabbing the animal around the shoulders with one hand, lifting the animal up, and supporting the rear with the other hand



Guinea Pigs

- Horse Techniques

- Control the head
- Use a halter/lead rope
- Calm, soft voice
- Gentle strokes
- Stay close to the body
- No sudden moves
- Watch deadly zones



- Losing your temper with horses and other livestock typically serves to make things **worse**

- Be smarter
- Be careful
- Be patient



Equines



- Cattle Techniques
 - Halter
 - Lariat
 - Panels/Alleyways
 - Safety Fencing
 - Herding
 - **IF YOU CHASE THEM, THEY WILL RUN**
 - Boots and a hat don't make a cowboy
 - You need be smarter than those you are herding
 - Establish a plan before you act and everybody uses the same plan

Cattle



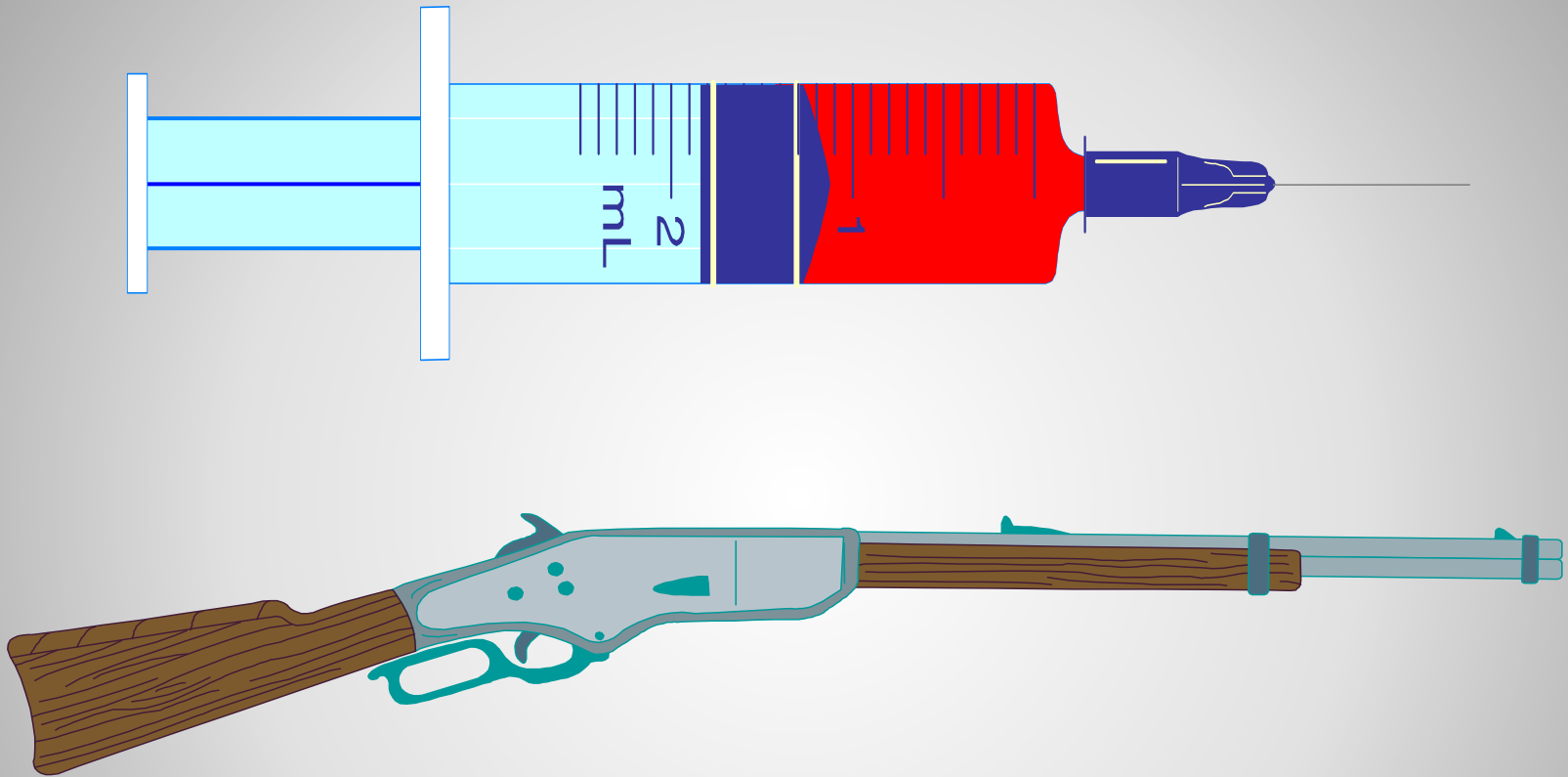
- Large swine
 - Herding
 - Panels/Alleyways
 - Hog Snares
 - Lariats (very difficult to use)
 - Hearing protection concerns when working in close

Swine

- Llamas and Alpacas
 - Usually halter broken
 - Approach and handle more like horses than cattle and sheep
 - Can spit when upset
- Sheep and Goats
 - Usually herd
 - Small enough to restrain manually



Other Ruminants



9. Euthanasia

Animal euthanasia may be necessary in cases of severe injury, disease, or as a result of disasters such as fires, floods, tornados, or earthquakes.

Euthanasia – '*eu*' good, '*thanatos*' death

The procedure must be painless, stress the animal as little as possible, and safe for the personnel involved.



Euthanasia

As animals are brought to the emergency shelter they must be triaged

- Euthanize severely injured, moribund (at the point of death) animals
- Give first aid to injured or sick animals and then transfer to local veterinary facility or field veterinary hospital



Only a Veterinarian can determine if euthanasia is the proper course of action.

Who decides if an animal is to be euthanized?

- Human safety
- Animal welfare
- Animal restraint
- Skill level and practicality
- Aesthetics
- Animal carcass disposal



Euthanasia Considerations

- Veterinarians
- Trained veterinary technicians
- Law enforcement officers
- Animal control officers

Who may legally perform euthanasia in an emergency shelter?

- The possession and use of 'Controlled Substances' as defined by the Drug Enforcement Agency (DEA) requires a DEA license.
- Veterinarians working in an emergency shelter must provide their own controlled substances for anesthesia and euthanasia under their DEA license



Controlled Substances

- Dogs and cats
 - Injectable agents preferred
- Birds
 - Cervical dislocation, carbon dioxide, injectable agents
- Horses
 - Injectable agents, gunshot
- Livestock
 - Captive bolt, gunshot, injectable agents
- Wildlife
 - Gunshot, injectable agents

Euthanasia Methods

AVMA Guidelines on Euthanasia (2007)

- Barbiturates

- Sodium pentobarbital (DEA schedule II drug)

- Routes of administration

- Intravenously preferred

- Intraperitoneal – when IV not possible

- Intracardiac – only if animal heavily sedated

- Potassium Chloride

- May only be used for euthanasia if the animal is under a general anesthetic

Injectable Euthanasia Agents

- Nicotine
- Strychnine
- Cleaning agents, solvents
- All neuromuscular blocking agents

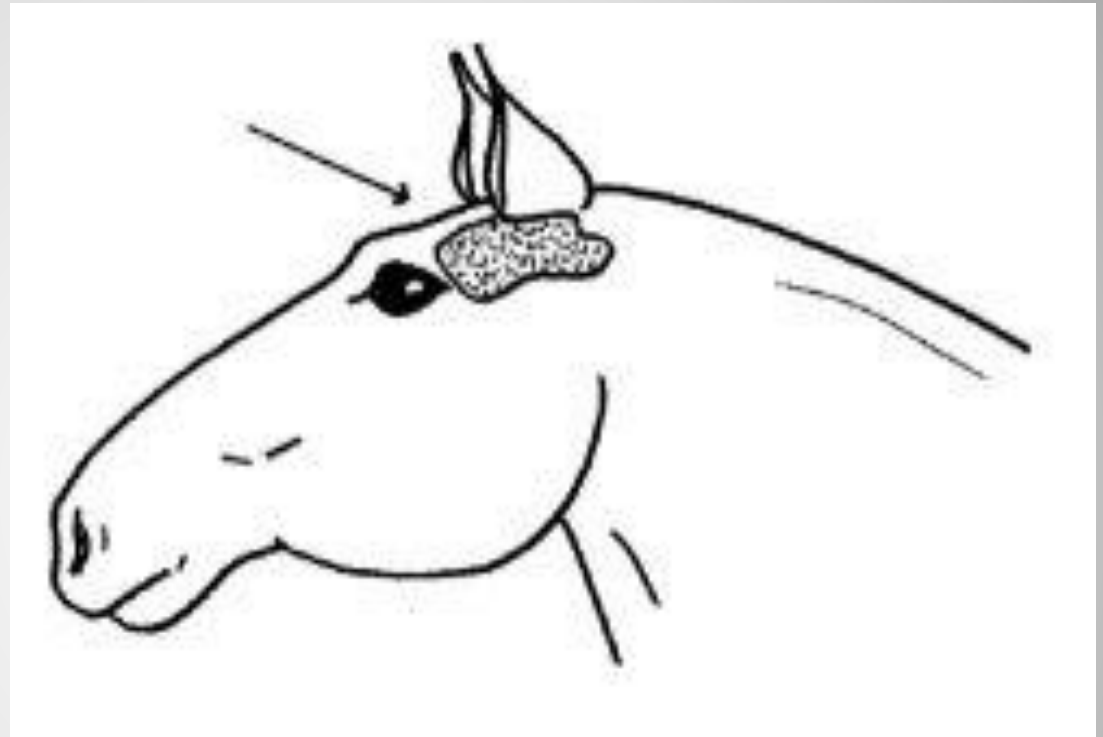
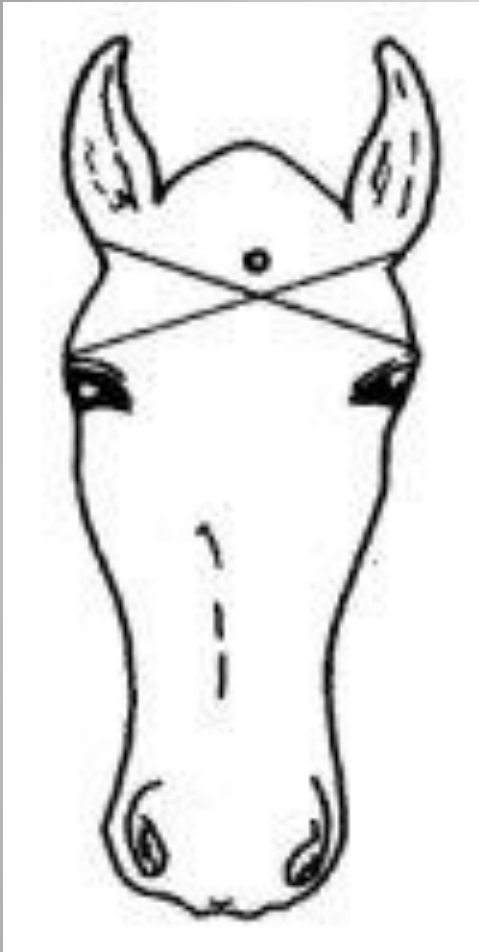
All methods of euthanasia must meet the AVMA Guidelines on Euthanasia (2007)

Unacceptable Injectable Substances

- Education of owner if present
- Signed consent
- Animal identification
- Euthanasia method
 - private area
 - sedation
 - preplaced IV catheter?
- Incise chest post euthanasia to induce a pneumothorax and ensure no recovery.

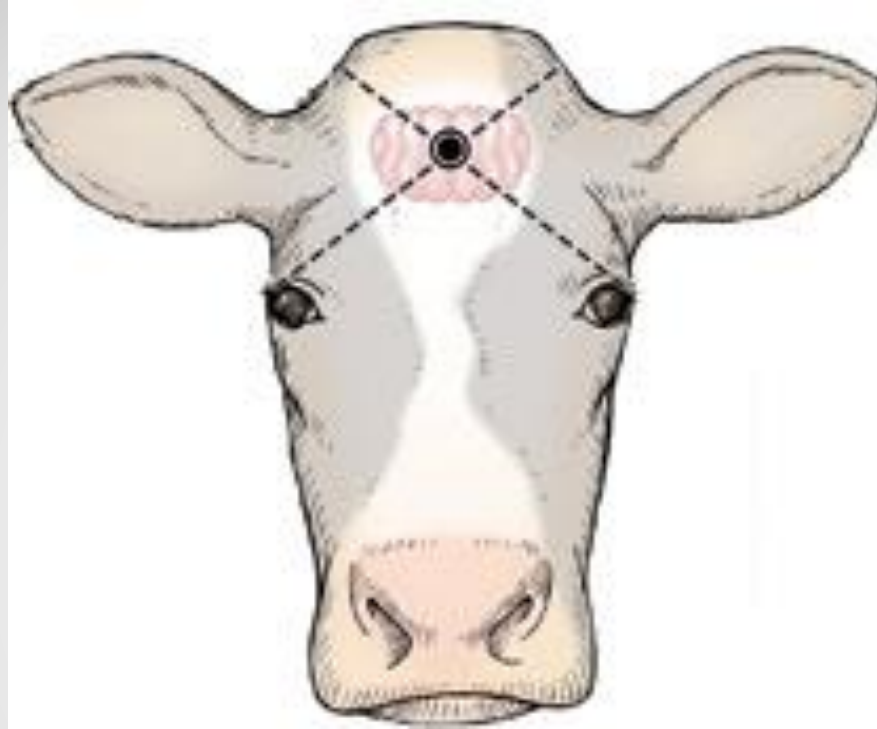


Preparation for Euthanasia



Placement of gunshot- equine

http://www.omafra.gov.on.ca/english/livestock/horses/facts/info_euthanasia.htm#gunshot



<http://vetmed.iastate.edu/vdpam/extension/dairy/programs/humane-euthanasia/gunshot-or-captive-bolt>
<http://www.aabp.org/resources/euth.pdf>

Placement of gunshot - cattle

- Animals euthanized with injectable chemicals must be appropriately disposed
 - Prevent poisoning should other animals gain access to the carcasses
- Look to laws of local jurisdiction regarding notification of owner, holding of carcass

Carcass Disposal Issues

http://www.avma.org/issues/animal_welfare/euthanasia.pdf

http://www.agrosecurity.uga.edu/annexes/Annex05_Euthanasia.pdf

References

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