



SANTA CLARA POLICE DEPARTMENT
PepperBall & Extended Range Baton Training

Course Objectives

- To develop the students' skills in the safe operation and deployment of the PepperBall Launching System and Sage Extended Range Baton Box Magazine Launcher.
- To give the students an understanding of the Santa Clara Police Department policies and procedures regarding the PepperBall Launching System and Sage Extended Range Baton Box Magazine Launcher.



Course Structure

1. Introductions/Forms/Safety Issues
2. PepperBall & Extended Range Baton
3. PepperBall Projectiles & Launcher
4. Extended Range Baton Projectiles
5. PepperBall & Sage Targeting
6. Philosophies & Tactics
7. Policies
8. Range Practical
9. Written Exam



Safety Guidelines

- Keep finger **outside** trigger guard until on target and ready to fire
- Treat all launchers as if **loaded**
- Be sure of **target** and what is beyond and around the target area
- Point **muzzle** in a safe direction at all times. Remember the Laser Rule
- **Do not intentionally shoot at the head, neck, spine or groin with PepperBall and do not intentionally shoot at head, neck, chest, spine, lower back, or groin with Extended Range Baton** (unless within department policy and deadly force is authorized). As with other less-lethal projectiles, head shots could result in unintentional, severe, and permanent injury or death.
- Wear **safety glasses** or turn head to side when filling HPA bottles
- All students are empowered as safety officers during classroom and range training
- If a safety violation is observed, shout "Cease Fire" repeatedly until all shooters safe their weapon
- If any injuries occur, report them immediately to the instructor



PepperBall Defined

NON-LETHAL chemical agent delivery system that uses **HIGH-PRESSURE Air and large capacity hoppers** to deliver **PAVA powder PROJECTILES** from a safe distance.

- Combines chemical agent exposure with kinetic impact and pain
- Effective on individuals as well as large groups of people for riot and crowd control
- PAVA is one of six capsaicinoids found in pepper plants
- PAVA is one of the hottest capsaicinoids and is an amide of Pelargonic Acid and Vanillyamine (thus, PAVA)
- PepperBall® products contain only purified non-oil based PAVA
- PepperBall PAVA is produced at a pharmaceutical grade
- PAVA is also used in Tabasco sauce, spice packs and cooking oils
- **PepperBall PAVA is non-Flammable**



Kinetic Energy Munition

Kinetic energy is the means by which impact projectiles are designed to work

A projectile delivers energy to the human body causing pain in an attempt to gain compliance, convincing the suspect to submit to arrest without further use of force

The kinetic energy delivered with the impact munitions vary with the projectile design, weight and speed

The potential for serious injury or death still exists with these types of munitions

To put kinetic energy into perspective, here are some common comparisons:

- Major league fastball: 97 foot/pounds of energy
- 12 gauge Sock Round: 120 foot/pounds of energy
- 38 caliber 158 grain bullet: 377 foot/pounds of energy
- Extended Range Baton KO1 round: 153 foot/pounds of energy
- Kinetic impact of PepperBall round: 10-12 foot/pounds of energy



PepperBall Advantages

- Thousands of actual uses
- No judgments levied against PepperBall (reduces liability)
- **Chemical agents can be effective when suspect is hidden or not in view**
- Safe at point-blank range at approved target areas
- **Ability to escalate or de-escalate force as appropriate**
- **Chemical agent exposure & kinetic impact**
- Multiple projectiles, one platform
- Measurable and specific targeting
- Specific area saturation - Can be used to deny access or egress to specific areas
- Quick recovery from PAVA powder
- Allows officers to maximize time and distance to ensure safety



PepperBall Considerations

1. Dedicated PepperBall System

- Policy development and training

2. PAVA, like all other chemical agents, may not work on certain persons

- Mentally ill, drug abusers, alcoholics, enraged, highly emotional, or focused

3. Potential for misuse by users due to high rate of fire and hopper capacities

- Proper training!



Extended Range Baton Considerations

- Non-Flexible: Plastic that is not intended to conform to the shape of the target
- There are two types of impact projectile trauma: blunt and penetrating
- Blunt trauma is preferred, where an impact of a projectile leaves the body surface intact, yet causes sufficient pain to convince the subject to comply and submit to arrest
- Common injuries are bruising, abrasions, swelling that may affect range of movement



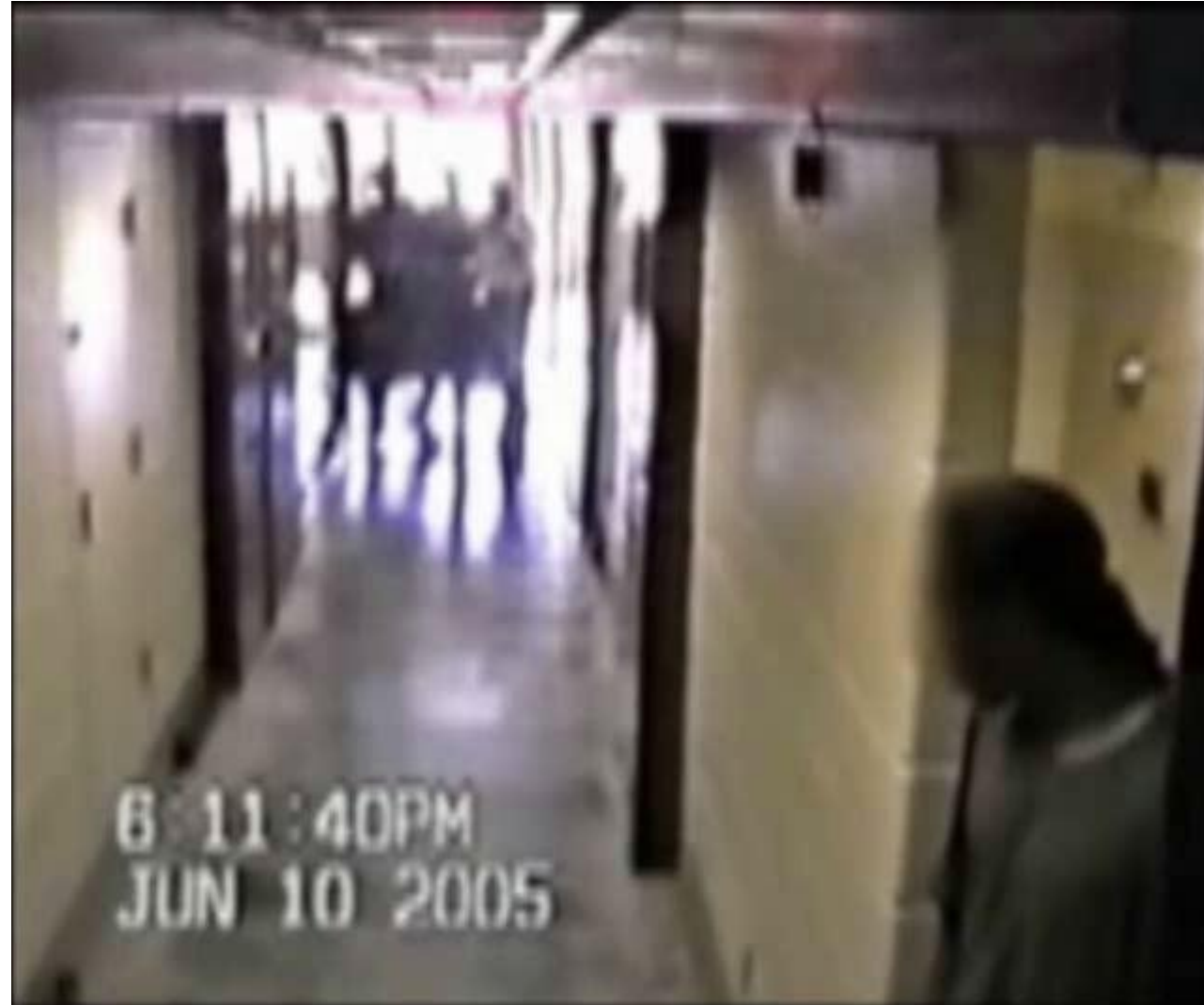
Extended Range Baton Considerations

- The least desirable and unintended consequence of impact projectile deployment is that of penetrating trauma
- The penetrating injury from impact munitions can result from a number of factors:
 - Short range deployment (less than 6')
 - Targeted area
 - Excessive kinetic energy
 - Munition design
 - Physical stature, age, health issues, lack of clothing
 - Use of pharmaceuticals such as blood thinners or illegal narcotics
- Smaller, thinner, frailer, unhealthy people will be more susceptible to significant injury than those who are larger, thicker, more muscular and healthy
- This factor must be taken into consideration based on the totality of the circumstances



Patrol Applications

- Armed Attacker
- Barricaded Suspect
- Suicide-by-Cop
- Riots/Looting
- Building/Field Searches/Area Denial/Vehicle Standoff
- Drug Labs
- High-Risk Warrants
- Event Security VIP Security



Patrol Applications

Possible
PepperBall
application
in open
field use,
with
hidden
suspects, or
area of
denial.



PepperBall Projectiles

- 68 caliber plastic breakable spheres weighing 3 grams
- Velocity envelope = 300 to 350 fps (feet per second)
- Kinetic impact = 10 to 12 ft./lbs. of energy
- Vs Sock Round impact = 120 ft./lbs. (162 joules)
- Operational Temperature range:
Minus 30° to plus 150° Fahrenheit (powder projectiles)
Liquid projectiles should never be frozen and fired
- Shelf life of three years for Live and Live-X projectiles



- Red/White
- PAVA Payload
- 0.5% Chemical Agent
- Used for direct impact and area saturation
- 0-60 feet (0-18 meters) direct impact/150+ feet (45+ meters) area saturation
- Operation temperature range -30F to 150F (-34C to 65C)



- Red / Black
- Concentrated version of Live projectile used in high-intensity/MFF/Crowd Control
- 5% Chemical Agent
- Used for direct impact and area saturation
- 0-60 feet (0-18 meters) direct impact/150+ feet (45+ meters) area saturation
- Operation temperature range -30F to 150F (-34C to 65C)



Extended Range Baton Projectiles

- **KO1**
 - Direct fire
 - Standard 100 meter effective range
 - **KO1 250fps - 153 ft/lbs**
- Should be stored in a controlled environment with a maximum of 60% humidity in a 65-75 degree area
- Shelf life of all munitions is 5 years from the date of manufacture
- Shall be stored with baton facing up



PepperBall & Extended Range Baton Effects

Physiological Effects

PepperBall

- Sensation of impaired breathing and tightness to the chest
- Burning sensation/inflammation of skin
- Profuse tearing/Involuntary closure of eyes
- Secretion of excessive mucous
- Involuntary extension of hands to face
- **Warning:** Possible side effects include Anaphylactic Shock to 0.005% of population

Extended Range Baton

- Blunt trauma
- Common injuries are bruising, abrasions, swelling that may affect range of movement

Psychological Effects

PepperBall

- Fear/Anxiety/Nervousness
- Panic may occur with persons who have never been exposed to chemical agents
- Expect the unexpected

Extended Range Baton

- Fear/Anxiety/Nervousness
- Panic, the loss of control by the suspect may create a “Fight or Flight response”



Cross Contamination

- Use of chemical agents can result in cross-contamination of officers
- Waiting a few extra seconds prior to approaching or handcuffing can help minimize cross-contamination
- Consider having suspect move to you
- Be aware of wind direction prior to deploying system if possible
- Powder residue can be transferred to officers



Decontamination

- Begin decontamination after suspect is controlled and in custody
- **Fresh Air & Cool Clean Water**
- Keep suspect calm
- Reassure suspect
- Effects are temporary
- Look for unusual reactions
 - Monitor for distress, coherence and respiration (Excited Delirium)
 - If in doubt, summon medical aid



Follow Department Policies



PepperBall Launcher

- Semi-automatic design is target accurate to 60 feet, and provides area saturation up to 150 feet
- Offset, slide-loading system for wider field of view and easy breech loading
- Features an interchangeable mounted air system for forward or rearward mounting of HPA bottle



PepperBall Air Bottle Refill



PepperBall Launcher

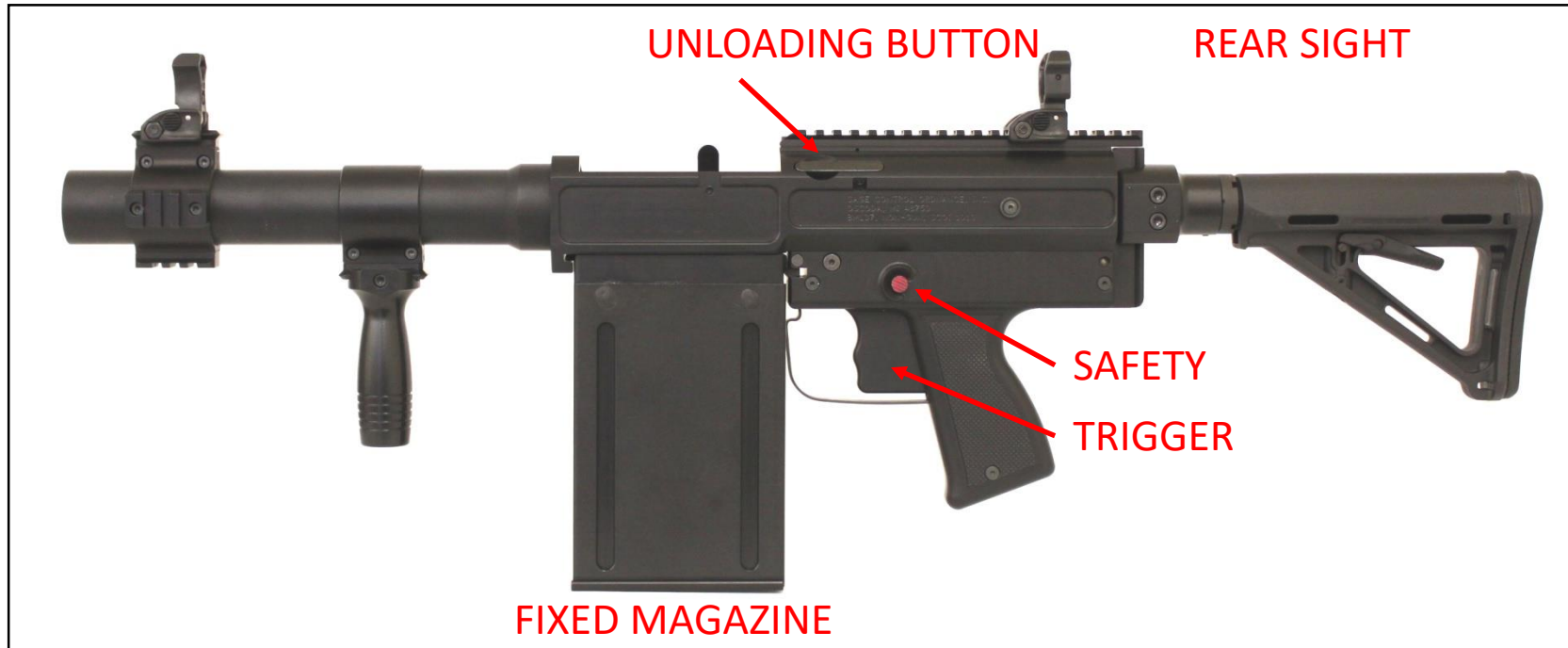


Extended Range Baton Launcher

FRONT SIGHT

UNLOADING BUTTON

REAR SIGHT



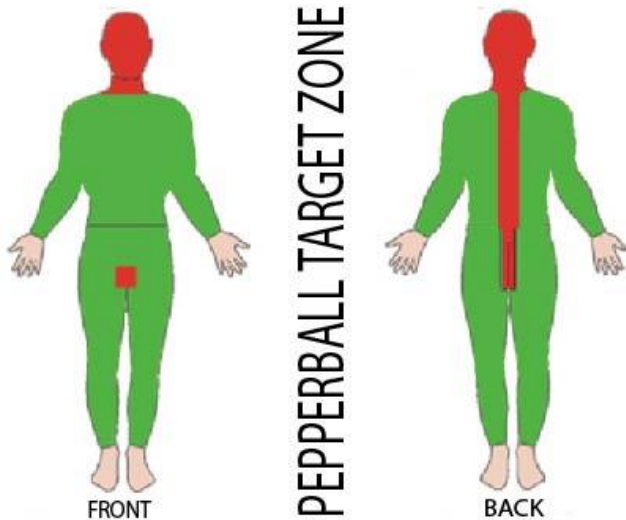
FIXED MAGAZINE

SAFETY

TRIGGER

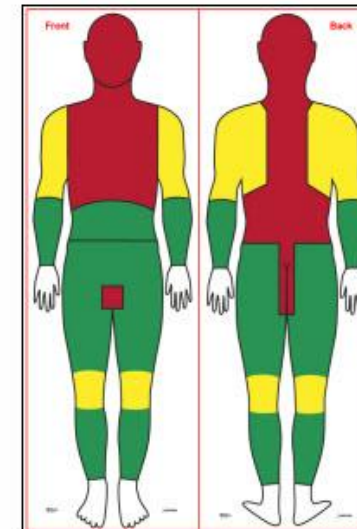


PepperBall & Extended Range Baton Targeting



- PepperBall no hit zones – head, neck, spine & groin
- Intentionally targeting the head, neck, spine & groin with the PepperBall is allowed when deadly force application is authorized under our department policies
- PepperBall has no minimum stand off distance at approved target areas (Per PepperBall)

Extended Range Baton TARGET ZONE



Tactical Considerations

- Always have a cover officer if deploying a less lethal launcher
- If possible, verbalize commands and warnings (AB 392) Ex: “Stop or force will be used against you.”
- Prior to deploying PepperBall or Extended Range Baton in the field, notify dispatch of less lethal deployment
- Prior to engaging a suspect with less lethal notify surrounding officers to avoid sympathetic fire, “Less Lethal, Less Lethal, Less Lethal!”
- “Volley fire” should be avoided unless there is a threat of death or serious physical injury
- Reassess after each engagement for suspect compliance and/or chemical agent effectiveness
- Each less lethal application will be judged as its own and separate use of force
- Have a back up plan if less lethal launcher does not have an effect
- Consider area saturation (PepperBall) by impacting surrounding objects like walls, ground, automobile, and trees
- Anticipate suspect lowering head after impact

ALWAYS FOLLOW YOUR DEPARTMENTAL POLICY



Body Worn Camera

- **423.6 ACTIVATION OF THE PORTABLE RECORDER**
- This policy is not intended to describe every possible situation in which the portable recorder should be used, although there are many situations where its use is appropriate. Members should activate the recorder any time the member believes it would be appropriate or valuable to record an incident.
- The portable recorder should be activated in any of the following situations:
 - All enforcement and investigative contacts including stops and field interview (FI) situations.
 - Detectives shall use their portable/video recording device when conducting any enforcement action in plainclothes and during any interview in accordance with the Santa Clara County Protocols.
 - Traffic stops including, but not limited to, traffic violations, stranded motorist assistance and all crime interdiction stops.
 - Self-initiated activity in which a member would normally notify the Communications Center.
 - Any other contact that becomes adversarial after the initial contact in a situation that would not otherwise require recording.
 - Members should remain sensitive to the dignity of all individuals being recorded and exercise sound discretion to respect privacy by discontinuing recording whenever it reasonably appears to the member that such privacy may outweigh any legitimate law enforcement interest in recording. Requests by members of the public to stop recording should be considered using this same criterion. Recording should resume when privacy is no longer at issue unless the circumstances no longer fit the criteria for recording.
- At no time is a member expected to jeopardize his/her safety in order to activate a portable recorder or change the recording media. However, the recorder should be activated in situations described above as soon as reasonably practicable.



Body Worn Camera

- 423.6.1 CESSATION OF RECORDING
- Once activated, the portable recorder should remain on continuously until the member reasonably believes that his/her direct participation in the incident is complete or the situation no longer fits the criteria for activation. Recording may be stopped during significant periods of inactivity such as report writing or other breaks from direct participation in the incident.
- Members shall cease audio recording whenever necessary to ensure conversations are not recorded between a person in custody and the person's attorney, religious advisor or physician, unless there is explicit consent from all parties to the conversation (Penal Code § 636).
- It shall be deemed a violation of this policy for any member to fail to activate their portable/video recorder device when required by this policy, or intentionally terminate a recording in order to commit a violation of the law or Department policy.



Santa Clara Police Department Policies & Procedures

303.7 OLEORESIN CAPSICUM (OC) GUIDELINES

As with other control devices, oleoresin capsicum (OC) spray and pepper projectiles may be considered for use to bring under control an individual or groups of individuals who are engaging in, or are about to engage in violent behavior. Pepper projectiles and OC spray should not, however, be used against individuals or groups who merely fail to disperse or do not reasonably appear to present a risk to the safety of officers or the public.



303.7.3 TREATMENT FOR OC SPRAY EXPOSURE

Persons who have been sprayed with or otherwise affected by the use of OC should be promptly provided with clean water to cleanse the affected areas. Those persons who complain of further severe effects shall be examined by appropriate medical personnel.



Santa Clara Police Department Policies & Procedures



303.7.2 PEPPER PROJECTILE SYSTEMS

Pepper projectiles are plastic spheres that are filled with a derivative of OC powder. Because the compressed gas launcher delivers the projectiles with enough force to burst the projectiles on impact and release the OC powder, the potential exists for the projectiles to inflict injury if they strike the head, neck, spine or groin. Therefore, personnel using a pepper projectile system should not intentionally target those areas, except when the officer reasonably believes the suspect poses an imminent threat of serious bodily injury or death to the officer or others.

Officers encountering a situation that warrants the use of a pepper projectile system shall notify a supervisor as soon as practicable. A supervisor shall respond to all pepper projectile system incidents where the suspect has been hit or exposed to the chemical agent. The supervisor shall ensure that all notifications and reports are completed as required by the Use of Force Policy.

Each deployment of a pepper projectile system shall be documented. This includes situations where the launcher was directed toward the suspect, whether or not the launcher was used. Unintentional discharges shall be promptly reported to a supervisor and documented on the appropriate report form. Only non-incident use of a pepper projectile system, such as training and product demonstrations, is exempt from the reporting requirement.

Santa Clara Police Department

Policies & Procedures

303.9.1 DEPLOYMENT AND USE

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:

- 1. The suspect is armed with a weapon and the tactical circumstances allow for the safe application of approved munitions.**
- 2. The suspect has made credible threats to harm him/herself or others.**
- 3. The suspect is engaged in riotous behavior or is throwing rocks, bottles or other dangerous projectiles at people and/or officers.**
- 4. There is probable cause to believe that the suspect has already committed a crime of violence and is refusing to comply with lawful orders.**





Santa Clara Police Department Policies & Procedures



303.9.2 DEPLOYMENT CONSIDERATIONS

Before discharging projectiles, the officer should consider such factors as:

1. Distance and angle to target.
2. Type of munitions employed.
3. Type and thickness of subject's clothing.
4. The subject's proximity to others.
5. The location of the subject.
6. Whether the subject's actions dictate the need for an immediate response and the use of control devices appears appropriate.
 - 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.
 - Officers should keep in mind the manufacturer's recommendations and their training regarding effective distances and target areas. However, officers are not restricted solely to use according to manufacturer recommendations. Each situation must be evaluated on the totality of circumstances at the time of deployment.
 - The need to immediately incapacitate the subject must be weighed against the risk of causing serious injury or death. The head and neck should not be intentionally targeted, except when the officer reasonably believes the suspect poses an imminent threat of serious bodily injury or death to the officer or others.

Santa Clara Police Department Policies & Procedures

430.2 POLICY

This agency will strive to effectively manage crowds during demonstrations or civil disturbances to prevent loss of life, injury, or property damage and minimize disruption to persons who are uninvolved. Officers encountering such incidents shall adhere to this policy to protect life, property, and the exercise of First Amendment rights. In rare circumstances involving emergencies, and in widespread highly volatile civil unrest with the potential for widespread violence, the incident commander (IC) may temporarily suspend any policy, provision, or guideline contained herein when such action is determined to be the only reasonable alternative for the prevention of loss of life or major property damage.



MOBILE FIELD FORCE

▪ 430.7 USE OF FORCE

1. Unless exigent circumstances justify immediate action (e.g. specific threat to line officers from members of a hostile crowd in accordance with Policy 300.1), officers shall not independently make arrests or employ force without the IC's authorization.

E. Impact projectiles shall not be launched indiscriminately into crowds.

(a) Non-direct (skip-fired) projectiles and munitions may be used in civil disturbances where life is in immediate jeopardy, or the need to use the devices outweighs the potential risks involved.

(b) Direct-fired impact munitions, to include SAGE, pepper ball, and related projectiles, have a proven track record of safe and effective use in public order management, when deployed in a manner that recognizes the unique factors involved, including the potential risk of hitting an unintended target due to officer-subject range and crowd density. Accordingly, direct-fire munitions can generally be used during civil disturbances against specific individuals who are engaged in conduct that poses an immediate threat of death or serious injury or significant levels of property damage in accordance with Policy 303.9.

(c) A verbal warning should be given prior to the use of impact projectile when reasonably possible.

Santa Clara Police Department Policies & Procedures

Definitions:

Civil Disturbance: A gathering that constitutes a breach of the peace or any assembly of persons where there is a threat of collective violence, destruction of property, or other unlawful acts. Such a gathering may also be referred to as a riot or unlawful assembly.

Demonstration: A lawful assembly of persons organized primarily to engage in First Amendment activity. These may be scheduled events that allow for law enforcement planning. They include, but are not limited to, marches, protests, and other assemblies intended to attract attention. Lawful demonstrations can devolve into civil disturbances that necessitate enforcement action.

Crowd Control: Techniques used to address civil disturbances, to include a show of force, crowd containment, dispersal equipment and tactics, and preparations for multiple arrests.



Santa Clara Police Department Policies & Procedures

Definitions (Cont):

Crowd Management: Techniques used to manage lawful assemblies before, during, and after the event for the purpose of maintaining their lawful status through event planning, pre-event contact with group leaders, issuance of permits when applicable, information gathering, personnel training and other means.

Impact Projectiles: Projectiles designed and intended to deliver non-penetrating impact energy from safer than contact range. These may include direct fire or non-direct skip-fired rounds. The latter are projectiles that are discharged toward the ground in front of a target, theoretically delivering the energy to the subject following contact with the ground.



Santa Clara Police Department

Policies & Procedures

300.5 REPORTING THE USE OF FORCE

Any use of force by a member of this department shall be documented promptly, completely and accurately in an appropriate report, depending on the nature of the incident. The officer should articulate the factors perceived and why he/she believed the use of force was reasonable under the circumstances. To collect data for purposes of training, resource allocation, analysis and related purposes, the department may require the completion of additional report forms, as specified in department policy, procedure or law.

300.5.1 NOTIFICATION TO SUPERVISORS

Supervisory notification shall be made as soon as practicable following the application of **all** use of force.





Group Discussion



- Shall officers independently make arrests or employ force without the IC's authorization (In a crowd control scenario)?
- When would it be ok?
- What announcement should you make before using a less lethal device (If possible)?
- Should Pepperball or OC spray be used against individuals or groups who merely fail to disperse or do not reasonably appear to present a risk to the safety of officers or the public?