



Utility Public Safety Alliance  
Regional Meetings 2017

# Hazardous Materials/Emergency Response



**COLORADO**

Division of Fire  
Prevention & Control

Department of Public Safety

# Objectives

- Basic Response Objectives – Before Emergency Services Arrive
  - Keep Yourself Safe
  - Help a Brother/Sister Out

# Hazardous Materials Management Processes

- Cores of all systems are basically the same:
  1. Protection of Life
  2. Property
  3. Environment
- Several different management processes exist
  - 8-Step Process
  - GEDAPER Process
  - DECIDE Process

DECIDE	8-Step Process	GEDAPER	Hazmat Strategic Goals
Detect the presence of the hazardous materials	Site management and control	Gather information	Isolation
Estimate the likely harm	Identify the problem	Estimate potential course and harm	Evacuation
Choose a response objective	Hazard and risk identification	Determine strategic goals	Notification
Identify the action	Select personal protective clothing and equipment	Assess tactical options and resources	Product identification
Do the best possible	Information management and resource coordination	Plan and implement chosen actions	Determination of appropriate personal protective equipment
Evaluate your progress	Implement response objectives	Evaluate	Decontamination
	Decontamination	Review	Spill and leak control
	Terminate the incident		Termination

Sources: The information on the 8-Step Process<sup>®</sup> is from *Managing the Incident*, Gregory Noll, Michael Hildebrand, Jim Yvorra, Fire Protection Publications, Oklahoma University, 1995. The information on the GEDAPER<sup>®</sup> is from *Hazardous Materials Strategies and Tactics*, David Lesak, Prentice Hall, 1998. Both systems reproduced with permission of the authors.

## Hazardous Materials Management Systems

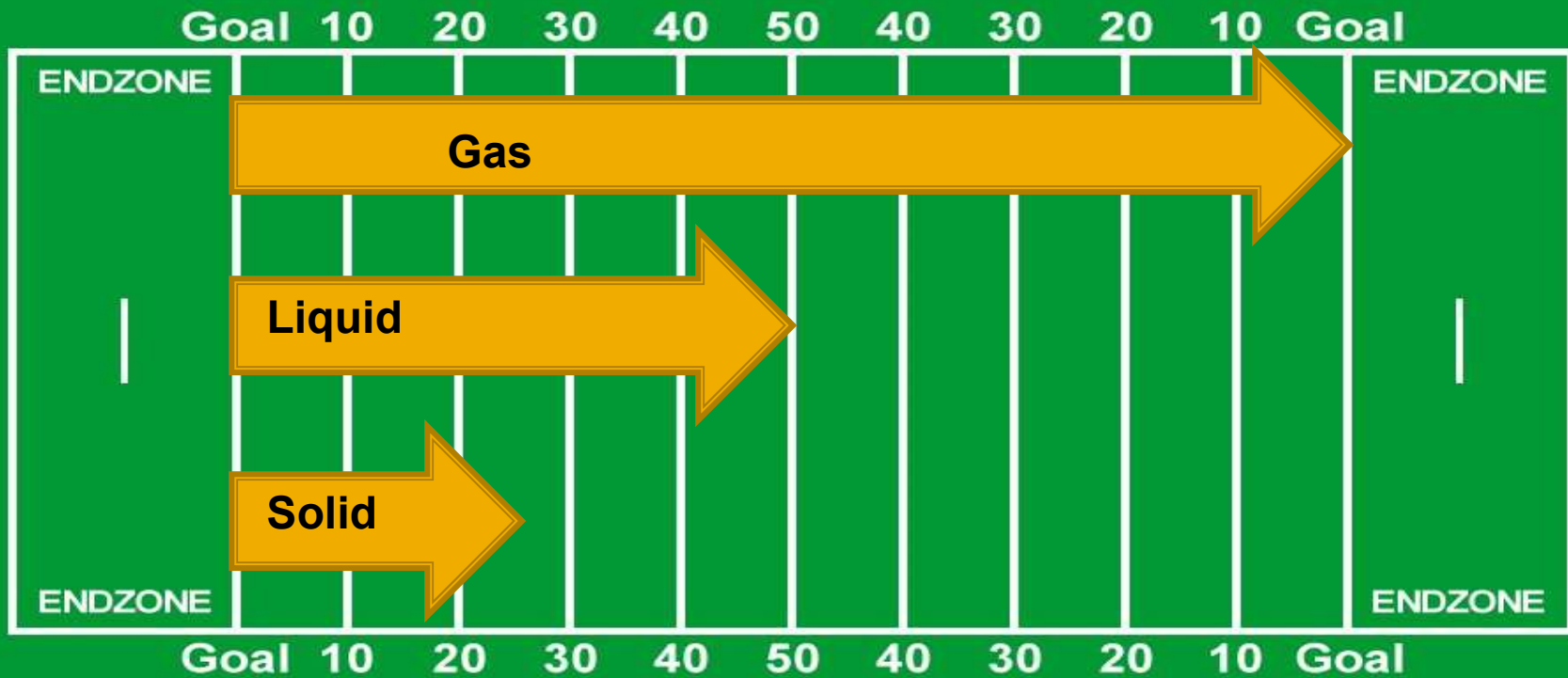
# Isolation and Protection

- The *most important* tasks
- ISOLATE and DENY ENTRY:
  - Barrier tape
  - Use of Law Enforcement
  - Use of Vehicles to Block Access
- Control Ignition Sources
  - Vehicles
  - People



Doing the Limbo Dance

# Establishing Zones: FOOTBALL RULE!



IMMEDIATE Isolation Distances

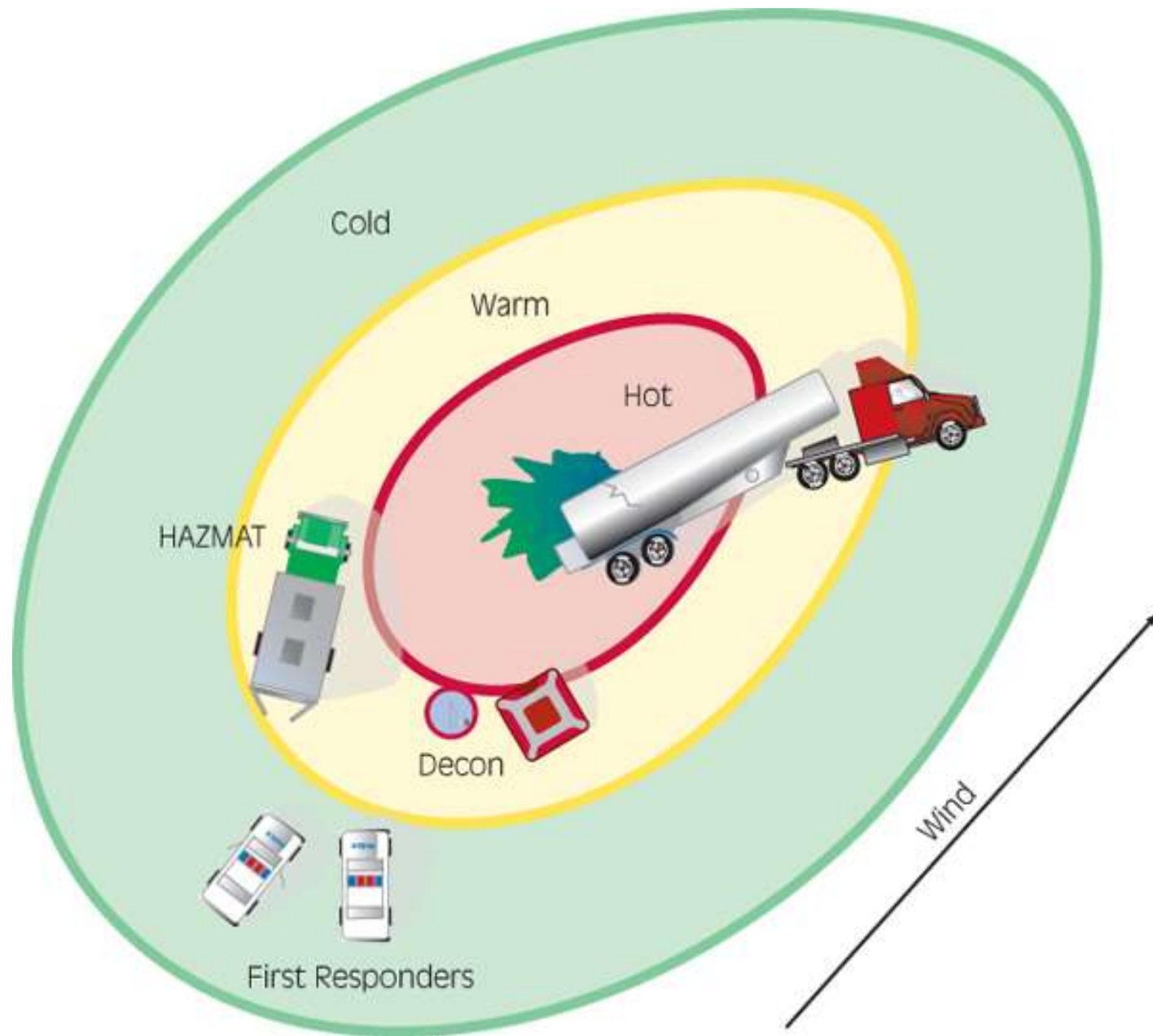


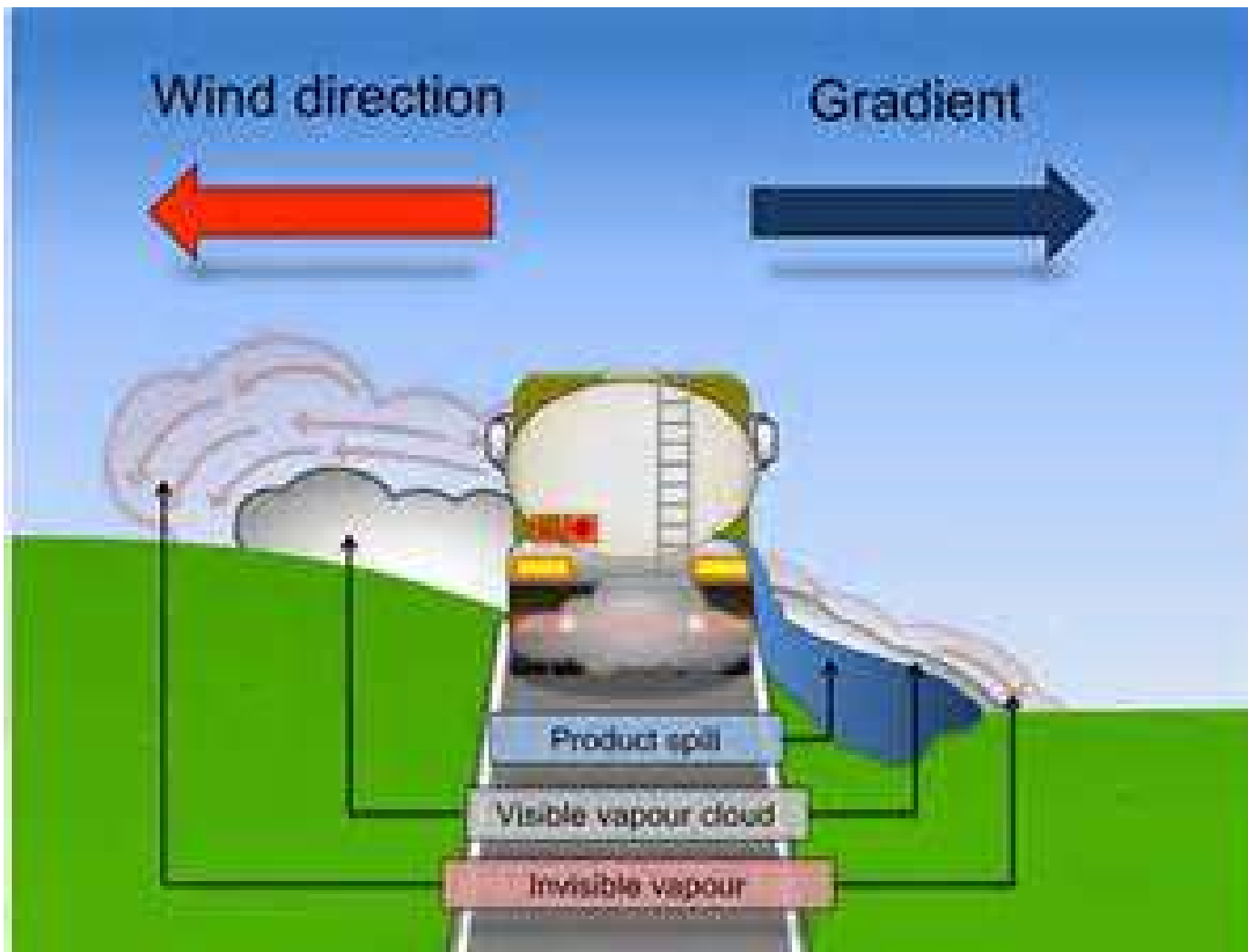
# Rescue

- Rescue of victims from hazard area can be extremely controversial
- Evaluate incident

















Respond uphill and upwind from the release



# BOMB THREAT STAND-OFF CHART

Threat Description Improvised Explosive Device (IED)	Explosives Capacity <sup>1</sup> (TNT Equivalent)	Building Evacuation Distance <sup>2</sup>	Outdoor Evacuation Distance <sup>3</sup>
 Pipe Bomb	5 LBS	70 FT	1200 FT
 Suicide Bomber	20 LBS	110 FT	1700 FT
 Briefcase/Suitcase	50 LBS	150 FT	1850 FT
 Car	500 LBS	320 FT	1500 FT
 SUV/Van	1,000 LBS	400 FT	2400 FT
 Small Moving Van/ Delivery Truck	4,000 LBS	640 FT	3800 FT
 Moving Van/ Water Truck	10,000 LBS	860 FT	5100 FT
 Semi-Trailer	60,000 LBS	1570 FT	9300 FT



Explosive Involved In Fire or has the Possibility of Fire Impinging on Material will Require Evacuation of 1 Mile.

# Evacuations Vs. Sheltering in Place

- Explosive Material
  - Evacuate
  - Quickly Remove From Area
- Toxic Materials – Especially Toxic
  - Shelter In Place A Possibility
  - Shut off air handling systems, Close Windows and Doors

# Wet – Naked – Wet!

- Emergency Decon
  - Simple process

