

COSTA MESA POLICE DEPARTMENT

STAFF REPORT

TO: Executive Staff Members
FROM: Jason Chamness, Detective
SUBJECT: Service Pistol Evaluation and Replacement
DATE: Dec 14, 2016

PURPOSE

A firearms committee was formed to research, evaluate and test a variety of options to replace our Department issued Heckler and Koch (HK) USP .40 Caliber service pistol.

BACKGROUND

During a Costa Mesa Police Department (CMPD) Staff Meeting in 2016, an assessment of our service pistol was requested by Staff. Currently, CMPD officers are issued the HK USP .40 caliber pistol. The HK pistol was originally purchased in 1998 and the recommended service life of 20,000 rounds has expired. The primary focus was to test and evaluate the most current and reputable pistol manufactures and calibers and compare them to our current service pistol.

The timing of this study allowed us to reference current research and testing by a variety of agencies including the Federal Bureau of Investigations (Attachment A). Lt. Everett and Sgt. Hildeman established a firearms committee to include the Department's Range Staff. Detective Peters, Officer Healey and I were asked to select an additional person for the committee. We selected Detective Hanson due to his knowledge of firearms.

DISCUSSION

The firearms committee started our research with the five (5) most well reliable and popular manufactures in the law enforcement firearms community. This included; Glock, Sig Sauer (Sig), Heckler and Koch (HK), Smith and Wesson (S&W) and Springfield. The latest model for each manufacture included the Glock Gen 4, Sig P320, Smith and Wesson M&P, Springfield XD Series and HK VP Series. Each of these include the latest "striker fired" trigger mechanism. Glock, Sig, S&W and Springfield all provided their latest weapons systems in

9mm, .40 and .45 Caliber for testing. HK did not respond to our request for samples of their pistols. The firearms committee borrowed the latest HK pistols from several officers at the Department.

The firearms committee collected a total of fifteen (15) separate pistols. We hypothesized a comprehensive test phase with multiple officers would provide us with the most unbiased and scientific data possible. To do so with fifteen (15) weapons would be time consuming and inefficient.

The firearms committee chose to test all five manufactures in .40 caliber with the goal of reducing, if justifiable, the number of manufactures considered. After conducting our initial testing, the committee agreed the Springfield and HK pistols were the least suitable for CMPD. The Springfield felt inferior with an unnatural sight picture, long and sluggish trigger pull and a restricted magazine release. The HK had a newly designed magazine release that was cumbersome and a limited magazine capacity in comparison to the other manufactures. Additionally, HK was the least responsive manufacturer when trying to obtain and evaluate their weapons. We continued our testing with the Glock, Sig and S&W in 9mm, .40 and .45 Caliber.

The firearms committee identified the following eight (8) characteristics we believe are most important for a service pistol:

- Ergonomics
- Trigger pull
- Grip
- Sights
- Perceived recoil
- Trigger reset
- Confidence
- Control

In addition to the above characteristics, gave consideration to several other factors such as weight, sight picture, integrated accessory rail, holster options, slide release, manufacturer reputation/support and cost.

We created three (3) different courses of fire to evaluate the above mentioned characteristics. We used a modified "B" silhouette target for all courses of fire. The "slow fire" drill consisted of the officer firing ten (10) rounds, slow fire, at the target from the twenty-five (25) yard-line. This drill helped evaluate ergonomics, trigger pull, grip and sights. The "rapid fire" drill consisted of each officer firing ten (10) rounds in rapid succession in less than eight (8) seconds from the ten (10) yard- line. This drill helped evaluate perceived recoil and trigger reset. The "failure drill" consisted of each officer firing two (2) rounds to the body and one (1) round to the head in two (2) seconds from the seven (7) yard-line. Officers

shot this course of fire three (3) times. This helped evaluate the officer's confidence and control.

The firearms committee selected ten (10) officers as for the test group. We chose officers based on shooting experience, shooting abilities and physical size. Twenty (20) additional officers fired pistols from each of the three manufactures in .40 caliber and provided feedback to the firearms committee.

We started our test phase with an "ice breaker." During the ice breaker, each officer fired ten (10) rounds of .40 caliber from each pistol. We chose to start with .40 caliber since it is the Department's standard issue ammunition. We continued this testing with the 9mm and .45 caliber from each of the three (3) pistol manufactures and asked the officers to provide instant feedback and first impressions.

At the end of the ice breaker, we asked each officer to rank the pistols from favorite to least favorite based on their first impression of the pistol. Among the test group, the Sig was ranked highest in all three calibers. The twenty (20) additional officers ranked all manufactures equally. Feedback from all officers was overwhelmingly positive for each of the manufactures (Attachment B)

We continued our test phase with members of the test group. They shot each of the three (3) courses of fire with the nine (9) different pistols. Each course of fire was scored so the officer's shooting performance could be quantified with a final percentage score. The officers provided feedback regarding their likes and dislikes and their comments were recorded on their score sheet (Attachment C).

After each officer shot a particular pistol, caliber, and course of fire, they gave the above characteristics (ergonomics, trigger pull, grip, etc.) a numerical score between 1 and 5 (poor to excellent). At the conclusion of all testing we tallied the scores. The Sig 9mm and .40 caliber received the highest scores with an average of 4.1. The Sig .45 caliber received a score of 4.0. The next highest was the Glock 9mm with a score of 3.7 (Attachment D).

After each officer completed the entire test phase, we asked them to reevaluate their initial preference. At the conclusion of all testing we recorded the following information:

Eighty percent (80%) of the test group selected the Sig as their overall favorite pistol manufacturer. Twenty percent (20%) selected the Glock. None selected the S&W.

Seventy percent (70%) of the test group selected the 9 mm round as their overall favorite ammunition. Twenty percent (20%) selected the .40 caliber and ten percent (10%) selected .45 caliber (Attachment E)

We combined all officers shooting scores with the various pistols and calibers and recorded the following:

1. Sig .40 caliber 91.9%
 2. Sig 9mm 91.8%
 3. S&W 9mm 90.6%
 4. Glock 9mm 89.7%
 5. S&W .40 caliber 89.1%
 6. Glock .40 caliber 87.5%
 7. S&W .45 caliber 87.1%
 8. Sig .45 caliber 85.5%
 9. Glock .45 caliber 81.9%
- (Attachment D)

An important consideration for any service pistol is weight. All pistols tested in the three (3) different calibers were roughly the same weight with an average variance of approximately 3-5 ounces.

COST CONSIDERATIONS

The unit cost for the Sig P320 9mm is approximately \$408 (ProForce) and is roughly equal to the quoted trade-in value of our current HK USP 40. The purchase of the new service pistol is effectively cost neutral (Attachment F).

The ancillary costs for the purchase of new Safariland holsters is approximately \$105 per holster. We recommend purchasing 150 holsters at a total cost of \$15,750 (Attachment G). Our current magazine pouches will fit the 9mm magazine and no new purchase is necessary.

As an enhanced benefit, the department could consider purchasing the Department authorized Streamlight mounted lighting system at a cost of approximately \$129 per unit (Attachment H). We recommend purchasing 200 lights at a total cost of \$25,776. Associated battery cost will be minimal with LED technology (Attachment H).

CALIBER RECOMMENDATION

The firearms committee is recommending the Department consider switching from the .40 caliber round to the 9mm round. The FBI's research indicates the 9mm round is a viable law enforcement cartridge (Attachment A). The shooting scores reflected the Sig 9mm increased the officer's accuracy. Currently, our supply of .40 caliber ammunition can be exchanged for 9mm ammunition. By switching to 9mm, the Department will save money. Additionally, the 9mm round will allow officers to carry more ammunition on their person.

CONCLUSION

Based on the firearm committee's extensive test and evaluation period, we recommend the Department replace the HK USP .40 caliber pistol with the Sig Sauer P320 9mm (Attachment I). The Sig 9mm was preferred by a majority of the test group. Shooting accuracy increased and a many felt the Sig 9mm instilled confidence in their shooting abilities.

Jason Chamness
Detective