The Bill Blackwood Law Enforcement Management Institute of Texas

The Oleoresin Capsicum (OC) Pepper Ball Projectile Launcher as a Less Lethal Force Option

An Administrative Research Paper Submitted in Partial Fulfillment Required for Graduation from the Leadership Command College

> By Jeffrey S. Casey

Dallas Area Rapid Transit Police Dallas, Texas August, 2005

ABSTRACT

With ever-increasing violence, better-equipped criminals, and the public scrutiny that police officers encounter every day, it is imperative that police agencies take steps to equip their officers with new innovative tools. When officers encounter violent and resistant suspects, the last option is always deadly force. With more use of force options available to an officer, he will have a better chance of affecting an arrest without resorting to lethal force. This research project will identify several less than lethal options that are currently available for law enforcement. One specific option, the OC Pepper Ball Launcher or simply the pepper ball launcher will be discussed in detail. Over time, less than lethal options have been refined to the point that many suspect and officer deaths and injuries have been drastically reduced. Many agencies have had great success with the utilization of the pepper ball launcher. Agency surveys were used to identify current practices and whether or not the addition of an option or options has had a positive impact on the agency. There were surveys distributed to 100 law enforcement agencies in the State of Texas. Out of 100 surveys distributed, 62 agencies responded. It was determined that all 62 agencies responding did have at least one additional less than lethal option currently in use, in addition to OC pepper spray and a baton. The use of OC pepper spray and batons are still a valuable part of a police agency, but they are now teamed with new options that improve the effectiveness of the police officer. When utilized as an option to lethal force and an addition to a force continuum, the pepper ball launchers would be a positive addition to any agency.

TABLE OF CONTENTS

Abstract	
Introduction	1
Review of Literature	3
Methodology	8
Findings	9
Discussions/Conclusions	12
References	16

Page

INTRODUCTION

Law enforcement officers around the nation respond daily to calls for service that place them directly in harm's way. Many of these calls involve suspects that are less than cooperative when officers attempt to affect an arrest. These incidents range from a general dislike of police to suspects on a controlled substance or those with mental deficiencies. Due to resisting suspects, officers have adopted Pepper Spray (Oleoresin Capsicum-OC) and a variety of types of batons to their everyday on-duty gear. The problem that is presenting itself more often recently is the inability of officers to get close enough to suspects to use the OC spray and/or a baton effectively. When officers are unable to reach a suspect in a violent or potentially hostile situation, the options for use of force dramatically end. With the lack of options, the potential for the use of deadly force significantly increases; thus, the number of injuries to officers and suspects increase as well. When officers encounter violent suspects, the use of deadly force is considered the last option. This can place not only the officers in danger, but innocent bystanders as well. With the advent of minimal or less than lethal force options, the officers can utilize an appropriate use of force option prior to deadly force. This enhances the balance between effecting an arrest and public safety (Penn State 2004).

This research project will identify several less than lethal options that are currently available for law enforcement. One specific option, the OC Pepper Ball Launcher or simply the pepper ball launcher will be discussed in detail, offering existing research and success and failure outcomes from various law enforcement agencies. With these available options, is the pepper ball launcher successful in the field with front line officers?

This project will incorporate existing research that has been completed on the pepper ball launcher, as well as brief information on other less than lethal mechanisms. Existing research includes articles, journals, case law/legal history, books, personal interviews and lesson plans developed by certified instructors for the pepper ball launcher instructional courses. An agency survey will be distributed to approximately 100 law enforcement agencies across Texas.

Although the current use of OC spray and batons are crucial for law enforcement officers, the results of this project are anticipated to illustrate the need for the same street level officers to have additional less than lethal options at their disposal. It is also anticipated that the research will show that implementation of the pepper ball launcher will result in an exponential decrease in the number of resisting suspects, injuries to officers and suspects, and deadly force incidents. Additionally, the pepper ball launcher is not only financially feasible initially, but it will have a tremendous potential to reduce litigation judgments in the future.

The results of this project are directed toward chief administrators of law enforcement agencies, regardless of the department size or location. In addition to administrators, those personnel that develop policies and those that train officers may benefit from this research. The implication for law enforcement is that critical, violent, or hazardous incidents can be resolved with a reduced level of force and a decreased number of deadly force results. With fewer deaths and injuries, the liability of agencies is decreased and the amount of litigation is reduced as well. Not only may these results insist on a review of existing Use of Force Continuums and potential revision in operational procedures, it may, in many cases, demand a new way of thinking for tenured commanders and administrators.

REVIEW OF LITERATURE

Alpert and Dunham note that nationally recognized experts maintain that 25 percent of police involved shootings could have possibly been avoided with proper less than lethal force equipment and training (Alpert & Dunham, 1995). Alpert goes on to say that the expensive

lawsuits as well as the controversy created by these incidents have prompted law enforcement agencies to look to the ever-expanding options of less lethal weapons (Scott & Copeland, 2001). As this author reviewed comments by other experts in the field of law enforcement, most every piece of literature agreed that the use of any weapon is not free of danger and controversy. Most assert that the reason some weapons are referred to as "less lethal" is because every weapon has an inherent danger of causing bodily injury or death.

The original use of less than lethal force dates back to the ancient Chinese, who loaded rice paper bags with red pepper and threw them in the faces of their enemies, the original "OC pepper." In the 1900s the US Army experimented with OC, but did not develop it any further, asserting that it was not as effective as other agents being tested. In the early 1970s, a company in Florida introduced OC into civilian law enforcement, and in the late 1980s, the US Department of Justice adopted OC for nationwide use. Today, OC is widely accepted and in use in most departments (Jaycor, 2004).

As Michael Brave points out, officers must have sufficient alternatives in the use of force continuum in order to minimize the amount of force he may have to use in a critical incident. If you give an officer only a gun and his hands, then he will be quickly turn to his gun. If you give an officer a gun, baton, and his hands, then he might "overuse" his baton or turn to his gun more readily. Law enforcement agencies are now being watched as if under a microscope rather than a mere magnifying glass (Brave, 1994). There are several options for less than lethal force. Some of these include chemical agents, flash/noise diversionary devices, oleoresin capsicum spray, batons, 12-gauge bean bag, and the Taser, just to name a few. One of these alternatives is the pepper ball launcher. Instructors point out that the term "pepper ball gun" is incorrect, and insist the use of "pepper ball launcher." This is to ensure the complete separation of this weapon

from a gun, and all the "lethal" connotations that accompany a gun. There are several advantages to the use of pepper ball launchers. Some of these include, but are not limited to: less-lethal, do not have to directly hit a suspect to possibly gain compliance, safe at point-blank range, very accurate for up to 30 feet, high capacities, officer presence with launcher send non-verbal messages, and area saturation. However, with several advantages listed, they mean nothing if we fail to provide officers with sufficient training, under good supervision. This training is mandatory for officer safety during an incident. It allows officers to make an educated informed decision on the use of the force, helps insure that officers make a choice for the correct level of force, and assist the officer with comprehensive reports and testimony after the incident is completed (Miller, 1995). The pepper ball launcher not only has a physical impact on a suspect but a psychological impact as well. The mere sight of an officer preparing a launcher affects the psyche of a suspect. By anticipating the impact, irritation of the OC spray, and feeling of helplessness, the suspect may very well surrender before any balls are launched. This is particularly evident in a correctional facility, where the inmate(s) have seen the effects of the launcher and do not want to experience it themselves (McEwen, 1993).

In 1999, the pepper ball launcher was introduced into the public (Jaycor, 2004). The nation was able to see the launcher in action thanks in no small part to the media. The media televised the riots that accompanied the World Trade Organization meetings in Seattle, Washington. It was been reported by Seattle Police that they fired over 9,000 projectiles to maintain order during the riots. Amazingly, with over 9,000 projectiles fired, there were no reported injuries directly associated to the pepper balls. In addition to the physical effects of the burning sensation on the skin, involuntary closing of the eyes, and feeling of difficulty breathing, the pepper ball launcher has several psychological effects on the suspect as well. These

psychological effects prove to be just as important on the outcome of a critical situation. These effects include the visual stimulation a suspect receives when he sees an officer holding a weapon that he is unfamiliar with, the kinetic impact could make the suspect think he has been shot, and the panic that many times ensues due to the OC released by the ball hitting the suspect. These psychological effects are particularly important in the situations involving the small number of people unaffected by the physiological aspect of the OC release.

While speaking about chemical agents, such as OC pepper spray, it is important to point out that 14 percent of the population are not affected or affected less than normal by chemical agents. So the availability of a pepper ball launcher does not automatically mean that you will gain compliance, but it is merely an alternative (Jaycor, 2004). Many agencies issue the weapon to supervisors only, but the reality is that the weapon must be available when the incident is occurring. Agencies that want the full advantage of the weapon, must consider deploying the weapon to a variety of officers, supervisors, and fixed locations.

While the pepper ball launcher will never completely eliminate the use of deadly force, it will assist officers by providing them with an alternative. This will allow the use of deadly force only when absolutely necessary. Chief Gil Kerlikowske agrees that the whole less-lethal program has been a phenomenal success for the Seattle Police Department (Seattle Post-Intelligencer, 2004). Chief Kerlikowske is the Chief of Police for the City of Seattle. The City of Seattle implemented the pepper ball launcher along with other less-lethal options for their officers. After implementation, there were no fatal shootings involving police officers in the entire year of 2003, the first time in 15 years. Also demonstrated successfully during rioting and protesting in Seattle, pepper ball launchers were not only used on specific suspect targets, but more so for creating a barricade type line. Using saturation methods, the protesters were

contained and controlled with very few reported injuries. With different models of the pepper ball launcher, an officer can hold upwards of 200 rounds, depending on the model utilized. Additionally, there are a variety of types of projectiles that can be utilized. The most well know is the pepper spray filled projectile. There are inert powders for training, liquid filled projectiles, semi-solid glass-shattering projectiles, and dye marking projectiles to mark leaders or instigators in a specific large group, allowing for identification later (Jaycor, 2004). There are also dangers associated with the pepper ball launcher. Several researchers point out that although overall the launcher is successful, there have been cases of injury and death. If the projectile(s) launched at a suspect strike him/her in the head or throat, for instance, the results could be serious or at worst, fatal. The projectiles have specific tasks, and they must be used appropriately. For example, the use of the solid glass-breaking projectile used on a suspect may have a deadly outcome. Again, this is why training is so important.

Along with the advantages, there are also disadvantages to the pepper ball launcher. The weapon availability is not always such that it can be effective in the first critical moments of a situation. If a few launchers are purchased in an agency, many times the supervisors or designated officers with the launchers must be close to a scene and be able to make the scene quickly in order to prevent escalation of the event. Many times the northern states experience problems due to cold weather. Some of the projectiles may freeze in extreme weather. When using a launcher to affect a person with several layers of clothing on in cold weather, the projectile could possible fail to burst upon impact. The padding of the clothing acts as a cushion for the impact. Of course, the officer could choose a different projectile, but using a hard projectile is dangerous and may not be appropriate. As pointed out by a PepperBall Industries instructor, many agencies are afraid of issuing a high-capacity weapon (up to 200 rounds) to an

officer, especially if the weapon is capable of selectable fire by the operator (Jaycor, 2004). Even if the weapon is considered "less than lethal", many agencies fear the lethality that comes with a high capacity weapon. Along with this train of thought comes another disadvantage, the training aspect of the weapon. As stated several times previously by the author, the training is critically important. A sophisticated weapon lends sophisticated training. If officers are not trained properly or officers do not receive proper continuing education, the weapons could be misused or used inappropriately. The addition of this type of weapon mandates a change to the basic force continuum of the police agency. This means implementation of new policies and procedures affecting every officer.

Paul Marini, a political activist from Oakland, states that weapons like the launcher can cause serious injuries. Marini works for the non-profit organization called the Midnight Special Law Collective. This is a group that assists activist groups. Due to the rapid-fire capabilities, Marini asserts that the launcher is merely an unholy alliance between pepper spray and the rubber bullet. He feels they are merely maiming weapons (Fox, 2001). The major provider of pepper ball launchers is Jaycor Tactical Systems. They assert that it would be very hard to actually kill a person with the launcher. Jaycor admits that used incorrectly, an officer could easily put someone's eye out, but they stand by the their claim that it would be difficult to take a life (Jaycor, 2004). Pepper ball instructors teach that if a suspect's throat was exposed and the suspect is unconscious, the suspect's larynx or windpipe could be crushed if directly hit with a large amount of pepper balls in the soft tissue area of the throat. The question here is training. The questions an instructor may ask in this situation are: Why would an officer be firing at an unconscious person, and why would the officer be firing this many rounds at the throat?

In addition to human suspects, the pepper ball has been effective on animals as well. In Alaska, bears such as the Grizzly have been shot with the pepper ball projectiles and it worked well. The bears lost interest in what they were doing rather than being affected tremendously by the OC inside the balls, but nonetheless, the bear retreated. The same such effect has been reported by California park rangers, when dealing with black bears. With dogs, the reports are closer to the reaction of people. Dogs have been reported to react to both the kinetic impact and the OC. Other animals that have been deterred from negative activities are monkeys in the orient, birds in an airport setting, as well as moose, and deer. As noted earlier by the author, there is a small percent of the population that is unaffected or experiences a reduced effect when sprayed with OC pepper spray. This is also true with the animals. There is that small number of animals where OC pepper spray or pepper ball projectiles will be non-effective.

METHODOLOGY

Is the OC pepper ball launcher successful in the field when available to front line officers? The intended outcome of this project is to show that not only is the pepper ball launcher successful in the field, but it's use is also practical, both financially and legally, affordable, and most importantly decreases the number of injuries to officers and suspects. Research into this topic will be conducted by performing a review of existing articles, books, and instructional material. Additionally, an agency survey was sent to one hundred police agencies in Texas. Although the author realizes that there are many other agencies outside of the state of Texas that utilize other options, the choice to send out surveys in Texas only is based on the similarity of training and basic composition of police agencies within Texas. A variety of locations around the state will be surveyed. Although the author was expecting a high number of participants in the survey, a baseline minimum return rate of 50 percent was established to ensure an adequate sample size. The agency survey asks eleven (11) specific Yes/No questions regarding issuance of less than lethal force weapon options, whether the agency feels the existing options are beneficial, and whether the agency plans on making additions to the less than lethal options. The actual return of the survey was 62 out of 100, well above the preset minimum return rate. With 62 surveys returned, the sample size for this project is sufficient. The results will be analyzed, captured in both number and graph form, and presented in summary form. The analysis will include what percentages of responding agencies have less than lethal options currently in use. Additionally, it will show how many agencies have a combination of 2 or more options and what are the combinations. Finally, the survey will show the responding agency's opinion on whether the less than lethal options currently in place have a significant benefit. The intended outcome of this analysis will show that all the responding agencies have at least one option in use currently, and the option is successful. Additionally, the author anticipates that most of the agencies intend to add additional options to their force continuum.

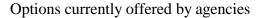
FINDINGS

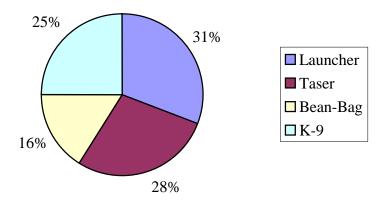
In the past 20 years, there has been a move by law enforcement toward the use or addition of less than lethal force weapons (Scott, 2001). Force continuums have changed dramatically with such basic additions such as the expandable baton and OC pepper spray. As time has moved on, the baton and OC pepper spray have proven effective, but not sufficient; thus, the migration toward increasing the number of options available to officers.

The ever-expanding expensive lawsuits and controversy over lethal force incidents has forced agencies to search for other options. With the addition of less than lethal weapons, the basic balance between effecting an arrest and public safety is greatly enhanced (Penn State, 2004). Even with the addition of options, the standard with any training manual and research performed has remained constant. Some experts argued different aspects of liability. They argue that the addition of a less than lethal force weapon aids in a reduction of liability to an agency, while others argue that the addition of a new weapon just leads to one more weapon the agency is liable for. It is valuable to gain insight into current agency practices.

One Hundred surveys were sent out to police agencies around the state of Texas. Sixty-Two surveys were returned and the information was compiled. Agencies were asked if they had a less than lethal option currently is use in their department other than a baton and OC pepper spray. Every agency that responded to the survey has at least one option in use with the baton and OC pepper spray. As reflected in figure 1, there are four different options currently in use.

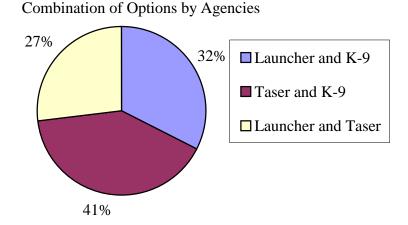






Along with the use of these options, there were 48 agencies that reported a combination of options. This combination included Taser and K-9, Pepper Ball Launcher and Taser, and Pepper Ball Launcher and K-9. Of these 48 reporting agencies, figure 2 reflects the distribution of the combined options among these agencies.





The data compiled revealed that ninety (90) percent of the responding agencies agree that the less than lethal options currently in use are significantly beneficial in their agency. The other ten (10) percent stated that the options they currently have in use are of no significant benefit to their agency. Additionally, fifteen (15) of the agencies stated that they have plans in the immediate future to add other options to their force continuum. The results of the survey suggest that there is a shift in force continuums in Texas. All agencies that responded had added at least one option to their continuum. These options have been added to the standard OC pepper and baton that most every Texas agency uses. Therefore, it appears that the continuums most agencies have known are now evolving as the demand for options grows. It is also interesting to point out that there are several agencies with a combination of 2 or more options. Not only are some agencies adding one option, they are choosing to add two or three. Many of these include K-9 units as a choice. With the introduction of dogs to the patrol division and the success these units have had, agencies are now exploring new, additional options.

Comments received with the surveys ranged from difficulty with council approval to officer training issues. Some officers who have had the same choice of options for years are now trying to adapt to the new innovations. The public, city council, and board of directors must also be educated in the process for these options to be successful. An important comment received concerned the use of the Taser with OC pepper spray, as many sprays are flammable. The author did not detail the Taser, but considered this an important and very relevant comment. Many agencies have reported strict guidelines for use of all their options.

DISCUSSION/CONCLUSIONS

Any officer should use only the degree of force necessary to reasonably make an arrest, overcome a threat, gain compliance of a suspect, and protect himself or herself or another person from harm. As less than lethal weapons are added to the force continuum, the weapons can only be used if a lower level of force is inadequate or not feasible for the action. There are obvious situations that would dictate that one or more lower levels on the force continuum be skipped and immediately proceed to a certain level due to the circumstances. The author found that there were very few negative articles or "failure" type articles on the pepper ball launchers. The overwhelming literature that is currently in print shows a great success rate in real world situations. These include street level suspect interaction, to SWAT use, to crowd control. Seattle Police actually reduced the number of fatal shootings involving police officers to zero in 2003 by implementing and correctly using weapons that are less than lethal.

The author feels it is imperative to talk about training. Training with less than lethal weapons, as in any aspect of law enforcement, is critical. If an officer is not properly trained, how can an agency expect the officer to use the weapon correctly? Training not only includes

the specific use of the weapon, but the insurance that an officer will make a good decision at the scene of an incident. Additionally, learning how to incorporate the weapon in a report is very important. The report must be an accurate reflection of what happened at an incident scene (Miller, 1995).

This research project identified several less than lethal options that are currently available for Law Enforcement. One specific option, the OC pepper ball launcher was discussed in detail, offering existing research in the law enforcement field. The purpose of this study was to determine whether the pepper ball launcher is successful or potentially successful in the field. The theory of the pepper ball launcher as a less than lethal force option is it's ease of use and numerous advantages for the street level officer. As the literature shows, the pepper ball launcher is an effective, efficient, and affordable tool for an officer. Given the data collected, there are many agencies in Texas that are already using some type of option, and many are already using the pepper ball launcher. The research does provide some negatives about the launcher system, but the negatives appear to be the same in any other less than lethal option as well. It was difficult to find any hard data on the number of suspect or officer injuries at an agency that uses the pepper ball launcher. The agencies that responded to the survey did not have any documented proof that a decline in injuries was directly credited to the use of the pepper ball launcher. Although most of the research states a decline in suspect and officer injuries, there were no examples of actual numbers provided. The author believes that although the numbers are not shown or credited to the launcher, there is a logical link between a reduction in injuries and the use of the launcher. When a suspect is taken into custody without a struggle or resisting arrest altercation, it cannot be anything but a positive reduction in the number of injuries or at least the possibility of injuries. One or two officers can take a large suspect into

custody without any type of significant fight or struggle using the pepper ball launcher; thus, this reduces the possibility of injuries.

There are both advantages and disadvantages to the pepper ball system. One of the advantages was just discussed, psychological. The most obvious advantage is the non-lethality of the system, including being safe at point blank range. Use at point blank range is a rare occurrence due to the tactical aspect of using the weapon at an extended distance. With the different projectiles that are available for use, there is an allowance for a "flexible" type force, thus making it appropriate for several different situations. A department can use the training projectiles and incorporate the launcher into more realistic training. After the initial purchase of a pepper ball launcher, the cost of the projectiles is very low as compared to other less than lethal options, such as the 12-gauge beanbag shotgun rounds. The author found a range of prices depending on the type of launching system you want to purchase. The launchers hold multiple rounds of projectiles, and the compressed air cartridges can be easily refilled on site at the police agency. And finally, it has positive effects on personnel. Not only can an agency control large numbers of people, such as the Seattle WTO riots or rioting in a jail facility, but also the number of close combat hand-to-hand altercations is greatly reduced. With an effective range of up to 30 feet, an officer does not need to get close to a suspect or suspects to effective reduce the violence of the situation. The use of the green marking projectiles is effective with crowds as well, marking suspects that are considered the leaders or catalysts for a riot event.

When utilized as an option to lethal force and an addition to a force continuum, it would be a positive addition to any agency. Adding this option will affect the policies and procedures of a department, but the end seems to justify the means for this option. The law enforcement officer himself will be positively affected; however, it is the public that is the real winner when officers are given options to deadly force.

REFERENCES

- Alpert, G. & Dunham, G. (1995). Controlling the Use of Force: An Evaluation of Street-Level Narcotics Interdiction in Miami. *American Journal of Police*. 14(1), 83-99.
- Brave, M. (1997). Law Enforcement Use-of-Force Training. LAAW International, Inc.
- Fox, B. (2001, June 23). Police Buy Pepper Ball Guns for Protest. AP News.
- Graham, M. (2000. April 22). Sheriff's Department gets \$500K for less deadly weapons. North County Times. Retrieved April 22, 2004 from www.nctimes.net.
- Haidle, C. "The Use of Pepper Spray, Does It Belong In The Use of Force Continuum?A Policy Research Project Submitted In Partial Fulfillment of the Requirements for the Professional Designation Graduate Management Institute," July 1999.
- Hamdorf, R. (1993). Asia Pacific Police Technology Conference: Non-Lethal Incapacitation. Adelaide, South Australia.
- Ijames, S. (1996, Fall). Less-Lethal projectiles: Seeking Balance. *The Tactical Edge*. 70-84.
- Jaycor PepperBall Technologies, Inc. (2004). *PepperBall Launcher Instructor Training*. San Diego, CA: Author.
- Jett, M. (1997). Pepper Spray: Training for Safety. FBI Law Enforcement Bulletin 66. 17-23.
- McEwen, T. (1993). Less-than-lethal Technologies in Law Enforcement and Correctional Agencies. Institute of Law and Justice. Alexandria, VA.
- Miller, N. (1995). Less-than-lethal-force weapons: law enforcement and correctional agency civil liability for the use of force. *Creighton Law Review*, Vol. 28 No. 3, 775.

- Penn State Applied Research Laboratory. (2004). Report on the Third International Law Enforcement Forum for Minimal Force Options and Less-Lethal Technologies February 3-5, 2004.
- Scott, R. & Copeland, M. (2001). Technology Innovation and the Development of Less-Than-Lethal Force Options. *Police Misconduct: A reader for the 21st century*. Upper Saddle River, NJ: Prentice Hall.
- Wilkerson, T. (2004, February 4). Less Lethal Weapons Still Pack a Big Punch; But Require Lots of Extra Training. *The Seattle Post-Intelligencer*.

Less Than Lethal Use of Force Agency Survey

Please take a few minutes and complete the following questions. This survey will be used as a research resource for the Leadership Command College of LEMIT. Please return the completed form to Lt. Jeff Casey. Thank you in advance for your assistance.

Number of Sworn Personnel				
Does your agency issue some time of baton?		YES		NO
Does you agency issue pepper spray?		YES		NO
Does your agency <u>require</u> officers to carry that baton and spray while on duty?		YES		NO
Does your agency utilize other types of less than lethal force weapons?		YES		NO
If YES, do you utilize:				
Pepper-Ball gun	YES		NO	
Taser gun	YES		NO	
Bean-Bag gun	YES		NO	
Patrol K-9	YES		NO	
Other	YES		NO	
Do you feel these options are beneficial to your department?		YES		NO
If NO , do you have plans to adopt any of these weapons?		YES		NO
Do you feel those additional options for less than lethal force would be useful for your agency?		YES		NO