

# Less Lethal Munitions



CVPD Less Lethal Course  
2020

# Definition of Less Lethal Force

Lawful application of force delivered with the intent to subdue or render non-threatening. It is accepted that the probability exists for bodily harm--or even death--to occur. However, it must also be accepted that the application of such force may be the only alternative to using lethal force to stop the subject's actions.

# Definition of Less Lethal Munitions/ SIMs

Extended Range, Kinetic Energy Impact Munitions are capable of delivering a stunning blow that may be used from a distance to *compel* a subject to cease actions when officers reasonably believe that they are a viable option for resolving the situation at hand.

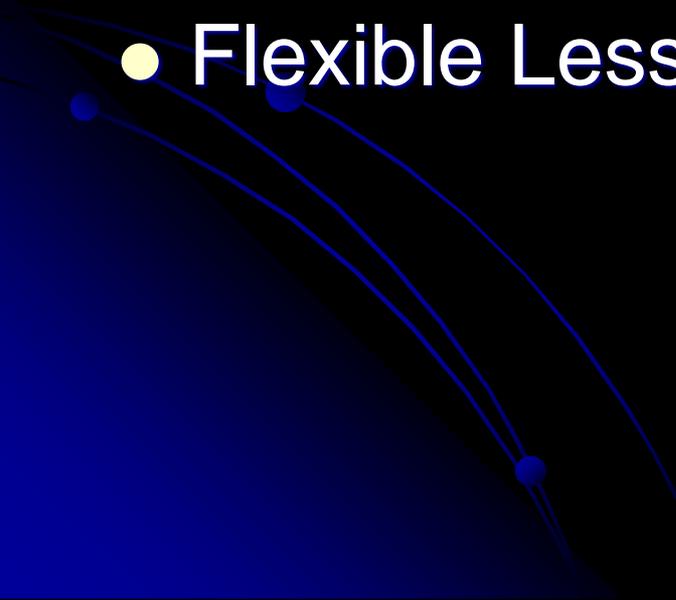
# Less-Lethal Munitions

- Beanbag/less lethal beginnings
- Evolution of beanbag/SIMs
- Specific Types
- Description-Ranges

# May be used for:

- Riot/Crowd Control
- Corrections
- Armed Suspects
- Mentally Challenged Subjects
- Non-compliant Subjects
- Tactical Operations

# Two Basic Classifications

- Non-Flexible Less Lethal Munitions
  - Flexible Less Lethal Munitions
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# Less Lethal Launching Systems

- Hand Held
- 37/40mm Launchers
- 12ga Pump Launchers
- Encapsulated Launchers



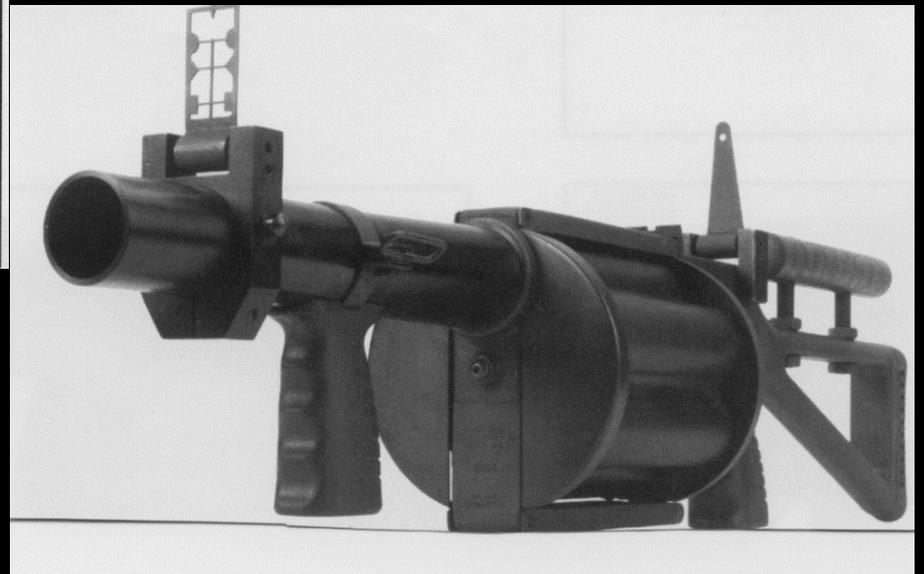
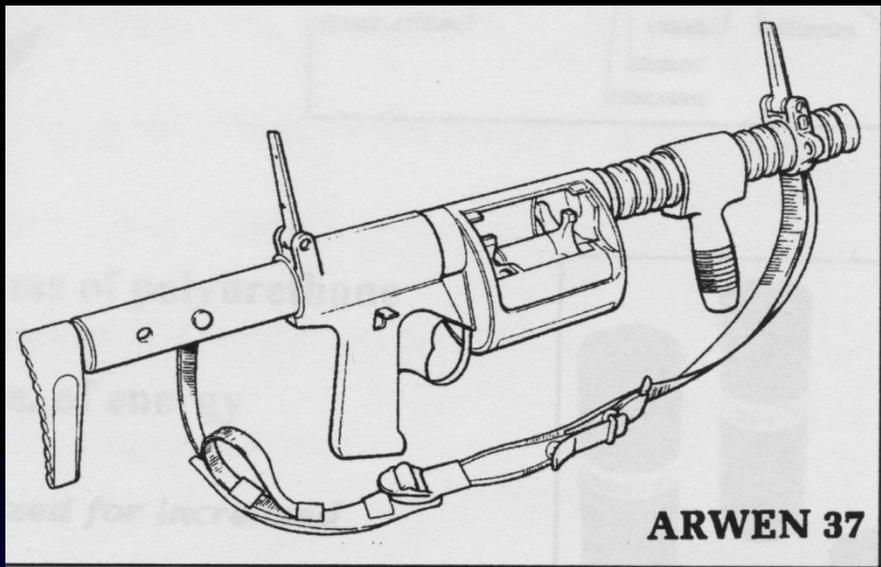
# 37/40MM Launchers



# 37/40MM Launchers



# ARWEN & SAGE Launchers



# 37MM/40MM Munitions

- Wood batons
- Foam batons
- “Stinger” rounds
- Arwen & Sage rounds

# 37mm/40mm Munitions



# 40MM “Sponge” Rounds

- Encapsulated projectile launchers
- Pepperball launcher



# Less Lethal Launching Systems

- FN Herstal 303 launcher

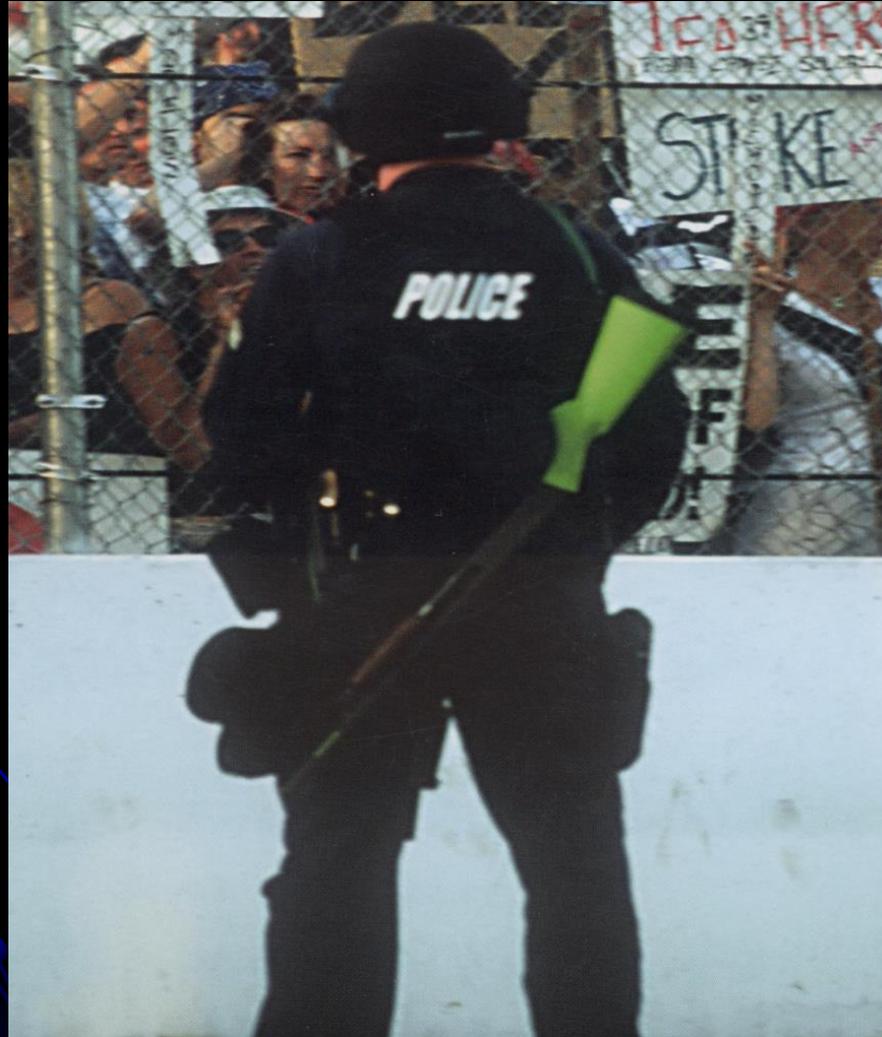


# Less Lethal Launching Systems

## Pepperball launcher



# Dedicated Less Lethal Launchers



# Less Lethal Launching Systems

## 12 gauge pump-action launchers (ex-shotguns)

- Semi-auto shotguns won't function properly with less lethal munitions
- Suggested accessories:
  - Tactical light
  - Tactical sling, (orange)
  - Expandable pistol grip buttstock (orange)

# 12 Gauge Launcher Payload Examples

- “Stingers”
- Rubber slugs
- Fin stabilized
- Bean bags

# Beanbag Less Lethal



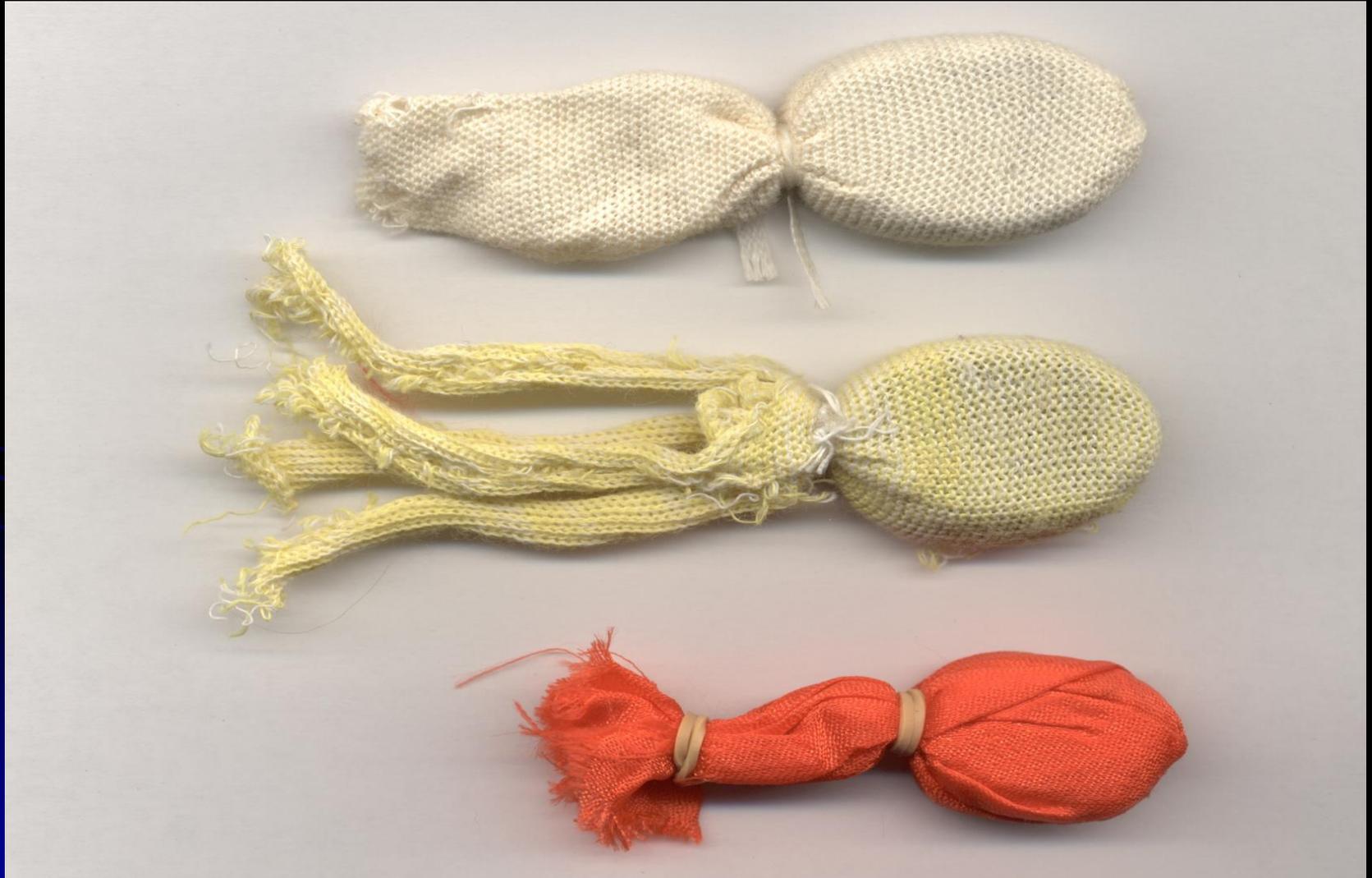
- Introduction
- System components
- Tactics/targeting
- Training issues
- Test/certification

# Bean Bag Projectiles

**“Super Sock 2581” Design is the newest type of beanbag munition**

- **Better flight stability**
- **Improved accuracy & reliability**
- **Reduced distance limitations**
- **Less likelihood of penetration**

# Bean Bags



# Beanbag Advantages

- Less-Lethal
- Very accurate-little recoil
- Realistic training
  - Real-world applications
  - No formal range required
- Psychological effects

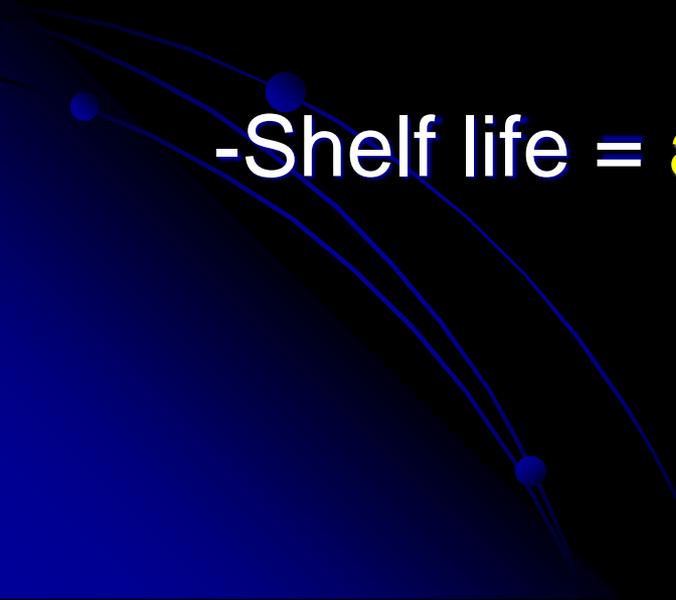
# Beanbag Disadvantages

- Dedicated system
- May not work on heavily clothed or padded suspects
- Staged system-not always available
- Psychological effect may be limited

# 12 Gauge Bean Bag Round

- CTS Model 2581 “Super-Sock”
- Bag material = **2 ply ballistic tubular knit material (lead birdshot)**
- Projectile weight = **615 grains (40 grams)**
- Muzzle velocity = **280 FPS (113 ft/lbs)**
- @ 20 yards = **269 FPS (95(ft/lbs)**
- Impact area = **1.55 inches**

# 12 Gauge Bean Bag Round

- Optimum range = **5 – 20 yards**  
(minimum safe distance **5 yards/15 feet**)
  - Accuracy = **3" groups @ 20 yards**
  - Shelf life = **approximately 5 years**
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# 12 Gauge Bean Bag Round

- **Patrol ready-**
  - Empty chamber
  - Hammer forward (slide unlocked)
  - **On safe**
  - 4 shells in tubular magazine

# Examples of Justified Use:

## CVPD Policy 308.9:

- ***KINETIC PROJECTILES: THIS DEPARTMENT IS COMMITTED TO REDUCING THE POTENTIAL FOR VIOLENT CONFRONTATIONS. KINETIC ENERGY PROJECTILES, WHEN USED PROPERLY, ARE LESS LIKELY TO RESULT IN DEATH OR SERIOUS PHYSICAL INJURY AND CAN BE USED IN AN ATTEMPT TO DE-ESCALATE A POTENTIALLY DEADLY SITUATION.***
- Crowd control situations where the group is hostile, aggressive or combative and must be controlled through the use of force.

## **CVPD Policy 309.1**

- **ONLY DEPARTMENT-APPROVED KINETIC ENERGY MUNITIONS SHALL BE CARRIED AND DEPLOYED. APPROVED MUNITIONS MAY BE USED TO COMPEL AN INDIVIDUAL TO CEASE HIS/HER ACTIONS WHEN SUCH MUNITIONS PRESENT A REASONABLE OPTION.**
- **OFFICERS ARE NOT REQUIRED OR COMPELLED TO USE APPROVED MUNITIONS IN LIEU OF OTHER REASONABLE TACTICS IF THE INVOLVED OFFICER DETERMINES THAT DEPLOYMENT OF THESE MUNITIONS CANNOT BE DONE SAFELY. THE SAFETY OF HOSTAGES, INNOCENT PERSONS AND OFFICERS TAKES PRIORITY OVER THE SAFETY OF SUBJECTS ENGAGED IN CRIMINAL OR SUICIDAL BEHAVIOR.**
- **CIRCUMSTANCES APPROPRIATE FOR DEPLOYMENT INCLUDE, BUT ARE NOT LIMITED TO, SITUATIONS IN WHICH:**
- **THE SUSPECT IS ARMED WITH A WEAPON AND THE TACTICAL CIRCUMSTANCES ALLOW FOR THE SAFE APPLICATION OF APPROVED MUNITIONS.**
- **THE SUSPECT HAS MADE CREDIBLE THREATS TO HARM HIM/HERSELF OR OTHERS.**
- **THE SUSPECT IS ENGAGED IN RIOTOUS BEHAVIOR OR IS THROWING ROCKS, BOTTLES OR OTHER DANGEROUS PROJECTILES AT PEOPLE AND/OR OFFICERS.**
- **THERE IS PROBABLE CAUSE TO BELIEVE THAT THE SUSPECT HAS ALREADY COMMITTED A CRIME OF VIOLENCE AND IS REFUSING TO COMPLY WITH LAWFUL ORDERS.**

# Examples of Justified Use:

- Verbal direction/ warning (if feasible)
- Lethal cover officer if the suspect is armed

A VERBAL WARNING OF THE INTENDED USE OF THE DEVICE SHOULD PRECEDE ITS APPLICATION, UNLESS IT WOULD OTHERWISE ENDANGER THE SAFETY OF OFFICERS OR WHEN IT IS NOT PRACTICABLE DUE TO THE CIRCUMSTANCES. THE PURPOSE OF THE WARNING IS TO GIVE THE INDIVIDUAL A REASONABLE OPPORTUNITY TO VOLUNTARILY COMPLY AND TO WARN OTHER OFFICERS AND INDIVIDUALS THAT THE DEVICE IS BEING DEPLOYED.

# Liability

Monetary awards have been paid out in legal settlements arising from use of less-lethal tools:

- Beanbag Rounds
- TASER
- Pepperball
- OC Spray/CS Gas
- Hand/Feet Techniques

# Plakas v. Drinkski (Indiana)

19F.ed 1143 (7th Cir. 1994)

A police officer fatally shot a suspect after being attacked with a fireplace poker.

The court ruled the officer did not have to use non-deadly force before shooting.

The court concluded that where deadly force is justified, there is no constitutional duty to use non-deadly alternatives first.

# Langford v. Gates (Los Angeles)

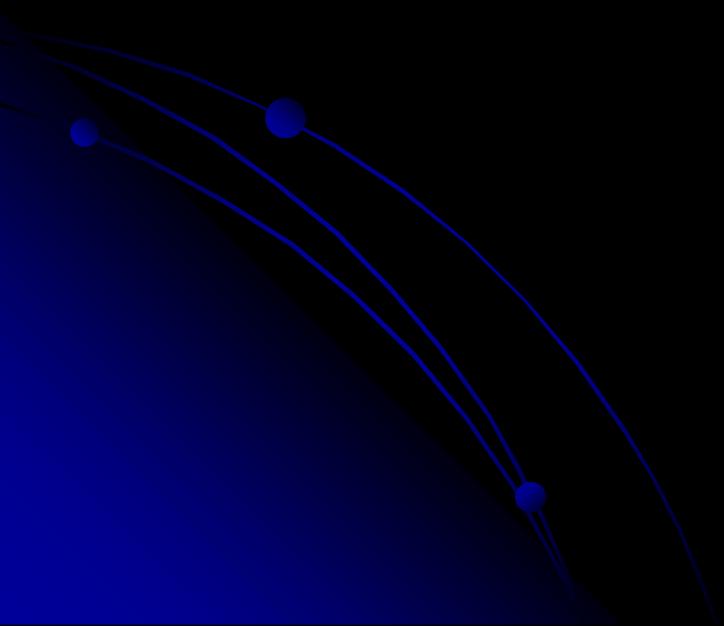
729 P.2nd 21,26 (1987)

Must maintain *proper documentation of training and operational use* of distraction devices

Bottom line:

“IF IT ISN’T DOCUMENTED, IT NEVER HAPPENED...”

# Deorle v. Rutherford



# Deorle v. Rutherford 2001 (9th Circuit)

Suicidal suspect (Butte County, CA) threatened responding deputies with 2x6 board, two hatchets, and later a plastic crossbow doused in lighter fluid which he relinquished after verbal commands from deputies. The suspect then advanced on Deputy Rutherford. The deputy launched bean bag round from 30' without a verbal warning, hitting suspect in the face. Suspect sued for excessive force.

The court found the force used was...used in circumstances that did not justify the failure to warn.

Officers have a duty to warn, if possible, before using any force option, including bean bags.

**“Chula Vista Police, get down on the ground or you’re going to get bean-bagged!”**

# Quezada vs. County of Bernalillo

944F.2d710 (10th Cir., 1991)

Deputy left cover and stood in open parking lot trying to talk down a gun toting suicidal female sitting in her parked car. When the female raised the gun and aimed at the deputy, he shot and killed her.

Court concluded the deputy's negligence was the sole cause of the woman's death "by forcing the deadly confrontation."

Officer may be held liable for putting him or herself in a situation, which requires use of deadly force against an armed suicidal citizen

**IE Officer lacking tactics, cover and escalating the situation.**

# Comparison Chart

<b>System</b>	<b>Muzzle Safe</b>	<b>Minimum Safe Distance</b>	<b>Max Effective Range</b>	<b>Kinetic Impact</b>	<b>On Board Inhibitor</b>	<b>Multiple Effects</b>
<b>Pepperball Projectiles</b>	<b>YES</b>	<b>Point-blank</b>	<b>30-100 ft.</b>	<b>YES</b>	<b>OC/Pepper Powder</b>	<b>YES</b>
<b>Pepper Spray</b>	<b>YES</b>	<b>3 ft.</b>	<b>10 ft.</b>	<b>NO</b>	<b>OC/Pepper Liquid</b>	<b>NO</b>
<b>Impact Rounds</b>	<b>NO</b>	<b>15 ft.</b>	<b>60 ft.</b>	<b>YES</b>	<b>NONE</b>	<b>NO</b>
<b>Tasers</b>	<b>NO</b>	<b>Point-blank</b>	<b>20 ft.</b>	<b>NO</b>	<b>Electric Shock</b>	<b>NO</b>

# Targeting/Tactics

- *Target head, neck, spinal column, and groin only if lethal force can be articulated*
- Evaluate suspect size, clothing, etc.
- Arms, shoulders, thighs, knees, shins
- Adjust targeting if necessary
- Verbal Notice to cover officers

***“BEANBAG, BEANBAG!”***

# Targeting/Tactics

- 3 Target Zones

Primary

Secondary

Lethal Force



- “Effective” range 15-60 feet

\*Anticipate suspect lowering head

# Recommended Target Areas

Officers should consider using the primary target areas in circumstances where death or serious physical injury would not be acceptable

# Secondary Target Areas

Depending upon the situation, officers may be authorized to target other body areas if the use of force is:

- Justified based on the circumstances

**AND**

- Efforts to subdue the suspect using a primary target area are or would be ineffective, inappropriate or too dangerous.

# Primary Target Areas

## **FRONT OF THE BODY:**

**-Arm, from wrist to elbow**

**-Lower abdomen**

**-Upper leg / Quadriceps**

**- Leg below the knee**

# Primary Target Areas

## **REAR OF THE BODY:**

**Buttocks**

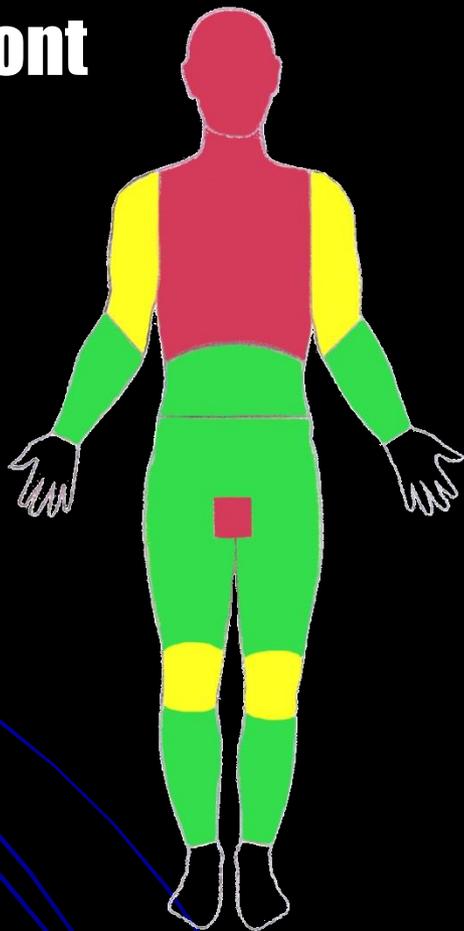
**Arm below the elbow**

**Upper leg / Quadriceps**

**Leg below the knee**

# Bean Bag Target Zones

Front



Back



**Primary**



**Secondary**



**Lethal Force**

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## ***POLICY 308.91 DEPLOMENT CONSIDERATIONS***

***BEFORE DISCHARGING PROJECTILES, THE OFFICER SHOULD CONSIDER SUCH FACTORS***

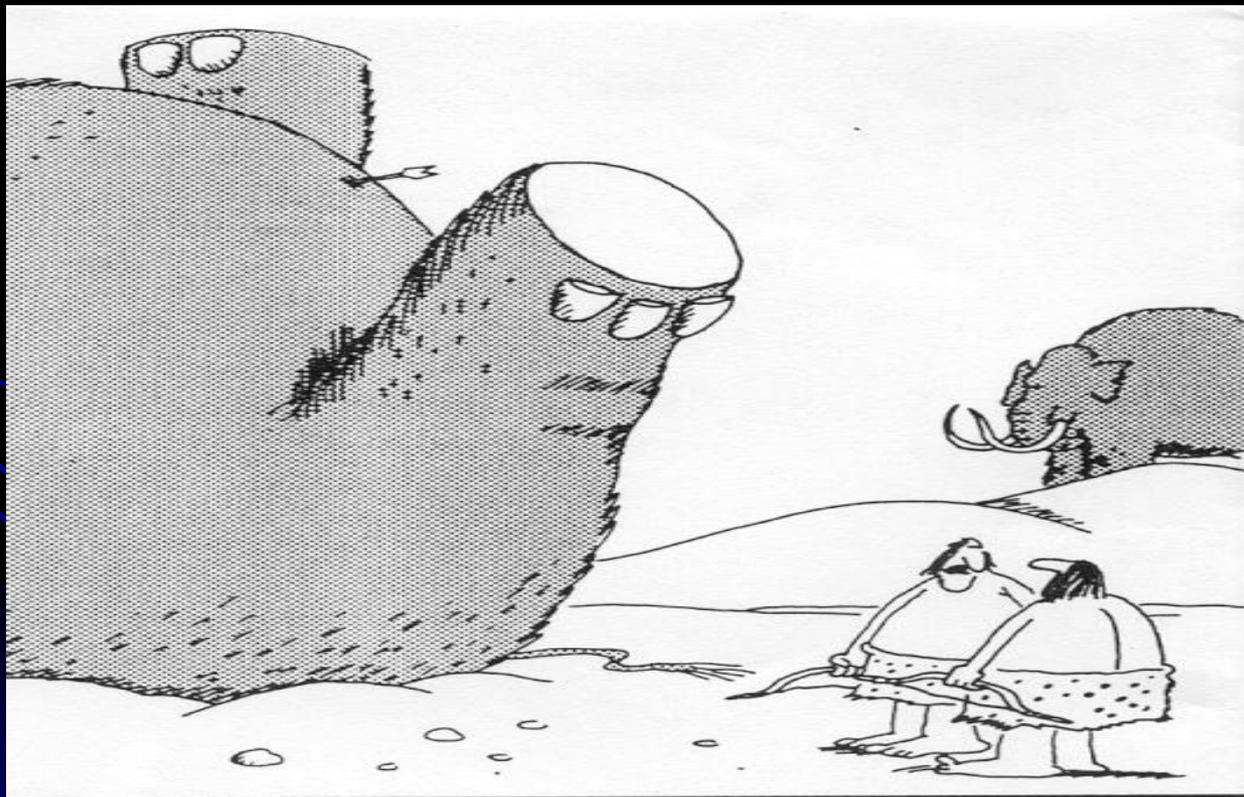
***DISTANCE AND ANGLE TO TARGET  
TYPE OF MUNITIONS EMPLOYED  
TYPE AND THICKNESS OF SUBJECT'S CLOTHING  
THE SUBJECT'S PROXIMITY TO OTHERS  
THE LOCATION OF THE SUBJECT***

***WHETHER THE SUBJECT'S ACTIONS DICTATE THE NEED FOR AN IMMEDIATE RESPONSE AND THE USE OF CONTROL DEVICES APPEARS APPROPRIATE.***

***OFFICERS SHOULD KEEP IN MIND THE MANUFACTURER'S RECOMMENDATIONS AND THEIR TRAINING REGARDING EFFECTIVE DISTANCES AND TARGET AREAS.***

# Deployment Factors

- **Accurate/Inaccurate shot placement; A major cause of failures in Less Lethal deployment**



“Maybe we should write that spot down.”

# Targeting/Tactics

## Escalation of Force with Beanbag

- Officer presence with beanbag launcher
- Verbal commands/warning
- Point beanbag shotgun at suspect
- Direct application
- Additional direct applications\*

**\*The #1 reason for beanbag failure was the failure to follow-up with additional hits.**

# Potentially Serious Injuries

**Damage to organs & blood vessels is the dominant factor in blunt force trauma lethality**

- **Head**
- **Chest & spine**
- **Abdomen**
- **Extremities**
- **Multiple impacts in close proximity**

# Injuries

- Blunt force trauma
- Bruising
- Multiple wounds
- Bone fractures
- Bleeding
- Rupture/pseudo aneurysm of blood vessels
- **Penetration (the least desired effect)**

# Penetration of the Skin by a Bean Bag Round



# Less Lethal Statistics

- **Subjects involved**
  - 47% were suicidal
  - 19% barricaded suspects
- **Weapons**
  - 33% involved edged weapons
  - 21% involved handguns

# Less Lethal Statistics

## Distances

- 61% took place inside 21'
- 19% were between 21' & 42'

## Number of rounds fired

- 43% 1 shot fired
- 22% 2 shots fired
- 18% 3 shots fired



# Types of injuries

- 53% bruising
- 20% abrasions
- 5% fractures
- 4% penetration
- <1% internal injury
- 2% death (Lethal Intent)
- 5.5% no injury



# Documentation

- Notify supervisor (will come to scene)
- Complete Blue Team entry (UOF)
- Complete, accurate narrative-lead up to and use
- Photos
- Medical clearance
- Preserve evidence (if possible)

# Tactical Considerations

- **Proper munitions & launcher confirmation**
- **Appropriate justification**
- **Evaluation of suspect**
- **Communication among officers**
- **Target areas selected**
- **ALWAYS have a Plan “b” ready**

# Team Effort



# Team Effort

## Preferred Tactic

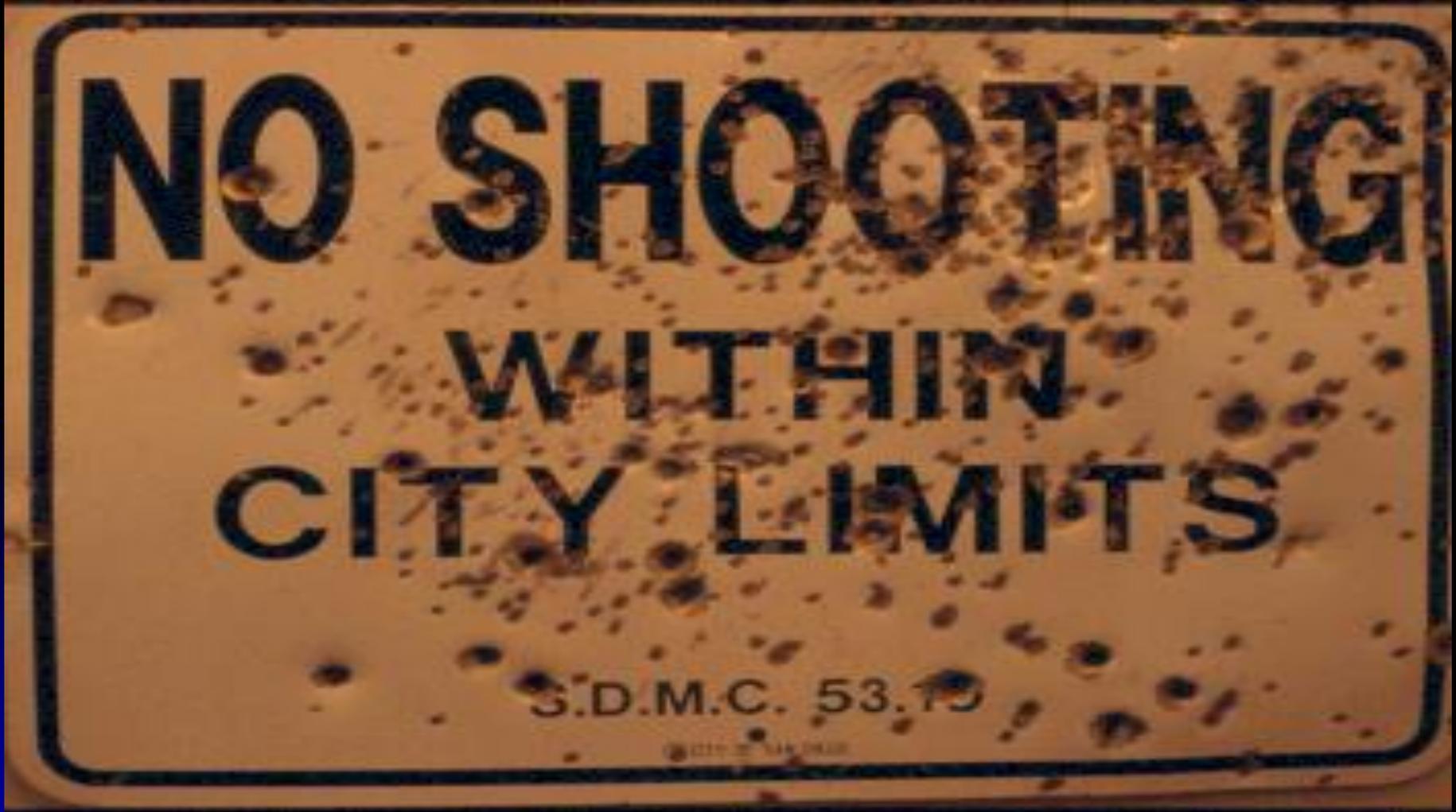
- **Less Lethal Officer**
- **Cover Officer (Lethal)**
- **Supervisor**



# Team Effort (Cont.)

- **Arrest team**
- **Distraction officer**
- **Negotiator**
- **Other Options/Tools?**

# Less Lethal Launcher Safety



# Less Lethal Launcher Safety

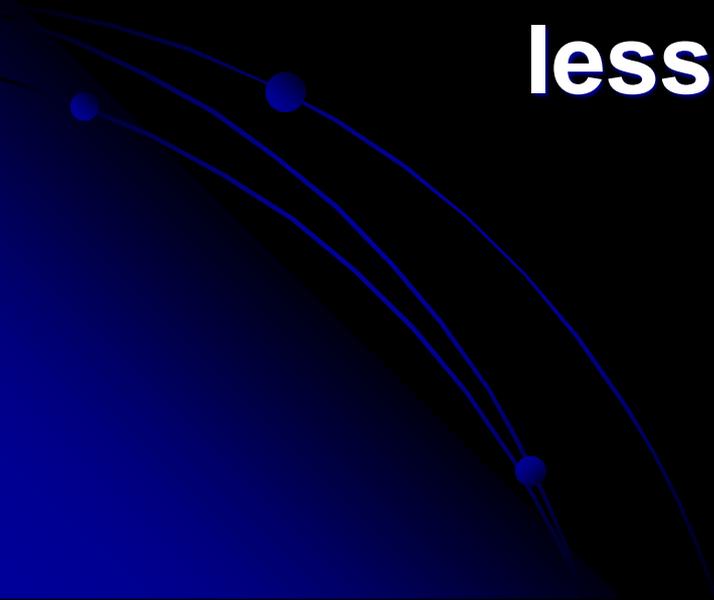
1. Treat all launchers as if they are loaded
2. Be sure the launcher is loaded with less lethal only
3. Laser rule - never allow the muzzle to cover anything you do not intend to deploy less lethal against

# Less Lethal Launcher Safety (Cont.)

5. Communicate prior to less lethal deployment
  6. Be sure of your target and beyond
  7. Master grip
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# Master Grip

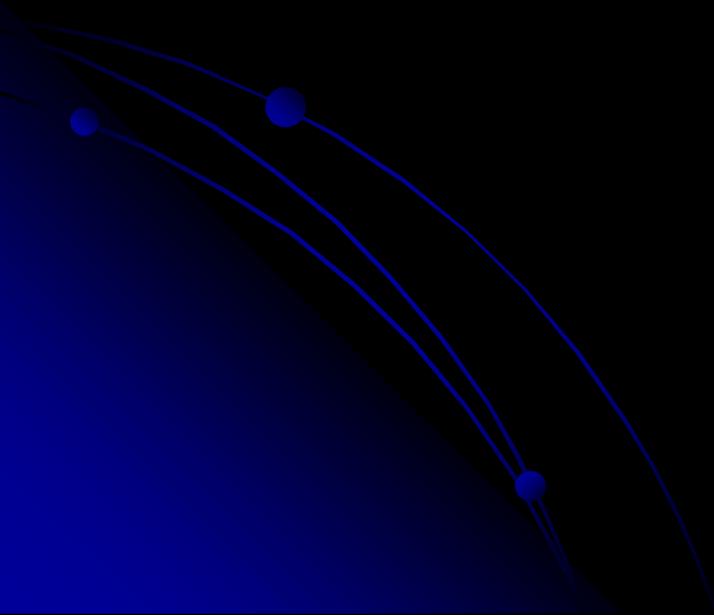
**Finger off the trigger and out of the trigger guard until you make the conscious decision to use less lethal munitions**



# Less Lethal Qualification

- Initial qualification written test
  - Initial range qualification
  - Bi-yearly re-qualification (with each particular system)
- 

# Questions?



# Written Test

