

M&P Proposal

Introduction

This memorandum is intended to present information on an opportunity to upgrade our currently issued Smith & Wesson 4566TSW, to a lighter handgun with a higher ammunition capacity. Smith & Wesson is offering their flagship M&P Series handgun in 40 and 45 calibers. The M&P is available in a full-size and a compact version. Smith & Wesson is also able to replace our aging AR15 platform.

Our current weapon systems are the Smith & Wesson 4566TSW duty handgun, the Chief Special compact handgun, and the Armalite AR15 carbine rifle. The 4566TSW was purchased and issued in 2007. The CS45 was purchased and issued 2003. The Armalite AR15 was purchased and issued 2001.

Manufacturers agree that a properly maintained firearm should last 20 years or 20,000 rounds. However, we expect law enforcement needs to change every 10 to 15 years to keep in step with evolving technology. Our department's last series of duty weapons include the S&W 645 manufactured 1985-1988, the S&W 4506 manufactured 1988-1999, and the S&W 4566TSW manufactured 1990-2004. The Fresno County Sheriff's Office has moved to a new handgun platform approximately every 15 years; however, this is the first time we have used a duty rifle platform and have no departmental experience of the deployment life of a duty rifle.

Problem Identification and Analysis

Smith & Wesson has advised they are no longer manufacturing their "third generation" handguns. The 4566TSW and CS45 are third generation weapon systems, which have become less popular in the shadow of the polymer handguns available in both the law enforcement and civilian market. Third-generation Smith & Wesson's are still available to law enforcement on a special order only basis. According to Smith and Wesson, only an estimated ten agencies in the United States and Canada currently issue Smith & Wesson's third generation handguns. Of these ten agencies, three are currently transitioning to a different handgun.

Due to low demand for third generation handguns, Smith & Wesson has moved the production and support of their third generation guns to a satellite facility in Maine. This allows more space in their primary factory located in Springfield Massachusetts for the manufacturing of the M&P line of firearms. A shortage of replacement parts for third generation handguns is a direct result of the move and lack of demand. This is a serious problem for us, as third-generation parts become more and more difficult to obtain. This has impacted our maintenance program, as parts are difficult to come by for routine maintenance and repair. The less routine replacement parts are nearly impossible to obtain through proper channels, as there is simply no demand. It has become commonplace for our agency to wait well over one year to receive parts from Smith & Wesson. Customer service and business relations with Smith & Wesson are second to none, nonetheless it is becoming more and more difficult for Smith & Wesson to supply necessary service and parts, as this weapon system becomes more antiquated. (This information was confirmed by our Smith & Wesson rep. on March 11th 2013.)

Our inventory of 4566TSW and CS45's are in need of replacement parts, based on the factory specifications to include replacement springs, magazine rebuilds, and night sight replacement due to

those which are dim or no longer glowing. Each gun in service, approximately 820, would incur an estimated \$130.00 per gun during the next two years. The total cost for maintenance on the two weapon systems would be approximately \$106,600.00 (based on current part pricing).

Due to the lack of demand for third generation guns, armorer classes are extremely limited, to the point that Smith and Wesson has not conducted a course for this particular weapon system for the last few years. Therefore, making it difficult for the Fresno County Sheriff's Office to have armorers that are current with certifications due to lack of opportunity.¹

With the introduction of the back-up/off-duty policy revised by Sheriff Mims, there has been less demand for the compact CS45, as many are opting to use their personal weapons. Although many deputies still take advantage of the compact program, large amounts have been returned to storage.

With regard to the Armalite AR15 Carbine, these weapons have been deployed for approximately 12 years. Factory specifications require worn parts and springs to be replaced. Each gun in service, approximately 239, would incur an estimated \$13.00 per gun during the next several years. The total cost for maintenance on the AR15 would be approximately \$3,107.00 (based on current part pricing). This does not include rifles which would need major component replacement, such as barrels \$180.00 and rifle bolts \$40.00. This is an estimated 10% of the current rifle inventory. Current customer service and relations with Armalite are adequate, but not outstanding.

Solution and Deployment

Given the above listed items, the training unit staff has begun researching a solution involving new weapon systems. Because we have a long and outstanding relationship with Smith & Wesson, they have a buy back/trade offer on the table for new weapon systems. They are offering to buy our weapons at current market value, and apply the value towards the purchase of new weapons. The following is a basic summary on the M&P handguns, and included in the offer is the MP15, the S&W AR-15 rifle platform.

Smith & Wesson M&P (military and police) Series

The M&P was introduced in 2005 and has since become Smith & Wesson's flagship law enforcement handgun. It enjoys worldwide demand, thus eliminating parts, service and maintenance problems currently being experienced with the third generation handguns. Smith & Wesson has no plans to replace this series, so we expect the lifespan of this weapon system to meet our needs for many years to come.

The M&P series of semiautomatic duty weapons come in both .40 and .45 calibers. The weapon is significantly lighter in weight, with more round capacity per magazine.

Smith & Wesson's engineers paid particular attention to the ergonomics of this handgun, ensuring ease of use for all shooters. The M&P has three easily removable/interchangeable handgrips for large, medium and small handed shooters. This is a very important feature considering the number and variety of deputies we employ. Our range staff frequently encounters deputies who have difficulty shooting, simply because of the large size of our current duty handgun. Additionally, there is an

¹ Essegian attended Gen 3 armorers course on April 23-25

ambidextrous slide release, and a reversible magazine release, making the weapon more versatile for left and right handed shooters, without unsafe hand manipulation.

The M&P firing cycle eliminates the double/single action function, instead maintaining a consistent 6.5 lbs. trigger pull throughout its firing cycle. The M&P offers built-in safety features similar to our current weapons system, including the firing pin safety, ¼ inch disconnect, magazine disconnect (optional), and the manual thumb safety (optional.) The M&P is also equipped with a sear deactivation lever that permits you disassemble the weapon without pulling the trigger. This eliminates the negligent discharges experienced by other agencies with polymer type weapons. (This gun doesn't have a hammer or firing pin. It has a striker system. You can't drop the hammer.)

Our armorers have already been trained on the M&P handgun and refresher training is all that would be needed.

Compact handgun

The M&P compact handgun is smaller in size, and lighter in weight, than the CS45, while adding additional round capacity in the magazines for both caliber configurations. The M&P compact also offers additional handgrip sizes to allow for individuals to customize the weapon to fit their hand size. This change can easily be made by the user, without the need of an armorer. The compact has the same safety features as the full-sized M&P model allowing for consistency between weapons. The magazines from the full-size M&P's can be used in the compact.

Due to the smaller size and lighter weight of the full-size M&P, it is reasonable to consider eliminating the compact program.

Carbine Rifle

The Smith & Wesson MP15 Carbine .223 cal. is a standard patrol AR-15 carbine rifle. The function of the weapon is the same as our current Armalite AR15. Therefore, no additional training and/or familiarization would be necessary, although recommended. Also, our armorers have been trained on the MP15. Our current armory tools, gauges can still be used for maintenance. Our current stocks of replacement parts are interchangeable. The MP15 will accept the departments recently acquired hand guards, lights and 30 round magazines. The MP15 has a 6 position adjustable stock to allow each deputy to change the length of the stock for a better fit. This will afford flexibility for deputies of varying stature, and also allow for adjustment when wearing thicker tactical gear and body armor. The MP15 is made and manufactured by Smith & Wesson therefore parts and service will be readily available.

Training needs

Training staff estimates weapon and equipment familiarization for the new weapon systems to be 4 to 6 hours per deputy along with 200 rounds of ammunition per weapon system.

Below are photographs of the proposed weapon systems from Smith & Wesson. We are currently in the process of obtaining demonstration weapons from Smith & Wesson for hands-on exposure.

Full-Size Duty Handgun



Smith & Wesson MP 40

- Capacity: 15 + 1
- Weight empty: 24.25 oz.
- Overall size: 7.63 x 5.5 in.
- Width: 1.2 in.
- Barrel length: 4.25"
- Trigger-pull: 6.5 lbs.
- Ambidextrous slide stop
- Reversible magazine release
- Optional magazine disconnect safety
- Optional thumb safety
- Consistent trigger pull
- Grip sizes interchangeable
- Life time guarantee
- Armorer's are currently trained
- Made in the USA
- Current Streamlight TRL-1 fits
- Night sights included
- Price \$410

Smith & Wesson MP 45

- Capacity: 10 +1
- Weight empty: 27.7 oz.
- Overall size: 7.55 x 5.5 in.
- Width: 1.2 in.
- Barrel length: 4"
- Trigger-pull: 6.5 lbs.
- Ambidextrous slide stop
- Reversible magazine release
- Optional magazine disconnect safety
- Optional thumb safety
- Consistent trigger pull
- Grip size interchangeable
- Life time guarantee
- Armorer's are currently trained
- Made in the USA
- Current Streamlight TRL-1 fits
- Larger frame than M&P40
- Night sights included
- Price \$430

Smith & Wesson 4566

- Capacity: 8 + 1
- Weight empty: 38.5 oz.
- Overall length: 7.9 in.
- Barrel length: 4"
- Trigger-pull: 6.5 / 14 lbs.
- Right hand slide top
- Right hand magazine release
- Slide mounted safety / de-cocker
- One grip size
- Limited armory classes
- Discontinued
- Parts take over one year for manufacture and delivery
- Made in the USA
- Night sights need replacement
- Rebuild / maintenance cost \$130

*Smith & Wesson Lifetime Warranty covers the barrel, slide and frame for the lifetime of the gun.

Compact Handgun



Smith & Wesson MP40c

- Capacity: 10 + 1
- Weight empty 21.7 oz.
- Overall size: 6.7 x 4.3 in.
- Width: 1.2 in.
- Barrel length: 3.5"
- Trigger pull: 6.5 lbs.
- Ambidextrous slide stop
- Reversible magazine release
- Optional magazine disconnect safety
- Optional thumb safety
- Consistent trigger pull
- Grip size interchangeable
- Armorer's are currently trained
- Night sights included
- Made in the USA
- Price \$410

Smith & Wesson MP45c

- Capacity: 8 + 1
- Weight empty 26.2 oz.
- Overall size: 7.55 x 4.8
- Width: 1.2 in.
- Barrel length: 4"
- Trigger pull: 6.5 lbs.
- Ambidextrous slide stop
- Reversible magazine release
- Optional magazine disconnect safety
- Optional thumb safety
- Consistent trigger pull
- Grip size interchangeable
- Armorer's are currently trained
- Made in the USA
- Larger frame than M&P40
- Night sights included
- Price \$430

Smith & Wesson CS45

- Capacity: 6 + 1
- Weight empty 32.1 oz.
- Overall length: 6.6 x 5.1
- Width: 1.3 in.
- Barrel length 3.25 in.
- Trigger-pull 6.5 / 14 lbs.
- Right hand slide stop
- Right hand magazine release
- Slide mounted safety / de-cocker
- One grip size
- Limited armory classes
- Discontinued
- Parts take over one year for manufacture and delivery
- Made in the USA
- Night sights need replacement
- Rebuild / maintenance cost \$130

*Smith & Wesson Lifetime Warranty covers the barrel, slide and frame for the lifetime of the gun.

Patrol Rifle



Smith & Wesson MP15

- Capacity 28 + 1
- Weight Empty 6.54 lbs.
- Barrel Length 16" mid-length
- Adjustable Stock
- Removable carry handle
- Will accept department handguard and light
- M4 feed ramps for ease of feeding
- Needs night sights
- Price \$760



Armalite AR15

- Capacity 28 + 1
- Weight Empty 7.5 lbs.
- Barrel Length 16" mid-length
- Fixed Stock
- No M4 feed ramps which can cause malfunctions
- Limited customer service
- Needs night sights
- Rebuild / Maintenance \$13 to \$233

Buy Back – Trade Proposal

This is an estimate based on current counts of stock and working weapons only. Non-functioning weapons will be excluded from this proposal and will affect overall totals. The pricing provided by Smith & Wesson is subject to change until negotiation is complete and an agency commitment agreement is reached. Quoted prices will only be honored for only Sixty (60) days after which, they are subject to dealer and market changes. Additionally the S&W rep. advised an additional discount per weapon is likely, estimated to be \$30.00 per handgun and \$50.00 per rifle. Because we are awaiting final approval regarding the discount, the discount has not been figured into the estimates below. It should be noted that the current used-handgun market is experiencing higher prices due to buying pressure brought on by current events and pending legislation.

The following rules generally apply to all trade in guns.

- Gov't Agency prices **do not include sales tax or FET**, where applicable.
- Prices are due and payable NET 30 days for each invoice.
- Trade-in pistols must be in good, serviceable working order.
- Deductions made if trade-ins are damaged or not as specified.
- Trade-in or exchange pistols must be complete with three magazines, working night sights, grips, & in original box, unless otherwise noted.
- Trade-in or exchange pistols must be turned in within 30 days after receipt of new guns, unless other arrangements have been made and approved.
- All firearms traded to the dealer/manufacture are subject to being refurbished and sold to other Federally Licensed firearms distributors.
- There is a **Limited Lifetime Warranty on most major brand guns & parts, including postage, labor and replacement parts when used with factory ammunition only.**

Current weapons systems – Quoted Trade-in Value (Per S&W rep on 3/11/2013)

<u>Weapon</u>	<u>Amount in Stock</u>	<u>Price</u>	<u>Total</u>
4566 TSW	675	\$340ea	\$229,500.00
CS45	475	\$250ea	\$118,750.00
AR15	380	\$575ea	\$218,500.00
		<u>Total Est. Trade:</u>	<u>\$566,750.00</u>

Proposed weapon system-Law Enforcement Special Pricing based on trade (Per S&W rep on 3/11/2013)

Weapon	Amount Desired	Price	Total
M&P.40	475	\$410	\$194,750.00
M&P.40c	325	\$410	\$133,250.00
MP15	325	\$760	\$247,000.00
Total Est. Buy:			\$575,000.00
M&P.45	475	\$430	\$204,250.00
M&P.45c	325	\$430	\$139,750.00
MP15	325	\$760	\$247,000.00
Total Est. Buy:			\$591,000.00
M&P.40	475	\$410	\$194,750.00
MP15	325	\$760	\$247,000.00
Total Est. Buy:			\$441,750.00
M&P.45	475	\$430	\$204,250.00
MP15	325	\$760	\$247,000.00
Total Est. Buy:			\$451,250.00

Estimated Equipment Costs

Equipment costs will be the same regardless of purchase package, as the detective/off duty holster will accommodate both the full-sized and compact models of the M&P handgun.

Product	Amount Desired	Price	Total
Duty Holster	500	\$76.87	\$38,435.00
Duty Mag Pouch	500	\$22.07	\$11,035.00
Det./Off Duty Holster	350	\$42.00	\$14,700.00
Det./Off Duty Mag Pouch	350	\$25.60	\$8,960.00
Honor Guard Holster	30	\$80.00	\$2,400
		Total Est. Cost:	\$75,530.00

Duty Ammo Comparison: 45 ACP vs. 40 S&W

Introduction

The debate over which caliber is best for law enforcement has been a spirited and long standing debate. Part of the challenge in comparing 40 S&W to 45 ACP is that there is no existing industry standard. The opinions are subjective at best.

To simplify this comparison, the range staff broke the analysis down into three categories: Ballistic performance, law enforcement needs, and cost.

Ballistic Performance: Shot placement and stopping power

Shot placement

The one issue that is most agreed upon when discussing ballistic performance is shot placement. Shot placement begins with a handgun the shooter is comfortable with, followed closely by practice time and training.

The 45 ACP's recoil energy moves backward with even pressure with almost no muzzle flip. The 40 S&W is most often described as having a "snap" feel in the palm and small amount of flip that interrupts the sight picture.

Typically, 40 caliber handguns have smaller frames which appeal to those shooters with smaller hands. This is a significant factor when trying to "fit" an agency of our size. Although the recoil is "snappier" in the 40 caliber, we expect more shooters to find 40 caliber guns easier to shoot because of size. Shooters with larger and stronger hands, who can tolerate the "boom" of the 45 caliber, may prefer the 45 caliber handgun because of less muzzle flip.

Stopping Power: a bullet's ability to incapacitate a living target

In size, the 45 ACP has the advantage. The 45 ACP round is about 11% larger in diameter, and 50 grains heavier than the 40 S&W. (when comparing same make and model)

In a report published by the FBI that compared ballistic characteristics, the 45 created a larger wound channel and penetrated about 11% more than the 40 caliber. In local testing conducted by Dooley Enterprises, we found that when both rounds performed well, by reaching maximum expansion, both expanded to almost equal size. However when the rounds do not perform well, the clear advantage goes to the 45 by virtue of mass and diameter creating the larger wound.

Kinetic energy is also factor in evaluating "stopping power." The Winchester Ranger 45 load we currently carry travels at about 885 FPS, and strikes with an average force of just under 400 FPSI. The

40 caliber, in the same make and model, travels at nearly 996 FPS and transfers an average kinetic force of just over 400 FPSI. Overall, both calibers are nearly equal in kinetic energy.

Law Enforcement Needs

Barriers

The 40 S&W performs similarly to the 45 ACP though wallboard, glass and wood, based on Winchester's published report.

Handgun Magazine Capacity

The 40 offers significantly more capacity in all makes and models where both calibers are offered. For example, in the Smith & Wesson M&P series, the 40 caliber handgun carries 15 +1, for a normal patrol load out of 46 rounds. The 45 caliber carries 10+1, for a total 31 rounds. Both are a significant upgrade from the 25 rounds carried on our current platform.

Training needs

The 40 caliber S&W is available in Simmunitions. The 45 is not offered.

The 40 caliber S&W is available for the IES Force Option Simulator, the 45 is not normally offered but can be custom made for an additional cost.

The 40 caliber S&W is available in law enforcement air-soft training weapons. (Low end systems are available but not viable for LE training)

Cost analysis

In the Winchester Ranger duty round we currently use, the 40S&W is 14 cents cheaper per round than the 45ACP. That would seem to indicate some savings on an annual basis. A closer analysis reveals that because we would carry more ammunition in our load-out, we may shoot more in qualifications and training.

Other issues

We did not consider 357 Magnum, Super 38 or 44 Magnum because they are designed for use in a revolver. There are very limited semi-automatic platforms available in these choices. The platforms that do exist are somewhat exotic and unproven, not to mention costly. For these reasons these calibers have been excluded.

A case for 9mm can be made for duty carry, however 40S&W and 45ACP out performs the 9mm round in several ballistic categories. The 9mm has the edge in capacity and cost analysis, but only marginally so over 40S&W. The 9mm also has some significant disadvantages for law enforcement related issues

such as performance through glass or wood. Based on our analysis, the 9mm is a good third choice behind 40S&W and 45 ACP.

Brand Comparison



Smith & Wesson M&P Series

- Polymer
- Accessory rail
- Reversible magazine release
- Optional thumb safety
- Interchangeable grip sizes
- Ambidextrous slide release
- Capacity: 45ACP 10+1 / 40 S&W 15+1
- ~~\$540~~ **\$430**



Glock

- Polymer
- Accessory rail
- Reversible magazine release
- Offers back-strap attachment to make grip bigger
- Capacity: 45ACP 13+1 / 40S&W 15+1
- Does not have AR-15 platform
- **\$520**



Heckler & Koch USP

- Polymer
- Accessory rail
- Ambidextrous safety / decocker
- Ambidextrous slide release
- Capacity: 45ACP 10+1 / 40S&W 13+1
- **\$940**



Sig Sauer P-Series

- Stainless steel / alloy
- Accessory rail
- Safety / de-cocker
- Not ambidextrous (must order left or right models)
- Capacity: 45ACP 8+1 / 40S&W 12+1
- **\$830**

*prices shown include a law enforcement discount

Brand Comparison



Smith & Wesson MP15

- Barrel Length 16" mid-length
- Adjustable Stock
- Removable carry handle
- Gas operated
- Will accept department hand-guard and light
- Needs night sights
- **Price \$1200 \$760**



Heckler and Koch 416

- Barrel Length 16" mid-length
- Adjustable Stock
- No carry handle
- Gas piston
- Includes HK rail system, no hand-guard
- Will accept department light
- Needs night sights
- **Price \$3,000**



Sig Sauer M400

- Barrel Length 16" mid-length
- Adjustable Stock
- Optional removable carry handle
- Direct gas operated
- Includes Magpul hand-guard
- Will accept department light
- Needs night sights
- **Price \$1,200**