

LAW ENFORCEMENT MANAGEMENT INSTITUTE

STATISTICS FOR STANDARDIZATION

OF POLICE SERVICE WEAPON

A RESEARCH PROPOSAL SUBMITTED IN PARTIAL FULFILLMENT

OF THE REQUIREMENTS FOR

MODULE III

BY

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ABSTRACT

The purpose of this paper is to investigate the necessity for the standardization of Law Enforcement Officer's service weapons. This research will assist the White Settlement Police Department in determining the need for the service weapon to be standardized throughout its sworn officers.

This research is important to assist in developing a service weapon standardization throughout the State of Texas which would be a progressive step for Law Enforcement as a profession. There have been thousands of dollars spent on research and testing throughout the United States by Federal, State, County and Municipal Law Enforcement agencies on service weapon standardization; however, no research, testing or justification has been undertaken by the Texas Legislature or the Texas Law Enforcement Officers Standards and Education to bring Texas Peace Officers to a higher level of professionalism in this important area of service weapon standardization.

The information in this research project was obtained from case law, publication, and personal interviews with experts in the police service weapon field. The intended purpose of this research is to inform the City Manager and City Council members of the need for standardization of the police service weapon of the White Settlement Police Department.

INTRODUCTION

Since the inception of our first State Law Enforcement agency - The Texas Rangers established in 1823 - the police service weapon has and is still one of the most significant tools of the police officer. Liability issues are increasing due to the Supreme Court's action of 42 U.S.C. Section 1983.

At present, the White Settlement Police Department employs 39 full time paid police officers. Weapons being utilized by the officers are: Smith and Wesson, Sig Sauer, Glock, H & K, Ruger and Beretta. The calibers of these weapons are: 45 A.C.P., 10mm, 40 Caliber, and 9mm. With these variations, in both manufacturers and calibers, there exists a possibility officers assigned on a major call leading to use of deadly force would not be able to interchange equipment. This increases the concern for officers' safety.

The firearms training programs for the White Settlement Police Department are increasingly complicated due to the lack of standardization.

HISTORICAL AND LEGAL CONTEXT

In August of 1975 the White Settlement Police Department restricted its officers to revolvers only in any caliber from 38 specials to 45 long colts. This remained in place until March 1990 when the approved weapons list was adopted which included all American-made revolvers in calibers from 38 specials to 45 long colt; the 41 and 44-magnum were deleted. Added to this list was the semi automatic double action pistols in calibers from 9mm to 10mm.

The White Settlement Police Department requires that you must qualify with your service weapon before you can carry that weapon. This mandates control by qualification and eliminates the possibility of over penetration for our populated area is reduced. The standardization problem is not solved; the quality and serviceability have improved.

As previously stated, with increased street violence and criminal assaults on peace officers by armed suspects, the need for standardization is an even more increasing concern. With standardization, every officer would carry the same type of weapon with the same caliber and the mechanical function would be the same. This would simplify training by streamlining the training built to enhance the officer's ability and confidence and the mental mind-set that each officer carries the same weapon and the same caliber. This would enable the officer should the need arise to furnish each other with

ammunition in magazines ready for use or utilize each other weapon if needed.

REVIEW OF LITERATURE OR PRACTICES

In May of 1988 the Firearms Training Unit at the Federal Bureau of Investigation Academy in Quantico, Virginia had a four-day weapon's workshop. The Workshop was attended by thirty-six (36) of the top experts in the law enforcement weapon field from the following agencies: Metropolitan Police Department, U.S. Border Patrol, Los Angeles County, Michigan State Police, U.S. Secret Service, U.S. Marine Corps, U.S. Army, Alcohol, Tobacco and Firearms, Maryland State Police, U.S. Department of Justice, Department of the Navy, Baltimore County Police Department, Drug Enforcement Administration, FBI S.O.A.R.U. and FBI H.R.T. unit. After the last shot was fired and the smoke cleared the following was reported.

Law enforcement has historically bought available "off the shelf" weapons and either adopted them to meet their individual needs or used them in spite of their deficiencies due to the widespread interest in semi-automatic pistols away from the old stand by revolver.

All participants involved in this test unanimously agreed that the need for pistols to replace revolvers in law enforcement has become paramount. The advantages of pistols are overwhelming in two broad but critical areas: 1) The tactical edge represented by pistols in shooting incidents, and 2) the significant training enhancements that accrue with the use of pistols when generally issued.

In the area of training enhancements, the group identified six distinct enhancements which serve to improve training and make it more effective.

1. Pistols are easier to shoot than revolvers. Over 95% of the shots fired with a modern double action pistols are short, single action trigger pulls, as compared with a revolver in which 100% of the shots fired require a long, heavy and difficult to control double action trigger pull. Further, pistols transmit recoil into the hand better than revolvers, spreading it out in time because of the cushioning effect of the slide action, and distributing it throughout the hand. The result is that shooters control the pistol better, and beginning shooters do not suffer damage to the hand as is common with revolvers. Revolver grips are too low below the barrel, thus increasing the perceived recoil and focusing the recoil upon small areas of the hand. At the lowest skill level, for example, a marginal shooter with a revolver will be a better shooter with a pistol, given the same amount of instruction. Ease

of shooting translates into better shooters leaving basic training, and a higher level of maintained proficiency in the field when the amount of training and rounds fired inevitably decreases as compared to the basic training undergone. This gives rise to the second enhancement.

2. The ease of shooting and increased proficiency which results leads to an increased confidence level on the part of the shooter. A shooter's confidence level on the part of the shooter. A shooter's confidence in his ability with the weapon will translate into significantly improved effectiveness with that weapon should the need to use it arise.
3. The ease of shooting inherent to pistols will result in better proficiency attained sooner in the training curriculum. If the total number of hours and rounds remain unchanged, the end product will be a better shooter.
4. Higher scores can be realized during qualification and training, more so in the field than in basic training. In basic training, the time and rounds devoted to training are sufficiently intense to raise all shooters to an artificially high level of skill. Once those shooters graduate and enter service in the field, the time devoted to training with the firearm inevitably decreases. The shooter's skill level subsides to

a lower "maintenance" level because of the decreased time spent in training and the increased time between training sessions. That maintenance level of skill will be higher in the field due to the higher skill level attained in training school and due to the ease of shooting pistols, as compared to revolvers. Thus the Agent/officer in the field will attain higher scores and the effectiveness, credibility, and dependability of the training program will be enhanced.

5. The pistol functions more reliably in the training situation. A constant problem with the revolver has been the accumulation of unburned powder under the extractor, which renders the weapon inoperable. This condition begins to occur with the revolver after firing several hundred rounds. Pistols routinely can be fired in excess of 1500 rounds without cleaning and will still function reliably.

6. Pistols issued for duty use require the exclusive use of service ammunition. The recoil reducing effects of pistols enable extensive firing of service ammunition without any pain or fatigue being imposed on the shooter. There is no light recoiling, target ammunition such as wadcutter used in revolvers. Shooters will train exclusively with the same ammunition carried on duty. This will enhance the shooter's ability to successfully resolve a shooting incident, and significantly enhance the agency's defense against a liability action. Training with light target

loads and carrying heavy service loads on duty as is common with revolvers gives rise to a serious liability question. It is done because of the detrimental effects on the shooter of extensive firing of service ammunition. This effects do not occur with pistols and the exclusive use of service ammunition is easily implemented.

DISCUSSION OF RELEVANT ISSUES

The tactical edge which pistols hold over revolvers is equally pronounced and compelling. The group identified seven significant tactical advantages.

1. Ease of shooting, as discussed above.
2. Speed of reloading. A common thread which is apparent in all interviews with Agents/Officers involved in shooting is the onset of a sense of helplessness and vulnerability upon having to reload. Revolvers are slow to reload even under range conditions and even with speed loaders. In the life and death stress of a shooting situation, they can be agonizingly difficult to reload due to the loss of fine motor control common under stress. The resultant time required to accomplish reloading can be fatal. If a hand has been injured or incapacitated, it can be virtually impossible. The speed with which a pistol can be reloaded is a significant tactical edge. It does not require the use of fine motor control as does revolver

reloading. It can be accomplished more readily with one hand. And the increased capacities of pistols can delay the necessity to reload enough that in most shootings it will not arise at all.

3. Increased proficiency, as discussed above under training enhancements, is a significant tactical advantage. A higher maintained level of skill represents a higher survival potential in an actual shooting incident.

4. Better durability and reliability. The modern double action pistol is more reliable and more durable than the revolver. The pistol is less likely to suffer damage during occasional abuse such as being dropped on pavement. With the single exception of a dud round, all stoppages occurring in a revolver require time and assistance to clear. Examples include powder under the extractor, a backed out extractor rod, a high primer binding the cylinder, double clutching the trigger which skips rounds in the cylinder, failing to completely eject empty cases, and failing to close the cylinder completely. There is no firing condition in the event any of these stoppages occur. Stoppages which occur with a pistol can be immediately resolved by the shooter and the weapon returned to a firing condition literally in seconds. Pistols stoppages include dud rounds, jams, failure to completely seat a magazine, and feeding failures. The incidence of such stoppages

are no greater than stoppages with revolvers, and if good quality ammunition is used, the incidence of occurrence is less.

5. Faster, accurate shooting. The ease of shooting, short trigger travel required, and decreased perceived and felt recoil enable any shooter to perform faster, with equal or better accuracy, than that same shooter can with a revolver.

6. Greater capacity. Although most advocates of pistols stress the greater capacity of the pistol as the primary advantage, the group identified it as merely one advantage among several, and not necessarily the greatest. Nevertheless, it is a real and compelling factor. Any Agent/officer who must reload is absolutely defenseless for however long it takes to actually reload. This moment of complete vulnerability can be postponed and perhaps avoided entirely due to the greater capacities of pistols, and if reloading does become necessary, it can be accomplished in mere seconds. In fact, ease and speed of reloading are identified as more significant tactically than the actual number of rounds available in the weapon. No agreement was reached on the optimum number of rounds which should be available in the pistol, since the larger numbers can result in grip sizes too large for general issue use by widely varying hand sizes, and the smaller capacities available could not be called inadequate. Nine rounds was the minimum

acceptable capacity, and compromise other factors such as general usability, overall dimensions, etc.

7. Another advantage is reflected in the amount of ammunition that can comfortably be carried by the officer as backup. While speed loaders are bulky and cumbersome to operate, magazines are streamlined and simplistic in operation, containing a significantly larger number of rounds. Therefore, the agent/officer gains a distinct advantage in this area.

The group further identified three issues which must be addressed relative to any contemplated change from revolvers to pistols.

1. New training techniques are mandatory. Pistols cannot be successfully fired with revolver trigger control techniques and instructional methods. The pistol is a completely different weapon system and requires different techniques and instructional methods. It is a mistake to attempt to shoot a pistol "like a revolver." To do so is to negate all the training advantages which apply to pistols.
2. Pistols cost significantly more than revolvers. The acquisition cost is approximately double that of a revolver, and the support costs for replacement

magazines, magazine pouches, and ammunition are more.

3. There is a first shot liability question which must be resolved. Simply put, in potentially dangerous situations the officer is going to have his finger on the trigger. The overwhelming probability is that the situation will be resolved and the weapon holstered with no shot being fired. The long, heavy double action trigger pull of a revolver represents a safety margin which prevents the weapon from being unintentionally discharged in such a situation. This is why single action pistols are deemed inappropriate for general issue use. The first shot, and all subsequent shots, is a relatively light, short, single action trigger pull. Inevitably this will lead to an "unintentional" shot at the worst moment. It is unrealistic to instruct the officer to keep his finger off the trigger until he is intending to shoot. In actuality, the officer facing an unidentified subject in a potentially dangerous situation will have his finger on the trigger no matter what policy or instruction have said to the contrary, and common sense and survival instincts dictate that he should. A relatively long, relatively heavy double action trigger pull provides the safety margin by which policy and instruction can allow the officer to do that which he will do anyway, and mitigate against the weapon firing unintentionally. In a double action pistol, once that first shot is fired, all the ease of shooting of a consistent single action trigger comes into play. Proper training in pistol

techniques will also make effective hits with the first shot easily attained.

Thus, the classical double action pistol is identified as the best choice for general law enforcement usage. The first shot, being relatively long and heavy, resolves the first shot liability, yet allows the shooter to hit effectively when a fast shot is intended and immediately transitions into short, relatively light single action trigger pulls for all subsequent shots. Thus ease of shooting is maintained for almost all shots fired from the pistols, yet that critical first shot requires an intentional trigger pull.

Absolute agreement upon an ideal pistol was not possible. Each agency represented had differences in one or more areas of specification. For example, several of the uniform departments represented insisted upon the presence of a manual safety on the weapon because they routinely carry their weapons exposed to the public. They cited several instances of officers' lives being saved because the subject who was attempting to shoot them with their own weapon could not figure out how to make the gun shoot with the safety on. Some representatives present did not consider all steel construction to be desirable, preferring the slightly decreased weight over considerations of extended service life. Some wanted no controls on the pistol slide, others did not care about the presence of controls on the pistol slide. Some did not care about ambidextrous operation, others did. The concern over first shot liability discussed above was not a unanimous

concern, although most of the representatives present agreed that it was an important factor. One of the uniform agencies represented was not completely convinced of the undesirable nature of a magazine disconnecter. The two points on which all present agreed unanimously was the need for pistols in law enforcement, and the fact that every individual agency will identify its own needs and select weapons accordingly.

The following specifications were established as a guide line, and agreed upon by a majority of those present. The group further recommends that any specifications be performance oriented and not engineering oriented. It is preferable to mandate what the weapon will do, rather than how it will be built. In the former case, if the weapon does not perform as desired there is redress available. In the latter case, if the manufacturer builds it as specified, and it does not perform as desired, there is no redress because the manufacturer has met the specifications.

SPECIFICATIONS

- A. 40,000 round service life for the frame and slide.
- B. 20,000 round service life for the barrel.

- C. No magazine disconnecter.
- D. No manual safety.
- E. A firing pin lock to prevent firing without a finger on the trigger must be present.
- F. A disconnecter to prevent firing out of a battery must be present.
- G. First shot should be a smooth, 10-12 pound trigger pull.
- H. Second and subsequent shots must be a short, 4-6 pound trigger pull.
- I. Must be able to decock the weapon without touching the trigger.
- J. Must have a pure decocking lever or control which has no other function and is preferably ambidextrous in operation.
- K. Magazine release on the frame, and it pushes "in" to release.

- L. All controls operable with the shooting hand.
- M. No dual function controls.
- N. Must have some means of altering or varying grip dimensions to fit variably sized hands.
- O. Either a fixed barrel bushing or no bushing at all.
- P. Inertial firing pin.
- Q. Easy to field strip for cleaning and maintenance.
- R. Magazines must always fall free when magazine released pushed.
- S. There must be a front lip on the bottom of magazine.
- T. The weapon capacity should be at least 12 rounds.
- U. The magazine base must extend below the bottom of the frame.

- V. The pistol and the magazines must not be capable of being reassembled incorrectly when field stripped.

CONCLUSION AND RECOMMENDATION

During the same time period as the FBI workshop, Reaves Junkin, a firearms expert for the Texas Department of Public Safety, was conducting weapons testing. Mr. Junkin had been very adamant that the revolver was the only police service weapon to use; however, he was having second thoughts due to the constant research regarding the violent death of officers during confrontations. In light of research and testing, Mr. Junkin settled on the reliability, safety and serviceability of the Sig Sauer and believed that the 45 A.C.P. was the best suited of the available caliber to facilitate officers with the ability of one-shot stoppage or incapacitating requirements. Mr. Junkin was concerned that even though the magazine capacity was limited to seven rounds the stopping power was the main factor and decided on the Sig 220 in 45 A.C.P. caliber. Mr. Junkin approached Sig Sauer experts regarding possible modification to the magazine and they were able to make the modification which gave the Sig 220 capable of carrying nine rounds with a round in the chamber. This modification was named the Texas D.P.S. modification. Mr. Junkin was able to justify and convince the managers of the Department of Public Safety to standardize the Sig 220. This was a giant step for the Department which had been

carrying one type of weapon and caliber for over 35 years.

Mr. Junkin still believed the 357 Magnum was the best round for effectiveness but the tactical edge was different with the pistol over the revolver. In 1996 the Sig Sauer made another innovative discovery of the .357 semi-automatic round and introduced the Sig model 229. This round was in direct reflection of stopping power, velocity and ballistic co-efficiency as the original 357 magnum, but the 357 semi-automatic was a shorter round and the model 229 had a magazine capacity of 13 rounds. The recoil was slightly less than the Sig 220 and the 229 was smaller in grip size which made the weapon more suited for smaller and minority officers. The Department of Public Safety, continuing with their modern and innovative mind set, standardized to the Sig 229.

The White Settlement Police Department, due to the cost, would have to make the transition of standardization over a three-year period. The purchase of fifty weapons would allow for future personnel expansion and weapon break down replacement. Total yearly cost of \$7,650 and a total overall cost of \$22,950 would cover the cost of the weapons. An additional \$10,000 would purchase extra magazines, holsters and magazine carriers. Overall cost would be \$32,950.

Our training program would be streamlined for simplicity and the department would have

state of the art standardization of each officer regardless of assignment. Having the same weapon and caliber would enhance officer safety and reduce department liability if deadly force had to be employed.

BIBLIOGRAPHY

Adams, Ronald J., Thomas M. McTernan, Charles Remsberg Street Survival Tactics For Armed Encounters, Illinois: Calibre Press, 1983

Beretta U.S.A. The Semi-Automatic Pistol In Law Enforcement, Maryland: 1993

Clede, Bill Police Handgun Manual. Pennsylvania: Starkpole Books, 1985

Celler, William A., Michale S. Scott Deadly Force: What We Know. Illinois: Police Executive Research Form, 1992

Greenleaf, James W., Assistant Director of Training Division, Federal Bureau of Investigation Weapons Workshop

Reaves Junkin, Texas Department of Public Safety, Firearms Expert