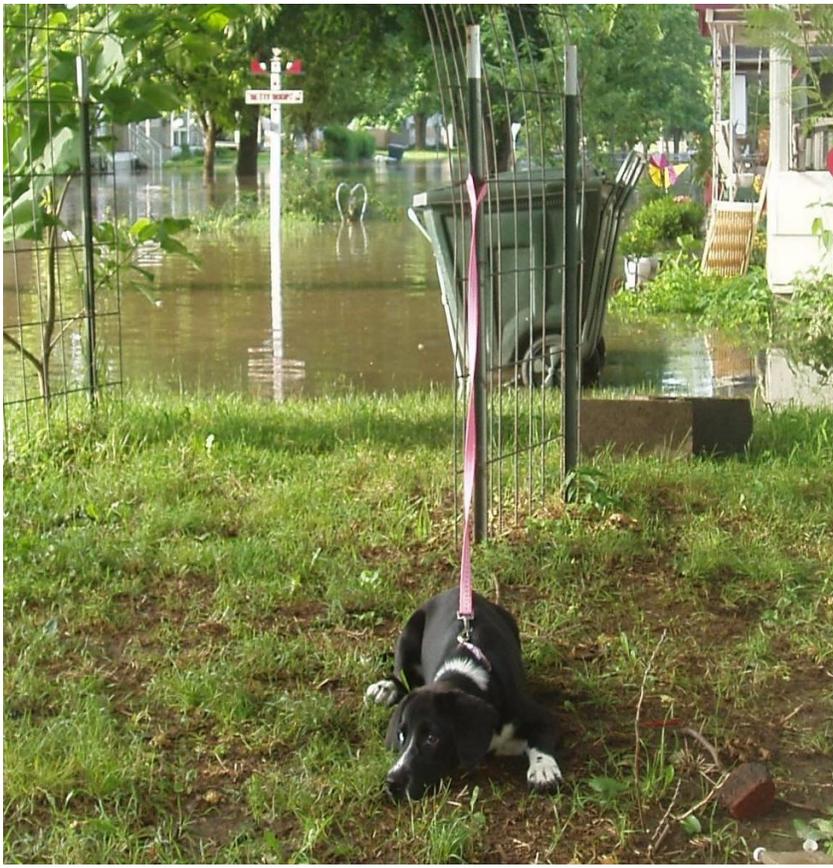


# Colorado Community Animal Response Training

Module 7: Overview of Animal Handling

Module 8: Hazardous Materials and Responder Safety



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**MODULE 7:**  
**OVERVIEW OF ANIMAL HANDLING**

# Module Objectives: Animal Handling

1. Describe the basic physical and instinctive differences between prey and predator animals.
2. Describe key handling, transportation and safety issues in dogs and cats.
3. Identify key handling, transportation and safety issues for other common companion animal types.
4. Identify key handling and safety issues related to common livestock species.

# Predators

## Vision

- Binocular (both eyes used together)
- Depth Perception
- Tracking/Focus

## Instincts

- Hunt
- Chase
- Kill
- Individual or Small Pack/Pride



# Prey

## Vision

- Wide Field
- Maximum Field
- Defense

## Instincts

- Herd
- Escape
- Protect Young



# Predator vs. Prey







# Domestication

Breeding for compliance, trust, calm

- = selection against survival instincts

Predators: selection for non-dominant, juvenile behavior

Selection for food, fiber or work traits



# Companion Animal Issues



# Canine Body Language



Not the same as human body language

Some breeds harder to interpret



# Calm/Relaxed Signs

No sustained direct eye contact

Ears relaxed

Tail wagging

Natural stance

- Not crouched

Small pupils



# Happy/Playful



Wagging tail

Play bows

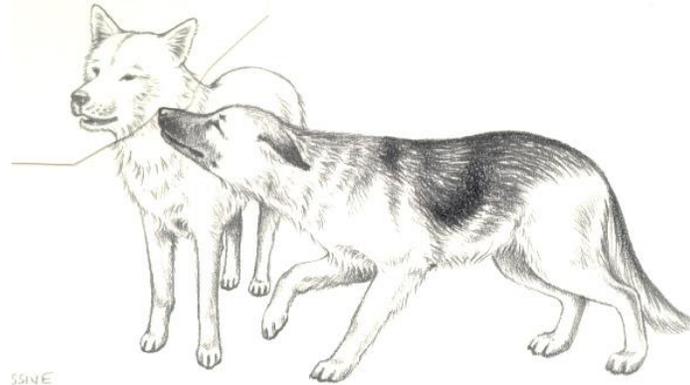
May bark and jump around



# Canine Greetings



Normal Male Greeting



Submissive dog greeting another dog

SSINE  
REETS  
ANT

Must allow time for canine formalities to proceed

Drawings courtesy of ASPCA

# Fearful



Crouched (may roll over completely)

Tail tucked, ears pinned back

Hackles may be up

Whining/vocalization

Urination, defecation

Shaking, panting

Same signs as pain



# Submission

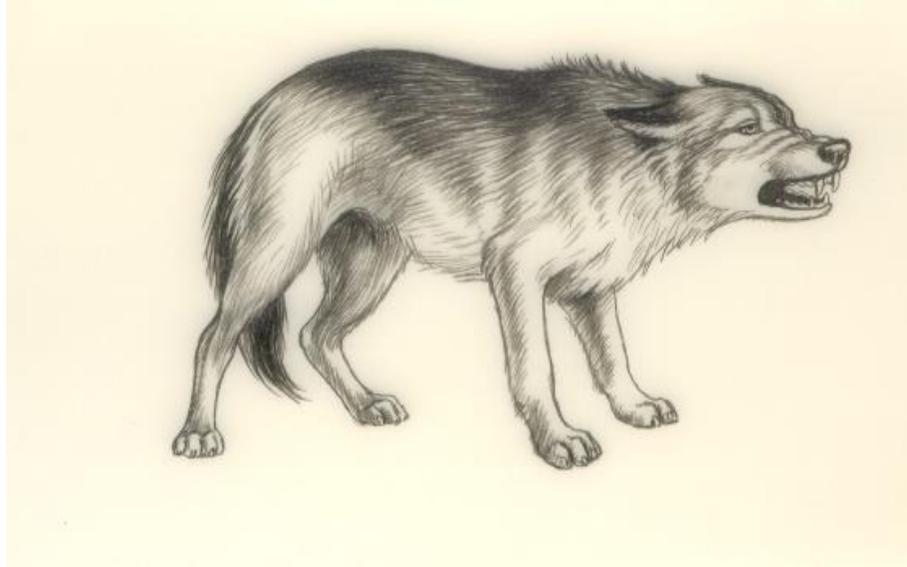


Full canine submission

Very important in K-9 social interactions

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

# Fearful and Aggressive



Fearful, but showing willingness to bite

Dangerous, but often can diffuse fear with calm, and very gradual approach

# Aggression – Territorial, Protective, Possessive

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**



# Aggression – Fear, Defensive



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 Not Showing Aggression:

## 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

# BSDR Technique

**B**ark- realize a dog is present

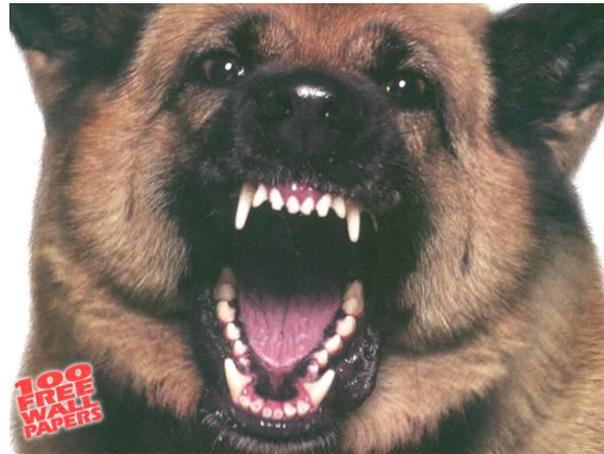
**S**top- halt all forward movement. Do snapshot.

**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.

# What am I thinking?



# For Dogs Showing Overt Aggression

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”



# Restraint

## Leashes

- Slip-type
- DO NOT USE LEASHES THAT ATTACH TO THE COLLAR
  - You may wind up holding a leash and a collar and chasing a dog
- Improvised leashes
  - Rope, baling twine, belts, or ????



## Muzzles



Standard Cloth Muzzle

# Cats



# Feline Body Language

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



Note: Cats do not exhibit submissive behavior

# Normal Cats

*Easiest when the owner is present*

For Animal Search and Rescue (ASAR) teams

- 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



# Unhappy Cats

## 5 POINTS of CONTACT

### Weapons

- Four feet with multiple razors
- Mouth full of teeth
- Lightning speed

Cat bites almost always become infected



[premierhand.com](http://premierhand.com)

# Out of Control Cats

Back off-allow to calm down if possible

Protective equipment

- Gloves
  - Double thick or armored
- Heavy Coat
- Eye protection

Fishing nets, blankets

Traps, cat grabbers

A job for professionals



# Handling Cats

Scruffing

Back legs

Nets

Pillow case

Towels

Shoe Boxes



[vetmed.wsu.edu](http://vetmed.wsu.edu)



The less handling the less stress.

# Other Species

Birds, reptiles, amphibians, ferrets, rabbits, rodents, etc.

- Many are temperature sensitive
  - Can't get too cold or too hot
- Many are stress sensitive
- May be difficult to handle
- May be dangerous



# Companion Animal Transportation

## Pet carriers

- Cats
  - Pillow cases
  - Boxes with air holes
- Dogs
  - Leashed

Don't mix animals together

Watch for heat stress



# Livestock Handling



# Equine Handling Methods

## 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



# Cattle



## 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

# Swine



## Large swine

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

# Other Ruminants

Physiologically, a **ruminant** is a mammal of the order Artiodactyla that digests plant-based food by initially softening it within the animal's first stomach, known as the rumen, then regurgitating the semi-digested mass, now known as cud, and chewing it again.

## 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



# Most Common Reasons for Injury

Some major causes of animal handling accidents are:

- fearful, agitated animals
- faulty equipment
- male aggression
- maternal aggression

Reducing fear improves both animal welfare and safety



# Wildlife Issues



Photo by Lassi Kurkijarvi

Colorado Department of Wildlife (CDOW) is the authority for wildlife issues

## Support

- Rehabilitation Facilities
- Veterinary Hospitals

Only trained personnel, with permission of CDOW, should attempt to handle or transport wildlife



Photo by Caroline Bennett / Rainforest Action Network

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## MODULE 8:

## HAZARDOUS MATERIALS AND RESPONDER SAFETY

# Module Objectives

1. List the categories of weapons of mass destruction
2. Describe the basic categories of chemical and radiological hazards
3. Describe how to interpret a NFPA diamond hazardous materials warning placard
4. Describe the purpose of a Material Data Safety Sheet
5. Briefly describe animal decontamination
6. Describe the four levels of PPE
7. Briefly describe basic responder safety concerns
8. Briefly describe the potential mental health impacts of critical incident stress on responders and victims
9. Describe why cultural competency is important in dealing with incident stress

# Weapons of Mass Destruction

Intentional use of CBRNE weapons:

Chemical

Biological (people, animals, crops)

Radiological

Nuclear

Explosive



Navy Photo by Photographer's Mate 2nd Class Jim Watson

# Chemical Threats

## Military chemical weapons (Poisoning)

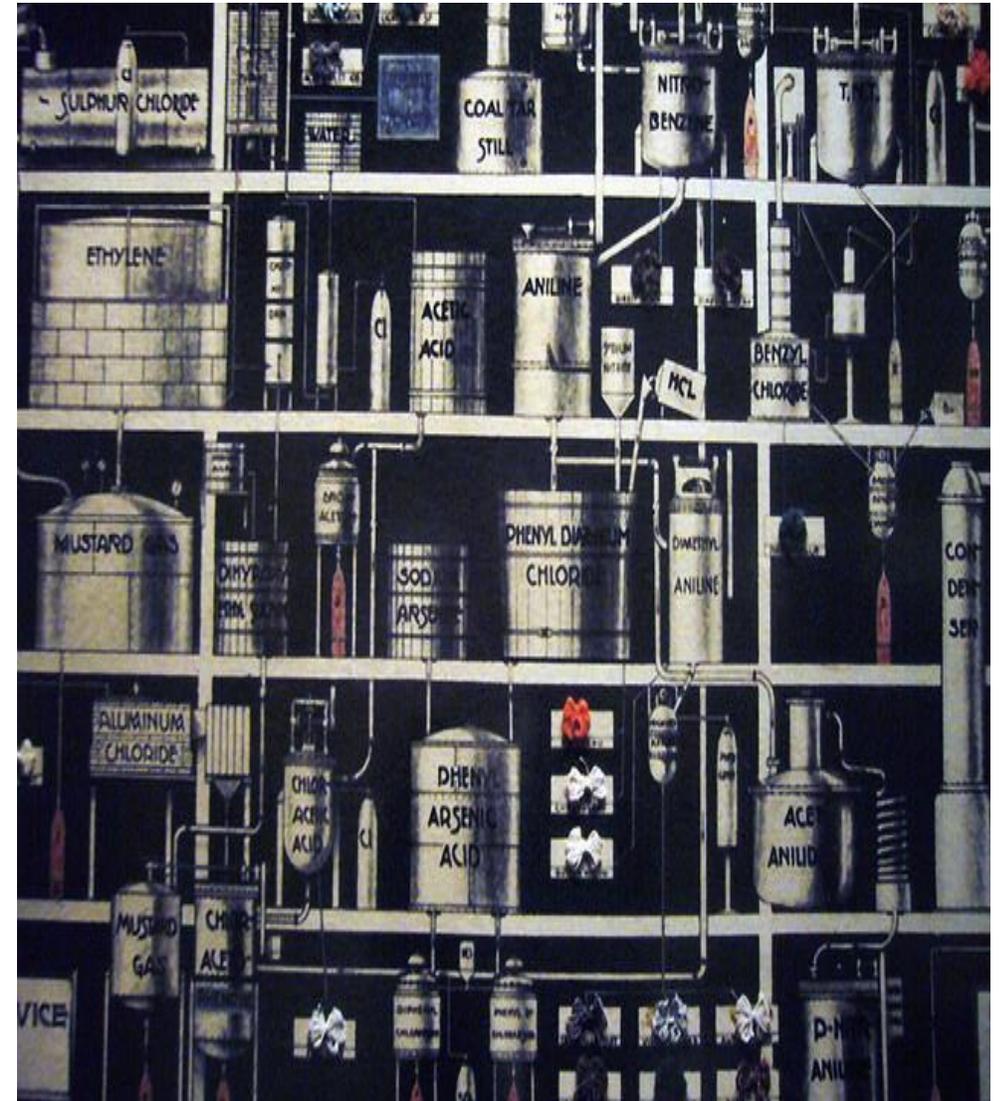
- Nerve agents (AKA nerve gas)
  - Tabun, Sarin
  - Asphyxiation
- Vesicant or blistering agents
  - Mustard gas
  - Chemical burns
- Blood agents
  - Cyanide compounds
  - Absorbed into blood through inhalation or ingestion

## Industrial/other chemicals

- Chlorine, phosgene, ammonia, nitric acid
- Pesticides

## Other

- Methamphetamine by-products, mace, tear gas



Chemical Warfare Museum

# Tokyo Subway Attack, 1995



news.bbc.co.uk

Sarin (nerve agent)

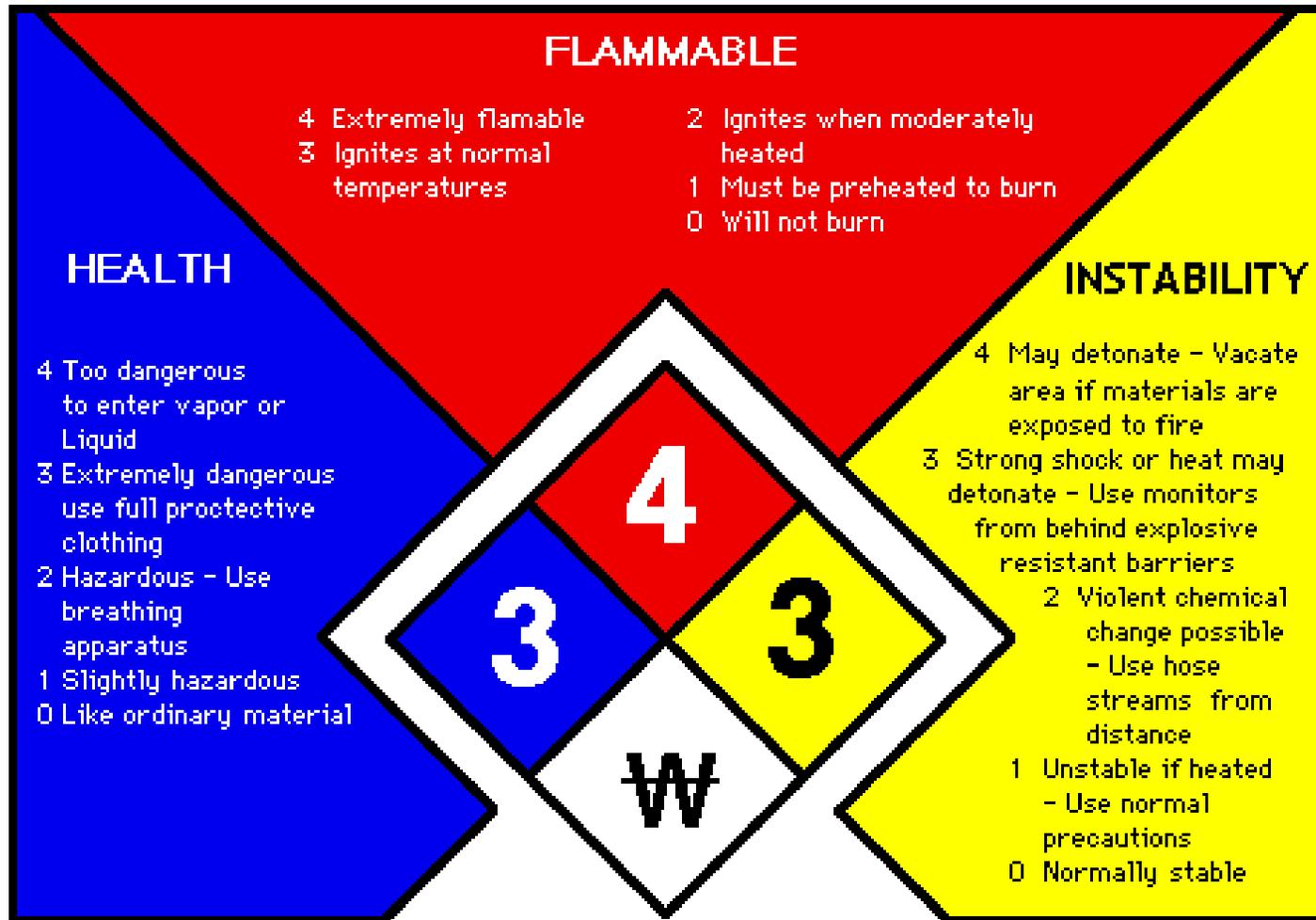
AUM Shinrikyo group

12 deaths

990 treated

9000 in impact area

# NFPA Hazardous Material Diamond



This safety labeling guide graphically explains the National Fire Protection Association's *Hazard Identification Coding System*

# Material Safety Data Sheets (MSDS)

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



RTKC03



RTKC01



RTKC01S

Every company that manufactures or distributes hazardous chemicals in the United States must prepare a Material Safety Data Sheet (MSDS). Development of MSDS's was mandated by the Occupational Safety and Health Administration (OSHA) in their Hazard Communications Standard 29CFR 1910.1200. This standard is commonly referred to as the Right-To-Know Law. The purpose of this OSHA standard is "to ensure that the hazards of all chemicals produced or imported are evaluated, and that information concerning their hazards is transmitted to employers and employees. This transmittal of information is to be accomplished by means of comprehensive hazard communication programs, which are to include container labeling and other forms of warning, material safety data sheets (MSDS's) and employee training."

# Radiological Threats

Industrial or medical accident

Event at a nuclear reactor or weapons facility

Intentional radiological contamination of food, water and the environment

Radiological dispersion device (RDD)

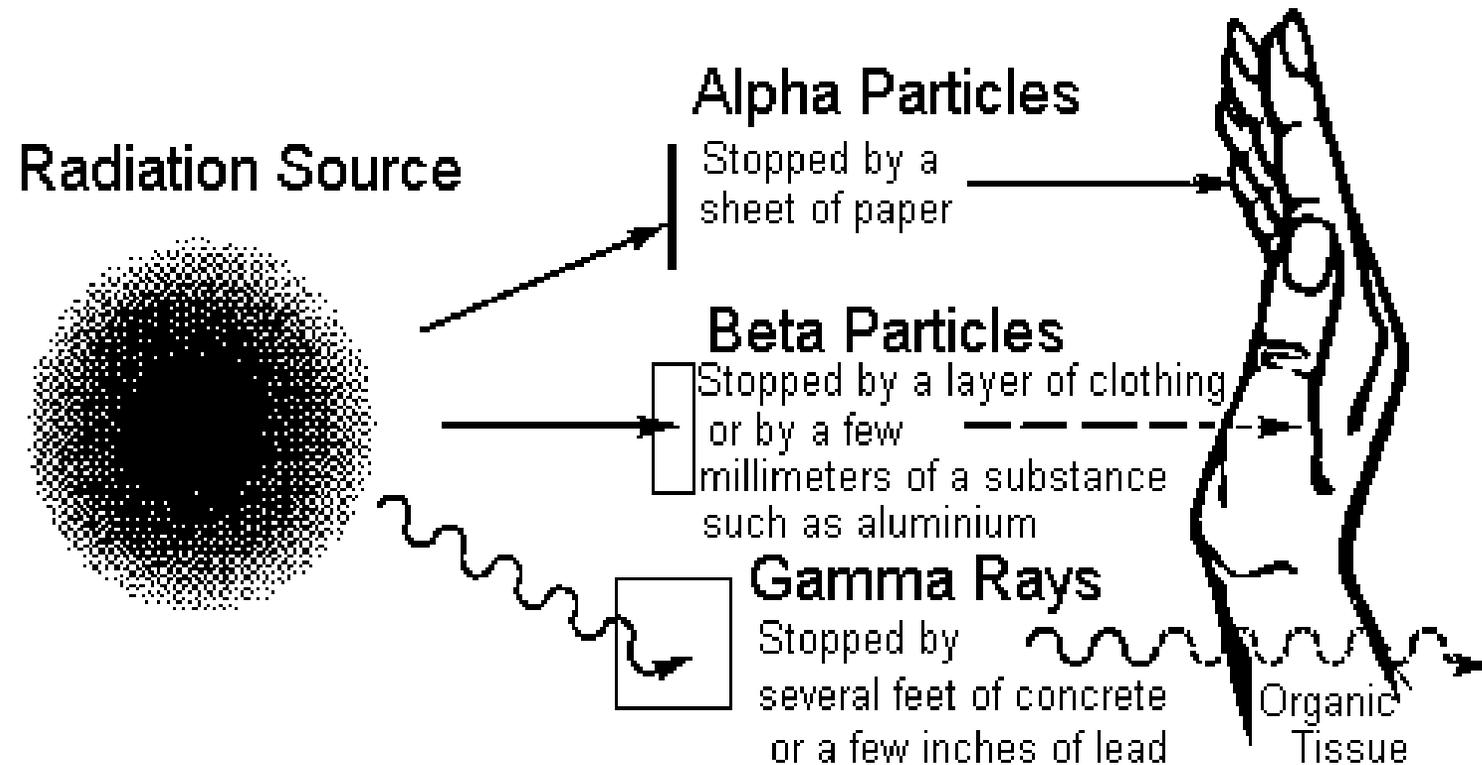


theguardian.com

“Dirty Bomb” (combines radioactive material with conventional explosives)

Nuclear blast event

# Radiological Agents



# Radiological/Nuclear - Impact on Animals and Agriculture

## Direct casualties

## Companion animals

- Evacuation
- Decontamination
- Sheltering
- Animal search and rescue (SAR)
- Euthanasia

## Livestock

- Decontamination versus euthanasia and disposal
- Food safety issues

*Resource prioritization!*



# Radiation Protection Principles

**Time.** The shorter the time in a radiation field, the less the radiation exposure. Work quickly and efficiently. A rotating team approach can be used to keep individual radiation exposures to a minimum.

**Distance.** The farther a person is from a source of radiation, the lower the radiation dose. Do not touch radioactive materials. Use shovels, brooms, etc., to move materials to avoid physical contact.

**Shielding.** Although not always practical in emergency situations, shielding offered by barriers can reduce radiation exposure.



# Decontamination

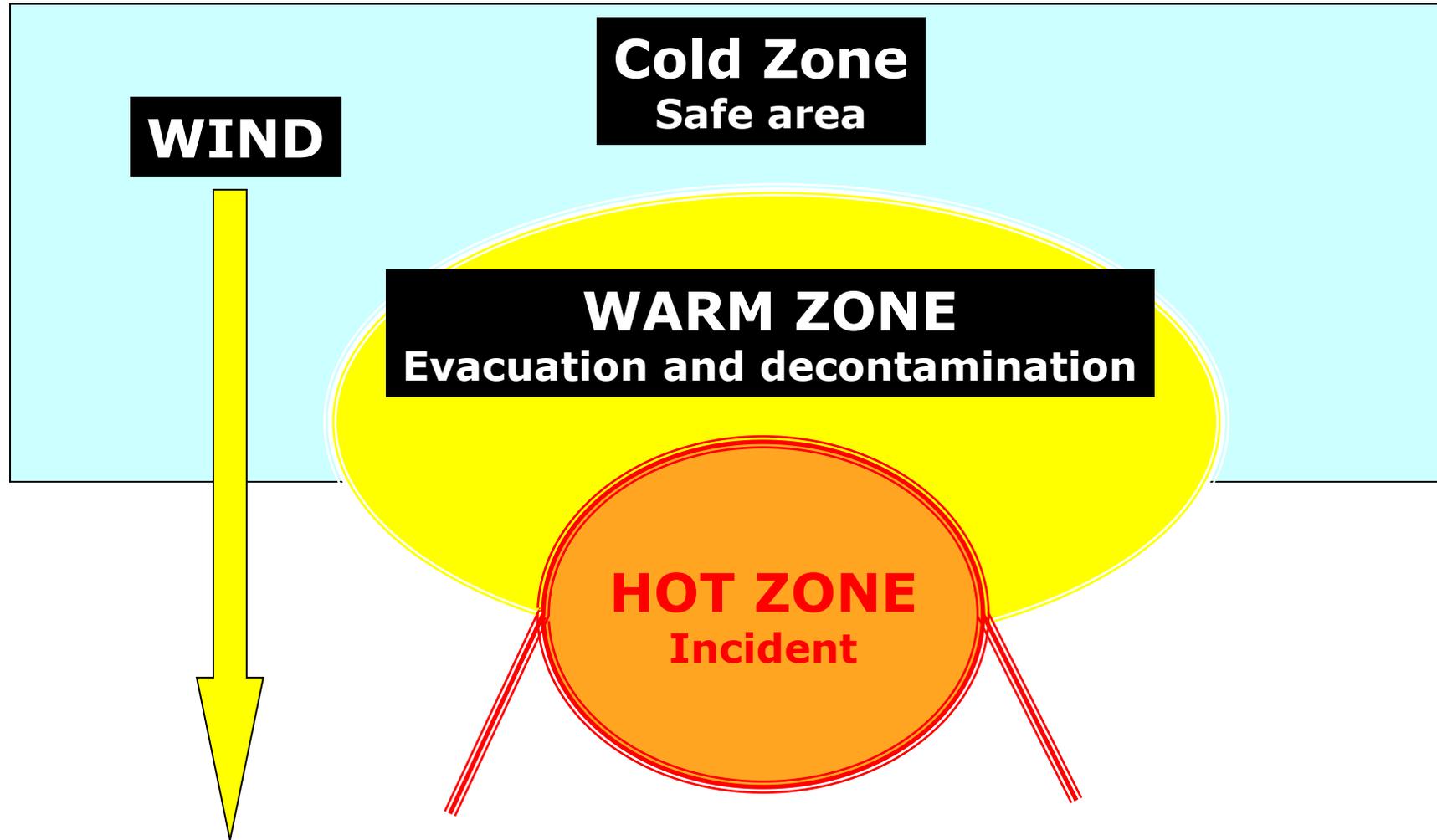
## Vehicles and Premises

### Two step process

- Cleaning
  - 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 Zones



# Animal Decontamination

## Considerations

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



State of Massachusetts Animal Response Team  
concord.patch.com

**Euthanasia may be a reasonable decision in some cases**

# Decontamination Resources

HAZMAT equipment

Fire-fighting equipment

Food/agricultural operations may have decontamination equipment

Limiting factors:

- Personal protective equipment
- Trained responders
- Supplies



wmdart.org



# 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

# General OSHA Requirements

Section 5(a)(1) of the OSH Act, often referred to as the General Duty Clause, requires employers to ***"furnish to each of his employees employment and a place of employment which are free from recognized hazards that are causing or are likely to cause death or serious physical harm to his employees"***

Section 5(a)(2) requires employers to "comply with occupational safety and health standards promulgated under this Act"



# What is PPE?

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



# Level A

Highest level of respiratory, skin, eye, and mucous membrane protection

Fully-encapsulated, vapor-tight, chemical-resistant suit

Chemical-resistant boots

Chemical-resistant inner/outer gloves

Coveralls, hard hat

Self-contained breathing apparatus (SCBA)



Level A protection is used for the most serious threats, where vapor and contact are both substantial hazards. Veterinary practices will probably never need level A protection in the course of normal clinical activities.

# Level B

Highest level of respiratory protection

Lesser degree of skin and eye protection

Disposable chemical-resistant coveralls or fully-encapsulated, non-vapor-tight suit and self contained breathing apparatus (SCBA)



Level B maintains full respiratory protection, but with a lesser degree of vapor protection for the skin. Veterinary practices will probably never have a need for level B protection during normal clinical situations. In some cases, however, level B could be used by animal health emergency response personnel in an initial agro-terrorism investigation.

# Level C

Lesser level of respiratory, skin, eye, and mucous membrane protection

Full face-piece or half-mask respirator

Powered, air-purifying, respirator (PAPR) or filter respirator

Chemical resistant clothing



Level C is similar to Level B, except that instead of supplied air, a powered air-purifying respirator is used for respiratory protection.

# Level D

Ranges from a work uniform to basic biological barrier protections

Respiratory protection:

- None or dust mask

No vapor protection

Simple barrier skin protection

Note: Humans working in PPE can scare many animals



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

# Risk Assessment

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



# Basic Animal Health Bio-Protection

## Barrier apparel

- Tyvek protective clothing, apron
- Footwear

## Gloves

## Head gear

## Goggles

N-95 or better respirator when needed



Typically ranges from level C to D

# Responder Health and Safety

If you don't think you should.....**DON'T**

If asked to do something that you are not qualified for or think is dangerous....**DON'T**

**DO.....**

Find appropriate personnel and equipment

Seek appropriate supervision

Report to safety officer if unresolved





# Animal Issues for Survivors

## General emotional trauma

- Helplessness
- Emotional attachment to animals

## Displacement

- Housing and care concerns

## Loss

- Animals may be missing or status unknown

## Death

- Human and animal
- Livestock depopulation impacts





Thank you....



Photo by Beverly Goodwin

For more information contact Debrah Schnackenberg, Director Disaster Services Program  
at 303.539.7633 or [debrahschnackenberg@petaidcolorado.org](mailto:debrahschnackenberg@petaidcolorado.org)