Date: September 18, 2017

To: The San Francisco Police Commission
    Chief William Scott, San Francisco Police Department

From: The Bar Association of San Francisco (BASF)

Re: Supplemental Memorandum in Support of the BASF's Recommendation Against Allowing Electronic Control Weapons (ECWs)\(^1\) formerly known as TASERS® to be Adopted at this Time.

The Bar Association of San Francisco (BASF) and its membership of nearly 8,000 individuals urge members of the San Francisco Police Commission (Commission) to not approve the use of ECWs for all of the reasons set forth in the BASF's Recommendation and Memorandum dated June 20, 2016 (attached) and for the additional reasons supported by new research and findings as set forth in this Memorandum.

**Executive Summary**

We thank the Commission for completing the considerable work undertaken on the new Use of Force and Crisis Intervention Team (CIT) policies, both of which were finalized and approved by the Commission on December 21, 2016. As with any new policy, following Commission approval, the San Francisco Police Department (SFPD) was tasked with first designing a curriculum for training followed by a process of implementation; we are informed that at least one-quarter of the SFPD's force has completed the 2-day training on the new use of force policy and de-escalation. Many officers have also completed the CIT 40-hour training and while the SFPD is making good progress on training officers on the new policies, it is very clear that considerable time will be needed before the department is able to fully train and thereafter integrate the new policies and protocols. Further, as described in more detail below, at this time, we have no

\(^1\) Taser International, now known as Axon Enterprise, as well as the International Association of Chiefs of Police and the Police Executive Research Forum (PERF) name this weapon as such; it is weapon. The SFPD continues to reference this weapon as a Controlled Energy Device (CED) and it should be named and described as an Electronic Control Weapon - ECW (PERF), or a Conducted Electrical Weapon - CEW (TASER®/Axon Enterprise) or a Conducted Energy Weapon - CEW (International Association of Chiefs of Police). BASF uses the term ECW or TASER® herein.
way of analyzing or measuring the impact of efforts at community policing and/or these new policies.\(^2\)

Our June 20, 2016 Recommendation and Memorandum included extensive research supporting the BASF's position against allowing ECWs and that research is not repeated here; instead we take this opportunity to underscore the importance of awaiting any decision on this weapon given important new developments:

1. On May 19, 2017 Taser International/Axon updated "TASER Handheld CEW Warnings" with product advisories that were unavailable to the Commission and the BASF when the weapon was last considered (the "Warnings" are attached);

2. A series of investigative reports by Reuters released over the last several weeks highlights and documents additional dangers, risks and deaths attending this weapon, the weapon's lack of efficacy and the shifting of liability from TASER® to officers, departments and cities;

3. The lack of ANY independent studies on the safety and efficacy of the new generation of ECWs - the X2 or X26P - the only weapons currently available for purchase by the SFPD;

4. The lack of a cost/benefit analysis which should be considered by this Commission to better determine priorities for the SFPD (a partial cost/benefit analysis is attached to the Memorandum that follows) and finally;

5. The SFPD has not yet implemented critical recommendations outlined by the BASF in the June 20, 2016 Memorandum which should precede any discussion of ECWs, and although the department is currently addressing the DOJ/COPS recommendations issued in their October 2016 report, many critical recommendations should be accomplished prior to any discussion of ECWs. Some of the more critical priorities of the department include:

(a) The SFPD has yet to institute comprehensive data collection and analysis which can be tied to disproportionate impact of use of force on race, risk management and early warning systems that include analysis by outside experts;

(b) The SFPD has yet to complete and integrate all training on the new Use of Force and CIT policies so critical to 21st Century policing;

(c) The SFPD has yet to identify and secure the assistance of outside academics needed to partner with the SFPD to "evaluate the circumstances that give rise to deadly force, particularly those circumstances involving persons of color (DOJ Recommendation 1.1); and

\(^2\) The DOJ/COPS report concurred with this conclusion. "The SFPD does not collect data around community policing nor measure success within community policing functions and programs." Finding 46.
(c) Neither the SFPD nor the Commission have given serious consideration to inaugurating an ECW program only after a genuine "pilot program" has been designed, implemented and found satisfactory by an independent expert.

Finally, the BASF's Recommendation and its June 20, 2016 Memorandum, were premised on a Departmental Bulletin issued to the Special Operations Bureau which sought to arm approximately 5% of the force with ECWs, namely those: "officers assigned to the Tactical Company or the Specialist Team after having successfully completed the Department's Crises Intervention Team (CIT) training and all other required department-approved CED training."

The current proposal and draft policy contemplate that ALL sworn officers be armed with this weapon. Given the BASF's previous reservations about arming even 5% of our most trained officers with ECWs, this current proposal is far more worrisome than the one under consideration one year ago. We are well aware of the DOJ/COPS' Recommendations 16.1 and 16.2 but we are also aware that the DOJ/COPS did not consider our June 20, 2016 Memorandum when they reached their conclusions.

Therefore BASF has concluded, for all the reasons set forth in this Memorandum and supporting documents that this weapon should not be used in San Francisco at this time.

Respectfully Submitted,

Merri Baldwin
President, Bar Association of San Francisco

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4 On October 12, 2016 the United States Department of Justice issued 272 Recommendations, of which only two pertain to ECWs: that the SFPD and the Commission, working with all key stakeholders and community members, should make an informed decision based on expectations, sentiment, and information from top experts in the country and to strongly consider deploying ECWs.
Supplemental Memorandum in Support of the BASF's Recommendation
Against Allowing ECWs to be Used by San Francisco at This Time.

Introduction

As noted in BASF's June 20, 2016 Memorandum, the SFPD's need for transparency and healing with the community is best addressed by de-escalation, implementation of CIT (Crisis Intervention Teams) rapport-building communication, and time and distance in place of confrontation. These principles comprise the heart of the new DGO 5.01 and the Recommendations in the DOJ/COPS report.5

ECWs can alienate community members and undermine public confidence in a police agency and some agencies have stopped using them with no increase in injuries to officers or the public.6 Although some officers and members of the public firmly believe "a Taser is better than a gun"; this belief is premised on spurious marketing by Taser International/Axon because an ECW is not a substitute for a gun.7 In fact, the only independent statistically-significant study documenting whether ECWs reduce officer-involved shootings reached the opposite conclusion. As documented in our prior Memorandum, the 2009 UCSF study found that fatal shootings by police increased significantly following adoption of ECWs, especially in the first year.8

5 Notably, the Executive Summary of the DOJ/COPS reported the following: "The people of San Francisco are among the voices calling for urgency in police reform and building trust between law enforcement agencies and communities. A series of incidents involving the SFPD has raised questions about the department's use of force practices, accountability, and oversight of its practices. These incidents include the following:

- In 2015, the SFPD was involved in six fatal officer-involved shootings;
- In a 2010 criminal investigation, a series of racist, sexist, and homophobic text messages was found to have been shared among a group of SFPD officers. The public was not informed about this issue until February 2014; and
- In a similar incident made public in early 2016, prosecutors investigating an alleged sexual assault involving an SFPD officer discovered a series of racist and homophobic texts shared among the accused officer, his supervisor, and several additional SFPD officers in 2015.

These events have placed the city in the national spotlight regarding policing practices and opened a public and passionate conversation concerning the SFPD’s community engagement, transparency, and accountability. As the Final Report of the President’s Task Force on 21st Century Policing notes, trust is the key to the stability of our communities, the integrity of our criminal justice system, and the safe and effective delivery of policing services." https://ric-zai-inc.com/Publications/cops-w0818-pub.pdf, pages 1-2.

6 Following the Braidwood Commission's Report, ECW use in British Columbia dropped by 87% with no evidence that risks or injuries increased for officers or the community. The Chief of the Warren Michigan Police Department dropped all use of TASERs® and found no increase in injuries to officers or members of the public. "Killing Them Safely" by Nick Beradini, 2016.

7 Use of Force experts agree that ECWs are not used in situations Justifying the use of a firearm. An ECW is an intermediate use of force option; a firearm is a deadly force option and when faced with deadly force, officers will use a firearm, never an ECW. See: https://www.nbcnews.com/news/us-news/taser-vs-gun-why-police-choose-deadly-force-despite-non-n656461.

8 See Page 8 of Memorandum attached to BASF’s June 20, 2016 Recommendation citing the 2009 UCSF study which found: "The rate of in-custody sudden death increased 6.4-fold (95% confidence interval 3.2-12.8, p = 0.006) and the rate of firearm death increased 2.3-fold (95% confidence interval 1.3-4.0, p = 0.003) in the in the first full year after
Since June 2016, members of the BASF’s Criminal Justice Task Force have continued to provide critical legal, medical and factual research to guide this Commission and the public about the risks of implementing this weapon at this time for the SFPD. Both the Commission and the public have the benefit of research that continued to unfold in the last year.

Unlike the vast majority of law enforcement agencies using ECWs, the SFPD has never invested in this weapon. Most departments entered into contracts with Taser International in the early 2000s. The weapon was clearly marketed as an alternative to lethal force and the company assured departments that the weapon was life-saving. It is important to note that neither the manufacturer, nor the weapon is overseen by federal or state regulatory agencies in California and the number of deaths and/or injuries are not tracked by any governmental agency.

Over the years, and in response to deaths and injuries, the corporation has been sued under a products’ liability theory prompting a three-part response from Taser International. Each facet of the company’s defensive strategy should be carefully considered by this Commission: (1) Taser International/Axon has increased the number of Warnings against use, thereby (2) shifting liability to police departments and cities and (3) developed the new generation of weapons - the X2 and X26P - the only model available for purchase by the SFPD.

The first three parts of this Memorandum address the Warnings and recent investigative findings by Reuters about the weapon, followed by what we know - and don’t know - about the X2 and X26P. Thereafter, the Memorandum addresses a cost/benefit analysis. Finally, this Memorandum assesses whether the SFPD has implemented any of BASF’s earlier Recommendations or the DOJ/COPS recommendations that are prerequisites to a responsible rollout of a new, dangerous weapon.

1. The Warnings

Attached to this Memorandum are the "TASER Handheld CEW Warnings" published by the manufacturer on May 19, 2017. The company states that the warnings are intended to "reduce the likelihood that CEW use will cause death or serious injury."[^9]

[^9]: Taser deployment compared with the average rate in the 5 years before deployment. In years 2 to 5 after deployment, rates of the 2 events decreased to pre-deployment levels. We observed no significant change in the rate of serious OIs after Taser deployment. In conclusion, although considered by some a safer alternative to firearms, Taser deployment was associated with a substantial increase in in-custody sudden deaths in the early deployment period, with no decrease in firearm deaths or serious OIs." (Byron K. Lee, et al, Relation of Taser (Electrical Stun Gun) Deployment to Increase in In-Custody Sudden Deaths [Nov. 2009]) [https://www.ncbi.nlm.nih.gov/pubmed/19268749](https://www.ncbi.nlm.nih.gov/pubmed/19268749)

[^9]: While the proposed policy advanced by Commissioner Melara and SFPD is not the focus of this Memorandum, it is of worthy note that these Warnings are not set forth in the proposed policy. They should be, not only because they provide a minimal level of warnings about the limitations of these weapons, but also because omitting them reinforces the manufacturer’s efforts to escape liability that is instead imposed on local agencies.
Notably, the Warnings also advise that "significant differences exist between different TASER CEW models"* but do not offer further detail on the warnings unique to particular models except to advise that the weapon may fail.

The Warnings include a symbol which in turn notifies law enforcement of hazardous situations to avoid that could result in death or serious injury; many of the warnings are included in the list below but the full list is attached:

- **Cumulative Effects:** "Repeated, prolonged or continuous CEW application may contribute to cumulative exhaustion, stress, cardiac, physiologic, metabolic, respiratory and associated medical risks which could increase the risk of death or serious injury."
  - Susceptible individuals include:
    - The elderly,
    - Those with:
      - heart conditions,
      - asthma or other pulmonary conditions;
    - People suffering from:
      - excited delirium,
      - profound agitation,
      - severe exhaustion,
      - drug intoxication or
      - chronic drug abuse and/or
      - over-exertion from physical struggle.
  - Officers are warned to minimize the number and duration of CEW exposure and "**consider alternative control measure in conjunction with or separate from the CEW**" if deployment is ineffective in incapacitating a subject or achieving compliance. (Emphasis added)**

- The Company now warns that the weapon can cause **"Cardiac Capture,"** a condition they denied was possible previously. For this reason, officers are instructed to avoid aiming at the frontal chest area.**

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10 Page 1, paragraph 1 of Warnings.

11 Unfortunately because the optimal distance for effective deployment is 7-15 feet, once the ECW fails, and especially if the target becomes more agitated, the officer too often resorts to lethal force as the officer can no longer create the time and distance needed for safety. As reported on page 6 of BASF's June 20, 2016 Memorandum, LAPD reported nearly 25% of those shot by officers were wounded or killed during encounters in which officers said they tried to use a TASER® without success. Thus, ECWs, though heavily marketed as tools designed to minimize force, often have the reverse effect, and create the "need" for lethal force. This helps to explain the 2009 UCSF finding that the incidence of fatal shootings tends to rise after introduction of ECWs.

12 The chest is exactly the right target area for firearm use, so under stress, this warning may be very difficult to heed. Moreover, as the target and the officer are both in motion, the chest area will be difficult to avoid.
• Officers are also warned not to target:
  o Face
  o Eyes
  o Head
  o Throat
  o Chest area
  o Breast
  o Groin
  o Genitals
  o Known pre-existing injury areas.

• The weapon in probe-deployment mode can cause muscle contractions that may result in injury, including bone fractures,

• High Risk Populations include those who are:
  o Pregnant
  o Elderly
  o Low-body-mass index
  o Small child

• Secondary Injuries are to be avoided whenever possible because it is known that loss of control resulting from weapon use may "result injuries due to a fall or other uncontrolled movement," the company warns further that loss of control can have several causes, including:
  o Repetitive stimuli can induce seizure in some people which may result in death or serious injury and risks increase for those with epilepsy, seizure history; other seizure precipitating factors include emotional stress and physical exertion;
  o Some may faint;
  o The weapon may also cause loss of control from muscle contraction, incapacitation or startle response;
  o Falling can result from incapacitation and therefore a whole host of surfaces are to be avoided according to one of the Warnings. (One need not fall far: in June 2017, the city of Chicago agreed to pay $9.5 million to settle a federal lawsuit filed by a man who was severely injured when a police officer jolted him with a Taser and he fell and hit his head on the pavement.13)

• The Warnings contain a long list of eye injuries, including permanent vision loss that may be associated with injury from the TASER® probe, electrode and electrode discharge as well as the LASER sighting aid.

- Of significant note on page 6 of the Warnings, TASER® warns that the CEW or cartridge may fail to fire or operate.\(^\text{14}\)

Given the length and breadth of the current Warnings, the potential usefulness of the weapon has diminished over the years as the risks and dangers are acknowledged by the manufacturer.

2. **Reuters Investigative Reports**

Well-documented research undertaken by a group of investigative reporters for Reuters was released last month in a series of reports: "Shock Tactics" including "The Toll", "The Warnings" and "The Experts."\(^\text{15}\)

The series is far too long to summarize in this Memorandum, but it has become clear to BASF that the data presented in its June 2016 Memorandum underreported the scale of the dangers as well as the number of TASER®-related deaths by as much as half.

**Deaths**

In our June 2016 Memorandum, we noted Amnesty International's estimate as 550 deaths since 2001. Later and subsequent to the issuance of our Memorandum, Amnesty raised the estimate to 700. Reuters has now documented 1005 incidents in which people died after police stunned them with TASERS®. Excluded from the 1005 incidents are deaths resulting from a firearm following use of a TASER®.\(^\text{16}\) In more than 400 of these deaths, TASERS® were the only form of force used by the police; the rest involved both TASERS® and other forms of force. Most of the casualties were among the most vulnerable populations.

The Reuters report further notes that because "no government agency tracks fatalities in police incidents where Tasers are used [and because] [a]utopsies are not public in some states, [and because]...coroners and medical examiners use varying standards to assess a Taser's role in a death," "the probability of dying from a Taser shock in a police encounter may be incalculable."\(^\text{17}\)

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\(^{14}\) Failing to operate is different from efficacy. As expert witness Mike Leonesio reported to this Commission on June 21, 2017, 15-20% simply fail to fire and the officer has no way of knowing that the weapon is not operational. Efficacy refers to a failure to secure compliance through the use of the weapon. As noted on page 6 or BASF’s Memorandum in support of the June 20, 2016 Recommendation against TASERs, LAPD reports the weapon fails to be effective 47% of deployments.


\(^{16}\) "Among the cases Reuters opted not to include were those in which a person was shot with a firearm after being stunned by a Taser." [https://www.reuters.com/investigates/special-report/usa-taser-911/#article-the-toll](https://www.reuters.com/investigates/special-report/usa-taser-911/#article-the-toll)

\(^{17}\) [https://www.reuters.com/investigates/section/usa-taser/](https://www.reuters.com/investigates/section/usa-taser/)
ECW Use on Individuals with Mental Health Problems

Confounding police work, Reuters reports is the increase in calls for police response to individuals in mental health crisis. Taser International warned in 2013 to avoid shocking someone "who is actually or perceived to be mentally ill." Police Executive Research Forum warns against using TASERS® on "persons in medical/mental crisis." As Reuters reports, it is extremely difficult for the officer to determine, like so many of the conditions included in the Warnings, who meets the mental illness criteria.

One quarter of those who died in TASER® related incidents were suffering from a mental health breakdown or neurological disorder. **In 9 of every 10 incidents, the deceased was unarmed.** More than 100 of the fatal encounters began with a 911 call for help during a medical emergency. As noted in the BASF's June 2016 Memorandum, "it is preferable to make every effort to utilize these non-lethal methods [de-escalation, crisis intervention, rapport-building communication and community policing] prior to implementing use of a potentially lethal weapon."

**Lawsuits**

Reuters identified and reviewed 442 wrongful death lawsuits in which TASERS® were a factor that may have caused death. In 120 of the 442 cases (27%) TASERS® were the only form of force; in the remaining 322, the TASERS® were a factor in the police force used.

366 of the lawsuits concluded, and 232 resulted in judgments for the plaintiffs. Reuters was able to determine the payouts in only 193 cases totaling $172 million paid by cities and their insurers. This total does not include the cases in which settlements remained confidential or were unavailable.

Officers interviewed by Reuters expressed concern with the ever-increasing number of "Warnings" by TASER®. As one TASER® instructor noted, his role as a police instructor required not only that he teach officers how to use the weapon, but that he alert them each time TASER's® warnings evolved, in some cases, multiple times a year. But as some officers honestly admit, there are now so many warnings, **"If I read and abided by every single warning, I would not Tase anyone."**

**Increase in Lawsuits and Warnings Results in Decrease in Use**

Therefore the cities and departments that have invested in TASERS® are now subject to abiding by the warnings or risking lawsuits. San Francisco has the opportunity to consider these warnings prior to investing the City's scarce dollars.

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The Courts are also weighing in with stricter guidelines on ECW use. The 4th Circuit in *Estate of Armstrong v. Village of Pinehurst, et.al.*, 810 F. 3rd 892 (4th Cir 2016) found that deploying a TASER® is a "serious use of force" and TASERS® are proportional force only when deployed in response to a situation in which a reasonable officer would perceive some "immediate danger."

When considering rolling out ECWs to the SFPD, the Commission should be advised that the weapon, likely because of the increase in lawsuits and warnings, are used with less and less frequency by departments. For example, Reuters reports that in the five states covered by the recent 4th Circuit's ruling - North Carolina, South Carolina, West Virginia, Maryland and Virginia, police departments are scaling back on use.

"In Baltimore, police used TASERS® 47 percent fewer times last year than in 2015... Deployments fell 65 percent in Virginia Beach; 60 percent in Greensboro, North Carolina; 55 percent in Charleston, South Carolina; and 52 percent in Huntington, West Virginia. Norfolk, Virginia, saw deployments plunge 95 percent."

The section to follow addresses further limitations and problems associated with the new generation of weapons, the X-2 and X-26P.

3. **The Lack of ANY Independent Studies on the Safety and Efficacy of the X2 or X26P - the Only Weapons Currently Available for Purchase by the SFPD Further Supports the Recommendation Against Adopting the Weapon at this Time.**

Nearly all of the documents before the Commission center on the X26, a model no longer available for purchase. Most of the lawsuits involved this model and the experts who testified before the Commission on June 21, 2017 suggested the new model was designed to reduce the number of lawsuits. However, what is currently known about the new model?

TASER® swapped out its X26, with a maximum charge of 125 microcoulombs of electricity, for the X2 model, which has 63 microcoulombs.

Expert Mike Leonesio, who owns and operates Leonesio Consulting, the only independent ECW-exclusive laboratory in the country, and who is also an expert on use of force and police policy, testified before the Commission on June 21, 2016 that this new generation of weapon has not undergone ANY testing. To BASF's knowledge, there are no reports and certainly no independent studies on the risks or relative efficacy of the X2 or X26P. Further, as detailed in the attached cost analysis, this generation of weapon is more expensive than the last: $1800 - $2000 is the individual purchase price, which does not include the substantial costs associated with training, oversight, maintenance or storage of data. This will be a very costly experiment for San Francisco. The BASF therefore strongly urges the Commission to await testing of this

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new weapon and an opportunity to investigate its safety and efficacy prior to approving any policy that will require adoption of this weapon.

There is currently ongoing litigation that may bear on any decision to purchase either the X 2 or the X 26P. The Houston Chronicle recently reported on a lawsuit by law enforcement against Taser International/Axon: "Houston police, other law enforcement endangered by weaker Tasers, lawsuit claims." The lawsuit claims the company intentionally reduced the shock its weapons delivered amid publicity over the deaths linked to Tasers and "over fear of losing lucrative government contracts."

Plaintiff Karen Taylor, a former Houston police officer filed a products liability suit and deceptive trade practices suit, arguing that the weapon endangers officers who rely on it. She was seriously injured when the weapon failed to have any effect. Publicly, Taser International/Axon is defending the efficacy of the weapon but also admits: "It's widely known there are a number of issues why a TASER wouldn't be effective. Officers are taught that in training."

Again, the manufacturer is employing product warnings to shift the liability to the departments and cities that use their weapons. This time, it's in response to a lawsuit by an injured law enforcement officer, rather than a member of the public asserting civil rights violations. Before San Francisco subjects her SFPD officers and members of the community to an unreliable model, additional investigation, testing and study must be completed.

4. The Absence of a Cost/Benefit Analysis and a Determination of Priorities for the SFPD Supports the BASF's Recommendation Against Allowing ECWs to be Used in San Francisco at this Time.

Expert Mike Leonesio testified before the Commission on June 21, 2017. During his testimony, he estimated the first year in costs to San Francisco at $8,000 to $10,000 per officer which included the purchase price, maintenance, training and oversight. Assuming a department size of 2200 officers, the cost is between $17.6 million and $22 million. This estimate did not include AEDs and their upkeep, or the hospital costs for probe removal.

Following Mr. Leonesio's testimony, BASF submitted a number of questions to Mr. Leonesio and on a volunteer basis he provided partial answers where possible, given the limited information available to him. These questions and his partial answers are attached. Although Mr. Leonesio lacks sufficient information to complete his assessment, and the SFPD has never undertaken to ask or answer these questions, BASF submits that these questions must be answered prior to making an adequately-informed decision regarding the adoption of ECWs, given the expense and risks presented.


23 Ibid.
SFPD has a number of critical priorities today that will continue to consume substantial financial resources as well as the attention of SFPD commanders, officers, and civilian leaders. Just two examples, drawn from materials provided through the SFPD’s Executive Sponsored Working Groups (ESWG), which were formed to respond to the DOJ/COPS Recommendations, are detailed below. Like many of the SFPD’s other top priorities, these are not issues that SFPD is equipped to address on its own (by SFPD’s own account); they will require not only public stakeholder input, but also the assistance of outside academic partners.

First, DOJ/COPS Recommendation 1.1 requires the SFPD to partner with research institutions to evaluate use of force on persons of color and to develop and enhance relationships with those communities and to provide ongoing training for officers on how to assess and engage in encounters involving conflict with a potential use of force. Currently, the SFPD does not adequately perform this absolutely critical task according to the DOJ/COPS’ finding. The SFPD’s Director of Business and Finance has identified to the ESWG on Use of Force at least seven critical areas in need of academic partners:

- Management Consulting
- IT Support
- Use of Force Evaluation; Causal Factors; Report Automation
- Bias Assessments and Analyses
- Hiring Barrier Analysis
- Communications Content Development
- Reform Effectiveness Evaluation

The SFPD is in the process of securing RFQs (Request for Qualifications) from a variety of academic institutions and organizations for assistance in improving these areas. To date, however, only $800,000 has been budgeted to address these needs in areas that can only be fairly described as sweeping, touching numerous aspects of SFPD’s operations related to the use of force. The project managers reported to the ESWG that at least $2 million is needed. The BASF suspects even this larger sum, given the scope of the tasks at hand, is quite insufficient.

To secure the trust of the community, this is the work that the SFPD must first undertake prior to expending exponentially greater sums on a weapon known to be used disproportionately on people of color. The SFPD must confront its substantial operational weaknesses before taking up the issue of ECWs.

A second and far more expensive example of a prioritized need is presented by DOJ/COPS Finding 35 and a host of related findings. The SFPD’s information technology (IT) assets are nothing short of retrograde. And, any retained academic partners will be unable to assist the SFPD unless its IT is addressed. DOJ/COPS Finding 35 reads:

**Finding 35** The SFPD does not have sufficient systems, tools, or resources needed to integrate and develop the appropriate data required to support a modern, professional police department. Many of the department’s technology and information sharing systems are outdated and not integrated and do not support ready access for analysis to
inform management decisions. Progressive police supervision requires timely access to accurate information regarding officer activity, traffic and pedestrian stops, use of force, and resident complaints to help analyze officers’ actions and trends. The SFPD must conduct an assessment across the whole organization and determine how to prioritize the implementation of IT solutions for key management and operational practices.24

Finding 35 is but one of many recommendations to upgrade IT throughout the SFPD. In a report to the ESWG, the SFPD identified a need of $50 - 70 million over the next five years to bring this department into the 21st century in policing. Although IT is widely-recognized as critical to operational success, the SFPD has no ability to fully fund these needs. Yet, it continues to insist that spending many millions of dollars on TASERS® would be a prudent expense.

Funds needed for IT and academic partners are just two of many needs identified by the DOJ/COPS report. This Commission would be well advised to consider all these needs, and the relative prioritization and public benefits flowing from each, before causing the City to exhaust its scarce funds for TASERS®.

Additionally a proper cost/benefit analysis requires an investigation into the usefulness of this weapon prior to approval. Surely, given the number of warnings one must ask, can this weapon ever be used without risking an injury and lawsuit? Do we know enough about the new X2 and/or X26P? How often can this weapon be used, given the additional problems with efficacy as alleged in the Houston lawsuit against Taser International/Axon? Even assuming that the weapon may be safer to use on subjects because of the reduction in microcoulombs (an assumption that is unsupported without the support of independent testing and analysis), it may well expose officers to a greater risk of injury or death, as was allegedly the problem in Houston. If the new weapon is more likely to fail as alleged in the Houston lawsuit, and once the officer has engaged with a suspect within the optimal range of 7-15 feet, will the officer then be forced to resort to lethal force, as the 2009 USCF study predicts? Does that risk increase with the X2 and X26P, a significantly less powerful weapon?

To help answer some of these questions, the BASF also reached out to its neighbor, the Oakland Police Department (OPD) to determine how often TASERS® are used, and how often they are effective. It is well known that LAPD reports 47% efficacy but LAPD far exceeds the size of SFPD. The OPD, which is closer in size to the SFPD, reported that in 2015 TASERS® were deployed on just 37 occasions and 32 times in 2016. Oakland, reported for each year, the efficacy was 50%. Notably, both departments use the more powerful X26, not the X2 or X26P. Thus, OPD’s experience strongly suggests that, particularly given their expense and attendant risks, TASERS® are quite ineffective in terms of absolute numbers. The lack of efficacy worries officers. As reported in the Los Angeles Times 2016 article, “One of the LAPD’s preferred weapons to help officers avoid shootings often doesn’t work,” many officers are concerned about efficacy: “Whenever I have it, I say, ‘I hope that thing works...I’ve had dreams where I pulled the trigger and nothing happens.’” 25 The SFPD is proposing to expend substantial financial


resources and place its own officers as well as the public at significant risk, for very paltry results.

The Police Officers Association (POA) argues that because the carotid was eliminated in the new Use of Force DGO 5.01 (one of the stronger recommendations of the DOJ/COPS report), another intermediate weapon is needed. However, the carotid is a very unique force option rarely if ever used by the SFPD officers. Only a handful of officers have used the force option when it was last in use (14 or fewer occasions)\(^{26}\). Use of Force experts agree that the carotid is a "technique of opportunity," to be only used when the suspect and officer are engaged in a "wrestling match."\(^{27}\) The ECW cannot be used at a ranger closer than 7-15 feet, and is therefore no replacement for the carotid.

Another argument advanced by the POA is also unsupported. The POA argues that ECWs will protect smaller and/or female officers. First, it is noteworthy that the plaintiff in the Houston lawsuit is a female officer; the ECW failed to have any effect. The company's response is a stark reminder that the weapons are well-known to be unreliable. Moreover, as Mike Leonesio has testified, the ECW should never be used by an officer acting alone. At least two officers are needed to assist with handcuffing a subject and/or protecting against the weapon's known failure rate.

Looked at differently, approximately one-half of 1% of all calls to the SFPD result in the use of some form of force. A much smaller percentage—just a tiny fraction of a percent—would ever call for an ECW. This begs the question, should adoption of TASERS® really be a priority given what we now know about the weapon's efficacy and the many circumstances in which the manufacturer itself warns against usage? As noted by the TASER® training officer, "If I read and abided by every single warning, I would not Tase anyone." \(^{28}\)

All officers would be far better supported in their work with improved technology and by enhanced analysis of crime data. As noted by the DOJ/COPS program, its role is to help departments "enhance crime fighting technology, support crime prevention initiatives, and provide training and technical assistance to help advance community policing."\(^{29}\) More crimes could be solved and the public as well as officers would be far better served through other forms of technology upgrades that better inform officers and the public, rather than increase violence against them.

\(^{26}\) SFPD’s Use of Force reports pursuant to San Francisco Administrative Code 96A.

\(^{27}\) The BASF consulted with expert Mike Leonesio to discuss the replacement of the carotid with the ECW. The Commission would be wise to investigate the POA's articulated concern about the carotid as well as their argument that female officers need the ECWs with independent Use of Force experts on ECWs. Neither argument has any merit whatsoever.


We also know that Crisis Intervention Teams, de-escalation, time, distance and the principles of community policing make the public and officers safer than this expensive and unreliable weapon. Introducing this new weapon will almost certainly confound the SFPD’s efforts to introduce and reinforce these new tactics that are designed to reduce violence and repair police-community relations. As noted earlier in this Memorandum, for departments that have reduced or eliminated TASERS®, there has been no increase in officer or public injuries.

Finally, although we remain skeptical that the SFPD has identified any discrete need for this new weapon, assuming it had, we are obliged to point out that, to our knowledge, neither SFPD nor the Commission has investigated any other alternative weapons. As far as we know, neither SFPD nor the Commission has undertaken needed research or otherwise conducted appropriate due diligence to support a responsible cost-benefit analysis.

5. **The SFPD has not yet Implemented Critical Recommendations Outlined by the BASF in the June 20, 2016 Memorandum which the BASF Urged Should Precede any Discussion of ECWs, and Although the Department is Currently Addressing the DOJ/COPS Recommendations issued in their October 2016 Report, Several Critical Recommendations Should be Accomplished Prior to Any Discussion of ECWs.**

Some of the SFPD’s most critical yet still-unfinished tasks regarding the use of force include:

(1) The SFPD has yet to institute comprehensive data collection and analysis which can be tied to disproportionate impact of use of force on race, risk management, and early warning systems (including analysis by outside experts);

(2) The SFPD has yet to complete and integrate all training on the new Use of Force and CIT policies that are critical to 21st century policing;

(3) The SFPD has yet to identify or secure the assistance of outside academics needed to partner with the SFPD to "evaluate the circumstances that give rise to deadly force, particularly those circumstances involving person of color" (DOJ Recommendation 1.1); and,

(c) Neither the SFPD nor the Commission have given serious consideration to inaugurating an ECW program only after a genuine "pilot program" has been designed, implemented and found satisfactory by an independent expert.

Much of the work of the BASF’s Criminal Justice Task Force as well as the DOJ/COPS Recommendations center on the SFPD’s need for transparency and healing with the community over recent deaths. The majority of those tragedies have impacted people of color, and other at-risk communities, such as those suffering from mental health issues, substance abuse, or homelessness. All stakeholders, including the SFPD, acknowledge that these tragedies are best addressed by de-escalation, Crisis Intervention Teams, rapport-building communication, and time and distance. As set forth above, TASERS® do not reinforce these important new techniques. Rather, they undermine them, by providing officers with a weapon that is marketed
as “less lethal,” but in fact increases the risk of serious injury and/or death (including by firearm).

Moreover, and as well-documented by the BASF repeatedly, recent studies demonstrate the disproportionate use of force, including TASERS®, on populations of color. The BASF’s Criminal Justice Task Force’s Subcommittee on Data Collection and Analysis urged the department to not only institute a rigorous data collection program but to make certain all data is gathered in such a way that it is useful for analysis by outside experts, and then to employ the experts to undertake the analysis so that recommendations for training and policy can improve police community relations and the disproportionate impact of force on people of color. Not surprisingly, this is the number one recommendation of the DOJ/COPS report. As a department and a City, we must do better to understand and address these problems - especially before rolling out a weapon known to be used primarily on people of color.

The DOJ/COPS report is replete with concerns about the SFPD’s ability to collect and report on data - especially as it pertains to use of force. The importance of the SFPD’s need for a robust data collection system that can be tied and useful to training, underscores additional reasons to await the rollout of any other weapons. For example, the report noted:

One area requiring improvement is the coordination and sharing of information on use of force incidents. SFPD members responsible for training said that they generally do not identify trends by reading the Use of Force Logs in any structured manner and instead read them only for information. A timely, consistent, and robust data collection practice around use of force data would contribute to a better training environment. Such data would allow for more effective analysis of use of force incidents and the eventual inclusion of the findings into training scenarios and safety training for officers....

We did not see a consistent focus on developing a training needs assessment for the SFPD...The lack of easily digestible and robust data creates significant barriers to effective management of training in the SFPD, particularly as it relates to use of force...

Unique factors to the SFPD, such as effective engagement with the homeless community, need to become part of the training needs assessment and delivery of training. Homelessness is a factor in several officer-involved shooting incidents as is mental health crisis. The responsibility of responding to the homeless population is shared among multiple city agencies and should not fall solely to the SFPD. However, the SFPD needs to ensure that its officers are better equipped to deal with specific issues facing homeless individuals.³⁰

Research shows that TASERS® are more likely to be used against people of color, particularly African Americans and those in mental health crisis and both of these communities are

³⁰ DOJ/COPS report at page 14.
overrepresented in our homeless population.\textsuperscript{31} This population is also at risk of serious injury and death from TASER\textsuperscript{®} use. The Baltimore Sun analyzed data on statewide TASERS\textsuperscript{®} incidents that occurred between 2012 and 2014, and found that 64\% of those targeted were black men. Troublingly, nearly 60\% of all those Tased were described as "non-compliant and non-threatening."\textsuperscript{32} Absent a robust data system that documents trends, informs training, and guides the use of force, it would be irresponsible for the SFPD to introduce such a controversial weapon.

The SFPD has only begun to undertake the hard work needed to document, understand and remedy problems related to the use of force and the disproportionate use on communities of color and individuals in mental health crisis. This work remains very much incomplete.

As reported in May 2017: "San Francisco police officers, who were required in the aftermath of a disputed shooting in the Bayview neighborhood to document every time they point their guns, reported doing so 3,130 times in the first 15 months, or about seven times a day, records show. In nearly half of those cases, the person at whom the officer pointed a gun was African American, though black people make up less than 6 percent of the city’s population."\textsuperscript{33} There is every reason to suspect that the same disproportionality will be true for ECW use. The SFPD must document and develop an ability to identify trends and practices to better assess and inform training and early warning systems, and secure the professional support of outside academics to help the department and the City understand and remedy racial bias in policing before rolling out another weapon.

Unless and until the SFPD can make greater progress on the recommendations of the BASF’s June 20, 2016 Memorandum and the BASF’s exhaustive report issued August 17, 2017 on Data Collection and Analysis, which in so many ways mirrors the recommendations later issued in October by the DOJ/COPS, the SFPD and this Commission are urged to delay consideration of ECWs to a later time.

**Conclusion**

We thank the Commission for following our recommendation last year and delaying consideration of ECWs. The additional information developed in the intervening 15 months, strengthens and adds to the many reasons supporting BASF’s earlier and current recommendation against adoption of ECWs in San Francisco at this time.

The BASF applauds the serious work being undertaken by the SFPD and the leadership of our new chief William Scott. However, it is clear that consideration of ECWs remains premature in


\textsuperscript{32} Similar findings were found in the 2015 study of Taser use by Central Connecticut State University and as noted in BASF’s June 20, 2016 Recommendation and Memorandum, the racial disparity in TASER use was far worse in Chicago.

light of: the risks and dangers associated with this weapon, especially to communities of color; the lack of information known about the new model; the lack of a cost/benefit analysis; and, the risk that our current reform efforts to heal the community’s relationship with the SFPD will be derailed by the rollout of this new controversial weapon. Important work lies ahead for the SFPD and Police Commission and the BASF is committed to assisting in this work. We hope you will follow our recommendations outlined in this and our June 20, 2016 Memorandum, and we thank you for taking the time to consider them.
June 20, 2016

To:  San Francisco Police Commission
     Acting Chief Toney Chaplin, San Francisco Police Department

From:  The Bar Association of San Francisco (BASF)

Re:  Recommendation against allowing Tasers to be used in San Francisco as this time

The Bar Association of San Francisco (BASF) and its membership of nearly 8,000 individuals urge members of the San Francisco Police Commission not to approve the use of Tasers in the City of San Francisco for the reasons set forth below and in the attached Memorandum dated May 26, 2016 submitted to the Police Commission on May 30, 2016.

PREAMBLE

We would like to thank the Commission and acting Police Chief Toney Chaplin for their considerable contributions to the new Use-of-Force general orders and for the opportunity to research and consider the safety and impact of Tasers® (Controlled Energy Devices) as outlined in the proposed Bureau Order. As you know, BASF’s Criminal Justice Task Force (CJTF) has previously presented the detailed findings of its study and only a preliminary perspective regarding the use of Tasers/Controlled Energy Devices (CEDs) as outlined in the proposed Bureau Order. The BASF study/detailed findings report is attached hereto.

After reviewing the findings and deliberating, BASF’s position regarding the use of Tasers®/CEDs is that insufficient independent studies have been conducted to determine whether Tasers®/CEDs are safe or effective in reducing police shootings. In fact, the independent studies conducted to date suggest that Tasers®/CEDs have caused serious bodily injury and death, and that they have not resulted in a decrease in officer shootings. The data also suggests that Tasers®/CEDs are used disproportionately on people of color. Until such time as there is reliable data regarding the efficacy of Tasers®/CEDs in reducing police shootings, there is a meaningful effort to improve the safety features of Tasers®/CEDs, police can be properly trained in their use, and concerns regarding the use of Tasers®/CEDs in a racially disparate manner are addressed, Tasers®/CEDs should not be used in the City of San Francisco.

FINDINGS AND OVERVIEW OF KEY ISSUES

Tasers® are life threatening weapons which should not be used in San Francisco at this time. They are incompatible with the "De-Escalation" approach to 21st century policing as set forth by leading law enforcement executives across the U.S. who emphasize that officers should be trained to use distance and cover to slow the situation down and create more time for them to continue communicating and developing options. Like the use of guns by officers, Tasers®/CEDs have been shown to have a disproportionate impact on people of color. They pose a particular danger to vulnerable populations which in San Francisco at least, until demonstrated otherwise, are better served by C.I.T.’s (Crises Intervention Teams).
If Tasers® are eventually to be introduced in San Francisco, a number of additional protections will first have to be built into proposed former Chief Suhr’s "Bureau Order Re CEDs" to incorporate the latest developments in medical research. For example, it is now incontrovertible that Taser® shots lasting longer than 15 seconds should not be permitted. Yet, the proposed Bureau Order contains no reference to this and only few references to other implications to be drawn from recent medical studies, such as a restriction on the maximum number of cycles the weapon is to be discharged or of the now indisputable link between risks of Taser® injury or death and high risk populations such as pregnant women, children, and people who are visibly frail. Of equal concern are risks to those with heart issues, on medication, the disabled, the mentally ill, or those who are infirm, and rarely can police officers assess the medical condition of the subject before deployment. Nor is there any mention of the PERF 2016 primary recommendation on Tasers®: "[T]o get officers to stop thinking that if/when Tasers® fail, they can escalate immediately to deadly force."

What is no longer in doubt is that if Tasers® are to eventually become an effective and safe tool in policing it will necessarily be a gradual process, spanning not months, but years. At the outset are design issues involving safety features which the manufacturer will have to tackle, such as the fact that Tasers® often do not work on people in an excited mental state or on people with heavy layers of clothing. There is also a disconnect between what the manufacturer holds them out to do and what police officers can reasonably expect them to do, involving warnings and training at levels beyond which are currently contemplated. This may require that the range of situations for which the weapon is effective be narrowed before Tasers® can be considered. The San Francisco Police Department also needs to commit to the practice of collecting and publishing detailed statistical records on use of force trends. The critical importance of collecting, analyzing, and reporting data was recently underscored in The Stanford Reports on Improving Police-Community Relations in Oakland California, released on June 15, 2016.

RECOMMENDATION AND CONCLUSION

We appreciate that the San Francisco Police Department has taken a step back to carefully consider the very concerning research provided by our CJTF’s sub-committee on Tasers® as well as that provided by the Coalition on Homelessness and other stakeholders.

BASF has concluded that until there is reliable data supporting the efficacy of Tasers®/CEDs, and the Police Commission can establish procedures to ensure that Tasers®/CEDs are not used in a racially disproportionate manner, Tasers®/CEDs should not be used in the City of San Francisco.

Respectfully Submitted,

Michael F. Tubach
President
The Bar Association of San Francisco

Attachment: May 26, 2016 BASF Criminal Justice Task Force Report on Tasers

CC: San Francisco Sheriff’s Department
     San Francisco Police Department
     Head of the Police Officer’s Association

¹ Police Executive Research Forum (PERF), May 26, 2016, page 18, footnote 57
TO: Toney Chaplin, Chief of Police, San Francisco Police Department, President
Suzy Loftus, Vice President L. Julius M. Turman, Commissioners Thomas Mazzucco,
Petra DeJesus, Joe Marshall, Victor Hwang, and Sonia E. Melara, San Francisco
Police Commission

By Email: Sergeant Rachael Kilshaw (Rachael.Kilshaw@sfgov.org)

REPORT FROM TASER®/CED SUB-COMMITTEE OF THE BAR ASSOCIATION
OF SAN FRANCISCO (BASF) CRIMINAL JUSTICE TASK FORCE

Introduction
The Taser/CED Sub-Committee is part of The Bar Association of San Francisco
(BASF) Criminal Justice Task Force (Task Force), a large group of professionals
including law enforcement (SFPD, Sheriff’s Department and District Attorney’s
Office), criminal defense and civil rights attorneys, the Mayor’s office, academia,
community activists and the judiciary.

As you know, one of the Task Force’s representatives participated in the Use of Force
Stakeholders meetings, and our designee reported that the Task Force had not yet
undertaken critical research regarding CED (Controlled Energy Devices) also
commonly referenced by the manufacturer name: Taser®. Immediately, the Task
Force formed a Taser/CED Sub-Committee to undertake research to report to the full
Task Force.

The Taser/CED Sub-Committee consists of four members: Sub-committee Chair Tom
Meyer, a retired criminal defense/civil rights lawyer; Freya Home, Chief Legal
Counsel to the San Francisco Sheriff’s Department; Erin Katayama, an attorney for the
Justice & Diversity Center of BASF’s Homeless Advocacy Project (HAP); and
criminal justice researcher, Lizzy Gilbert.

The Sub-Committee has worked for months, researching the most recent scientific and
other studies on the use of Taser/CEDs, understanding that the vast majority of such
studies pre-date 2011. The Task Force sought a complete understanding of
Taser/CEDs – the medical implications, the impact on vulnerable populations and
populations of color, hoping to ground their findings/recommendations on research
independent of TASER International, as much as possible.
As sources, we have relied on both medical and non-medical journal articles, governmental studies and publications, the Police Executive Research Forum’s (PERF) March 2016 “Guiding Principles on Use of Force,” investigative news reports, face-to-face interviews with experts (including, among others, medical examiner Dr. Judith Melinek, the former Assistant Medical Examiner for San Francisco, Use of Force stakeholders, and members of the Task Force whose ongoing work in related contexts has proved beneficial to that of the Taser/CED Sub-Committee).

FINDINGS AND RECOMMENDATIONS

A synopsis of the research undertaken by the Task Force’s Sub-Committee was completed and circulated to the full Task Force well in advance of May 20, 2016. (The Synopsis follows these Findings and Recommendations.) The full Task Force took up lengthy discussion at the full meeting and although The Bar Association of San Francisco has not yet taken a “pro” or “con” position on Taser/CEDs, the Task Force, given the important work of its Sub-Committee, and as fully vetted by the full Task Force, is now able to find and recommend as follows:

- Introduction and use of Taser/CEDs should be decoupled from finalization and implementation of proposed Use of Force Policies
- Incorporation/implementation, if any, of Taser/CEDs as an additional weapon for police use, should be taken up at a later date for the following reasons:
  - The Task Force concluded that the San Francisco Police Department’s need for transparency and healing with the community over recent deaths is best addressed by de-escalation, implementation of CIT (Crisis Intervention Teams), rapport-building communication and time and distance— the heart of the proposed General Orders on Use of Force.  
  1 As these Orders are neither finalized nor yet implemented, it is the recommendation of the Task Force to revisit implementation/use of Taser/CEDs at a later time. Training on these important components of community policing are essential prior to the introduction of other weapons. Tasers can alienate community members and undermine public confidence in a police agency; some agencies have stopped using CEDs as a result of community reaction to high-profile CED injuries or deaths.  
  2 Clearly, such a result at this time would exacerbate the tenuous relationship with many community members, particularly communities of color and those with mental illnesses experiencing mental health crisis.

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1 As CED/Tasers are optimally effective at a distance of 15 feet or less, the “distance” contemplated by the new General Orders on Use of Force, is not possible.
The Task Force concluded that the medical evidence on Taser/CEDs – particularly that undertaken by medical researchers who are independent of funding by TASER International – suggests the weapon is indeed lethal, especially when used incorrectly or on vulnerable members of the population, including but not limited to those suffering from mental health and/or drug related problems. The Task Force notes that the SFPD has not yet concluded its Crisis Intervention Team General Order and protocols, and given the success reported by a number of jurisdictions which have employed CIT protocols, and given the promise of de-escalation, crisis intervention, rapport-building communication and community policing, when any possible benefit tied to Taser/CED use is balanced against the risk of harm and death to San Francisco’s most vulnerable population, it is preferable to make every effort to utilize these non-lethal methods prior to implementing use of a potentially lethal weapon. The Task Force appreciates the SFPD’s efforts to recognize vulnerabilities by limiting use of CEDs, nonetheless, the most recent research supports CIT and de-escalation when addressing those with mental health problems or those under the influence of drugs/alcohol.3

The Task Force concluded that recent studies/findings demonstrating the disproportionate use of Taser/CEDs on populations of color coupled with the Task Force’s understanding that SFPD has far more work to do to successfully and fully capture and analyze data regarding pedestrian and traffic stops – particularly related to race – supports their conclusion that no lethal weapon should be introduced until such time as data collection, reporting ability and analysis are more fully developed and implemented by SFPD and available for public review. The Task Force’s Subcommittee on Data Collection and Analysis will complete its work soon and the Task Force will provide their recommendations based on best practices of other police departments.4 SFPD has yet to institute comprehensive data collection and analysis – which (1) can be tied to risk management and early warning systems and (2) includes analysis by outside experts. Until the department is able to complete this essential work – which it is in the process of doing – implementation of Taser/CEDs should be postponed in order to take advantage of the wealth of information which will become available to the SFPD and the public on which each can better make informed decisions regarding introduction of any new weapons. Connected thereto, is the important role of training on implicit bias – this too is not yet fully implemented in the SFPD. Also connected thereto is the role of body cameras and the important training opportunities for SFPD that will be made possible through body camera footage review. Therefore, the Task Force

3 See research infra regarding excited delirium and its relationship to CIT/Taser use.
4 Some of these recommendations are previewed later in this Memorandum.
Memorandum Re CED Bureau Bulletin
Chief Toney Chaplin & San Francisco Police Commission
May 26, 2016
Page 4

THE BAR ASSOCIATION OF SAN FRANCISCO

recommends that the introduction of an additional potentially lethal weapon should await incorporation and analysis of body camera use and protocols within SFPD.  

- A potential final recommendation of the Task Force is to give serious consideration to inaugurating a Taser/CED program only after a genuine “pilot program” has been designed, implemented, and found satisfactory by an independent expert.
- Unless and until the SFPD fulfills the essential work outlined above, the Task Force concluded that it remains premature to consider use of Taser/CEDs.

SYNOPSIS OF SUB-COMMITTEE’S RESEARCH

INTRODUCTION

It is important to an understanding of the history of Taser/CEDs that it be viewed within the context of law enforcement in relation to persons who police consider threatening subjects. While this synopsis does not purport to be an exhaustive compilation of this history, it is intended to be a resource with up-to-date materials. It is important to note that the overwhelming percentage of materials made public about Tasers comes from TASER International, the sole company that manufactures them for US law enforcement. It is important to recall that, although much concern and criticism has come from the public, there is no national database in existence to assess the efficacy of, or potentially adverse outcomes, of Taser/CED usage.

BACKGROUND

Derivation of term Taser®

The name “Taser” is an acronym that stands for “Thomas A. Smith’s Electrical Rifle” after a fictional character in a book admired by the NASA scientist who began work on it in 1969. By 1999, Taser® patented a handgun-shaped device which relied primarily on a ‘neuromuscular incapacitation technology (NMI), though also causing pain. (This is as opposed to a “stun gun” which is discharged while it is touching the subject and causes only localized pain.) Tasers are also known as Electronic Control Devices, or ECD’s, or Controlled Energy Devices (CEDs), the terminology adopted by SFPD in the proposed Bureau Order.

Models

TASER International released the first high power ECD, the M26, in 1999, which was followed by its equally high power, but more compact, Model X26 in 2003. The X26 is higher voltage, shorter duration, and the arc can penetrate through 2" (of clothing and skin). In 2009, TASER International released a new type of Taser® called the “X3” which can fire 3 shots before reloading. In 2011, the company released the Taser® “X2 Defender.”

How They Work

The Taser® fires two small dart-like electrodes, each of which stays connected to the main unit by a conductive wire as they are propelled by small nitrogen charges. The electrodes are pointed to penetrate clothing and barbed to prevent removal once they are in place. Earlier models like the M26 had difficulty penetrating clothing, but newer versions (like the X26) can penetrate such barriers. In order to function, both prongs need to be imbedded in the individual, so that the electrical circuit is completed. Otherwise, the necessary conductivity will not be obtained. The sharp portion of the Taser dart is approximately 9mm in length.

Each time one pulls (and immediately lets go of) the trigger, it delivers a 5 second burst of stimulation. If one holds the trigger down, it will continue to fire at 5-second intervals until it has fired 3 times, at which point the nitrogen cartridges may be reloaded. “Deployments from 7 to 15 feet (2-4.5 meters) are considered ‘optimum range’ because there is a high hit probability, good probe spread, and therefore a good amount of muscle mass affected.”

The Taser’s voltage is 50,000 as it “arcs” through the air or clothing, before reaching the body. At the time it enters the body the peak voltage experienced by the subject is 1200 volts. But voltage is not the relevant measure. Rather, peak amperage per pulse is much more important for assessing physiologic effects.

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6 The single greatest cause of failure is heavy clothing.
7 Emergency Physicians Monthly, “They Tased Me, Doc!” http://epmonthly.com/article/they-tased-me-
doc/#comment-127302
8 Sec, Braidwood Commission on Conducted Energy Weapon Use, Restoring Public Confidence: Restricting the Use of Conducted Energy Weapons in British Columbia, Appendix F (June, 2009).
9 “They Tased Me, Doc!,” supra.
Training to Operate Tasers

Taser® recommends approximately six hours of training on how to use the weapon. However, it should be noted that TASER International conducts training and there is no data tracking on how law enforcement has incorporated Taser® use protocols within their departments. In a 2016 analysis of the 15 agencies with the most Taser® incidents from 2012 to 2014, there was a finding that policies of the state’s largest departments tend to disregard key safety recommendations from experts and Taser’s manufacturer.¹⁰

Do Tasers Always Work?

Why do police Taser/CEDs have no effect on certain people? Research has shown that Taser/CEDs are ineffective on some, especially those who are large in size or in an agitated or intoxicated condition — this leads officers to repeatedly deploy the Taser®, escalating force and enhancing risk of death.¹¹

Very recently, a Los Angeles Times review of reports of the Los Angeles Police Department (LAPD) found that nearly a quarter of the people shot by on-duty LAPD officers last year (2015) — at least 8 of 36 — were wounded or killed during encounters in which officers said they tried to use a Taser without success. “LAPD officers fired Tasers over 1,100 times last year,” according to a report published last month. The devices had the desired outcome - causing someone to submit to arrest - only 53% of the time — a fact that Captain John McMahon found “very disappointing.”¹²

REPEATED TASER/CED® SHOTS

The Mechanism

For various reasons, it is unsafe to repeatedly shock an individual. TASER International has issued a training bulletin indicating, “...multiple applications “may impair breathing and respiration.”¹³ Research has also shown that the weapons are simply ineffective in subduing certain populations,

¹¹ National Institute of Justice, Police Use of Force, Tasers and Other Less-Lethal Weapons 15-16 (May 2011)
including people who are large in size or in an agitated, intoxicated state, leading to repeated excessive use that escalates use of force."\(^\text{14}\)

**Company Warnings**

Taser\(^\text{\textregistered}\) has continuously warned of risks from repeated deployments since June 2006, according the company spokesman. And since March 2003, he said the warnings have advised that repeated use of the device on a person may contribute to cumulative exhaustion, stress, cardiac, physiologic metabolic, respiratory, and associated medical risks which could increase the risk of death or serious injury.\(^\text{15}\) Yet officers across the country, likely frustrated when the Taser\(^\text{\textregistered}\) does not produce the desired effect, repeatedly deploy the weapon. “Legal and policing experts worry that misuse is rampant across the nation as an increasing number of departments outfit more officers with stun guns; a Taser is used by law enforcement 904 times a day on average. The experts warn that too often officers are turning to Tasers before exhausting other means of dealing with disorderly people, actions that courts are beginning to brand as unconstitutional excessive force.”\(^\text{16}\)

**CHEST SHOTS**

Since 2009, Taser\(^\text{\textregistered}\) has advised police that whenever possible they should avoid targeting sensitive areas of the body, such as the head, chest/breast, or known pre-existing injury areas. John G. Peters, president of the Nevada based Institute of In-Custody deaths, reports that Taser’s safety bulletins about chest shots have evolved. “They’ve gone 180 degrees in the warnings,” he said. In 2013, Taser\(^\text{\textregistered}\) warned, “When possible, avoid targeting the frontal chest area near the heart to reduce the risks of potential serious injury or death.”\(^\text{17}\)

In 2012, Douglas Zipes, a cardiologist and professor of medicine at Indiana University, published a report looking at eight cases in which a person who had been Tasered in the chest lost consciousness during or immediately after being shocked by police.\(^\text{18}\) He also concluded that law enforcement officers must be judicious how and when to use the weapon, and avoid chest shocks if possible.


\(^15\) *The Baltimore Sun*, supra

\(^16\) *The Baltimore Sun*, supra

\(^17\) *The Baltimore Sun*, supra.

RISK OF DEATH AND SERIOUS INJURY

Studies and Data Analysis

A report authored by physicians from UCSF and published in the American Heart Journal found that studies funded by TASER International and/or written by an author affiliated with the company are 75% more likely to conclude that Tasers® are safe. Thus, research reported by TASER International is significantly biased in favor of Taser® safety. \(^{19}\) Below are some examples of independent studies and/or investigations conducted on Taser/CED safety and effectiveness.

- In Portland, Oregon, police found in 2007 that in only 25% to 30% of the situations in which the police used a Taser® actually met the criteria for use of “deadly force”. \(^{20}\)

- A UCSF study found that fatal shootings by police more than doubled in the first year after adoption. In following years, the numbers go down but remain higher than the pre-Taser® time period. In-custody deaths skyrocketed by 500% in the first year after the devices were introduced. That number drops down in the following year, but again remains higher than before Tasers were introduced. \(^{21}\)

- A 2011 U.S. Department of Justice study, which looked at a range of police departments, states unequivocally that the electricity produced by Tasers® has been associated with injury and even death. Among other things, the study warns that “caution is urged in using multiple applications,” particularly “against at-risk people,” that “growing use of CED’s is cause for concern,” and that “their ease of use and popularity among officers raise the specter of concern.” \(^{22}\)

- A 2016 Baltimore Sun’s analysis states that “[M]ore than 400 have died nationwide since 2009 in encounters in which the police used electronic control weapons such as Tasers” and

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\(^{19}\) See, Azandani PN, Tseng ZH, Ermakov S, Marcus GM, Lee BK, “Funding source and author affiliation in Taser research in Taser research are strongly associated with a conclusion off device safety.” Am Heart J., 2011.

\(^{20}\) http://spectrum.ieee.org/consumer-electronics/gadgets/how-a-taser-works

\(^{21}\) See, Byron K. Lee, et al. Relation of Taser (Electrical Stun Gun) Deployment to Increase in In-Custody Sudden Deaths (Nov. 2009).

that "California tops the list with more than 60 deaths."\(^{23}\)

- According to Zipes, "...the Taser® X26P pulses at a ratio of 19 shocks per second, or 1,140 a minute." He believes that presents a problem. "The normal heart cannot withstand such rapid rates," he said. "When a normal heart rate stimulated by electricity exceeds 250 times a minute, the entire conduction system breaks down and the heart goes into cardiac arrest."\(^{24}\)

- A three-year study (from 2002-2004), conducted by two professors at John Jay College of Criminal Justice, examined "all Taser® deployments by the N.Y.P.D. and found that, although these figures suggest that Tasers are becoming commonplace in law enforcement, "there are numerous unanswered questions regarding its use and effectiveness, as well as its potential to contribute to serious injury or death, particularly when used against the mentally ill, those under the influence of drugs or alcohol, and those with heat and respiratory conditions."\(^{25}\)

- One recent study has shown that citizens were injured 41% of the time when Tasers® were used as the only type of force and 47% of the time Tasers® were used in conjunction with another form of force, compared to people being injured only 29% of the time when no Taser® was used.\(^{26}\)

- Last year, speakers, including Dr. Zian Tseng, invited by the San Francisco Police Commission reported that another UCSF study found that, in the year after Tasers were to be deployed, aggregate data of 50 cities showed an increase in sudden deaths and officer shootings. The physicians who authored the study recommended that if Tasers were to be employed, officers must be instructed to shoot suspects in the back rather than the chest, and the number of shots must be limited.

\[^{23}\] Baltimore Sun, supra
\[^{24}\] http://www.alternet.org/investigations/bolts-blue-inside-deaths-caused-police-use-tasers
\[^{26}\] See, Zenaida Gonzales Kotola, Study concludes: Use of Stun Guns Increases injuries. College of Health and Public Affairs Blog, University of Central Florida, May 29, 2012). This confirms findings of other studies - even those supported by Taser International - that a high risk of injury accompanies Taser use. See, e.g., WILLIAM BOZEMAN, ET. AL. Safety and Injury Profile of Conducted Used by Law Enforcement Officers against Criminal Suspects, 53 ANNALS OF EMERGENCY MED. 480 (April 2009).
Taser® - Related Death Estimates

- TASER International did not fund a peer-reviewed medical research until 2005 (over four years of Taser® use by law enforcement and over a hundred reported Taser®-associated deaths in the U.S. and Canada.)

- Also in 2005 a Northern California ACLU study reported that at least 148 people died in the U.S. and Canada since 1999 after being shocked with Tasers by police officers.

- In 2009, independent researches from the UCSF School of Medicine determined that in-custody deaths increased six-fold during the year following the first deployments of Taser® International products in the surveyed California law enforcement agencies.27

- More recently, in its 2014 report to the Committee Against Torture regarding the United States, Amnesty International listed Tasers as the cause of 550 deaths since 2001.28

- In the recently released documentary, "Killing Them Safely"29 one of the individuals who died, appeared young, in good health and was tased but once.30 As concluded in their report to the Mayor dated December 4, 2012, the ACLU and Lawyers' Committee for Civil Rights, chronicling recent deaths (over a 7 month period) tied to Taser® use, "These deaths highlight the dangerous and unpredictable nature of Tasers, both in seemingly healthy people and those in high-risk populations, such as people with health ailments and the mentally ill."31


29 This documentary is available on Netflix and scheduled for showing at the Roxie Theatre on May 31, 2016.

30 This death conflicts with a recent finding that there is a general consensus that ECW's are safe for use on healthy individuals who are not under the influence of drugs or alcohol, are not pregnant, and do not suffer from mental illness—so long as the individual receives only a standard five second shot to an approved area of the body. Report on Electronic Control Weapons (ECWs) Submitted to the City of Berkeley 2015 (A report by Jena Neuscheler and Akiva Freidlin, students), http://www.berkeleyside.com/wp-content/uploads/2015/10/2015-10-06-Item-WS-Item-01-Stanford-Study-Electronic.pdf

RECENT CONCESSIONS BY TASER INTERNATIONAL

For a long time TASER International denied any causal relationship between Taser® usage and subject deaths.32 Recent concessions are likely provided in response to a series of lawsuits brought on behalf of victims of Tasers®, and on the advice of Taser® attorneys who are called on to defend them. 33 Among these concessions are:

(1) When possible, aim for the back rather than the chest, and if the latter, aim below the diaphragm rather than the heart;

(2) Tasers can cause serious injury or death34; and

(3) Shots should be limited to no more than 15 seconds in length.

VULNERABLE POPULATIONS

A report produced by the ACLU of Northern California outlines the dangers that Taser®s pose to vulnerable people in the City of San Francisco, especially given the demonstrated increase in officer involved shootings when Tasers are introduced:

“Interactions with these high-risk groups, namely those in mental health crises, accounted for the substantial part of the police work in San Francisco...San Francisco’s Emergency Dispatch Center receives more than 10,000 mental health calls for service per year, or 30 per day.” 35

33 For example, in Lucus v.City of Visalia 726 F. Supp 2nd 1149, 1159 (E.D. Cal 2010), the court held that a plaintiff, who was tased by a police officer and suffered a seizure, could allege that the manufacture issued inadequate warnings and that the City was aware of the particular risks to the plaintiff because of those warnings. More recently, the Ninth Circuit held that TASER International had no duty at the time of the victim’s injury to warn police departments that repeated use of its product could cause a condition likely to lead to sudden cardiac arrest and, therefore, that the manufacture was not liable to the plaintiff. Rosa v. TASER international, Inc. 684 F 3rd 941 (9th Cir. 2012).
34 Taken from recent label.
According to a recent investigative report by the San Francisco Chronicle,

"More than 60 percent of all fatal shootings by San Francisco police since 2010 involved people with mental health problems or who were acting erratically at the time of the incident, according to past reporting by The Chronicle. The department responds to an average of 400 calls per month involving such people, according to Suhr. "That's a lot of people in a lot of crisis," he said."\(^{36}\)

For this reason, among others, concern regarding deployment of Taser/CEDs resonate deeply with professionals who work with this population, such as Jennifer Friedenbach, the Executive Director of (S.F. 's) Coalition on Homelessness. The link between risks of Taser® injury and death and high-risk populations is virtually undisputed, as documented by PERF and TASER International.

According to the American Medical Association studies show that stimulant use creates a "high-risk" situation for Taser-related in-custody deaths, and that Tasers may actually increase the agitation of and contribute to the sudden death of people with mental conditions often described by police officers as "excited delirium." The American Medical Association defines excited delirium as a "state of agitation, excitability, paranoia, aggression and apparent immunity to pain, often associated with stimulant use and certain psychiatric disorder." \(^{37}\)

Dr. Zian Tseng, a cardiologist who has previously provided expert advice to the Police Commission has reported that people in an "excited delirium" are at a higher risk for sudden death caused by a jolt to their system. ""When you bring in this extra tool [Tasers®], you need to understand not just the benefits but the risks,... "And there are very real risks." \(^{38}\)

These concerns have been voiced repeatedly by Ms. Friedenbach and others who advocate for CIT (Crisis Intervention Training) urging CIT represents the best alternative to weapons.

The San Francisco Police Department's CIT policy and General Order regarding Crisis Intervention are not yet finalized and not yet fully implemented; similarly de-escalation or reforms calling for time and distance are yet to be finalized as matters of policy, protocol and training. Protocols must be developed and implemented on CIT and de-escalation – particularly when responding to those in mental health crisis. SFPD should also analyze whether the implementation and use of Tasers/CEDs will interfere with or be counter to effectively implementing de-escalation reforms. CIT officers need to be given authority to develop a de-escalation and communication plan and


PERF and various police departments report remarkable success with CIT teams, particularly with populations experiencing mental illness.

The most recent PERF report summarized Seattle's use of Crisis Intervention training and de-escalation strategies - particularly when facing individuals with mental illness, drug addiction, or other conditions that cause erratic and threatening behavior. In 2015, Seattle reported 2,516 incidents involving "significant challenges...posed to officers;" these incidents included 96 individuals with knives, 16 with guns and 109 with other weapons. Yet Seattle officers used force in only 51 cases and "[none of the 51 uses of force in the 2,516 incidents were Type III, the highest level, which includes deadly force or any use of force that causes loss of consciousness or substantial bodily harm."

The benefits of CIT team interventions were earlier reported by Memphis Police. Without adopting Tasers, Memphis reduced its number of officer-involved shootings of mentally ill individuals. Before Memphis implemented CIT in 1988, the police department averaged one to two shootings of mentally ill individuals each year. Following adoption of CIT, the Memphis Police Department demonstrated a complete turn-around, and police were involved in only three shootings of individuals with mental illness from date of implementation to 2011 - more than twenty years.

There is no reason San Francisco cannot achieve similar outcomes if similar reforms are undertaken. Taser/CEDs run directly counter to Seattle's and Memphis's model which emphasize giving suspects time to calm down. As the Braidwood Commission found, "the worst possible response is to aggravate or escalate the crisis, such as by deploying a conducted energy weapon and/or using force to physically restrain the subject." In addition, the use of Taser/CEDs run counter to de-escalation and time and distance: optimal effects of Taser/CEDs are realized only if used within 15 feet of the individual tased. Effective Taser® use requires close proximity between officers and suspects, the opposite effect achieved through time and distance.

DISPROPORTIONATE IMPACT ON PEOPLE OF COLOR

42 Braidwood Report, Supra, at 262.
In a press release dated April 13, 2016, the Police Accountability Task Force appointed by Mayor Rahm Emanuel, called for sweeping changes in Chicago Policing. Among other things, it found: “Of the 1,886 Taser® discharges between 2012 and 2015, 76% or 1,435 African Americans were shot with Tasers, compared to 13% for Hispanics, 8% Whites, and 21% Asians.43

Nationally, police officers use Tasers on African-Americans more frequently than on white civilians.44 Disturbing racial disparity has been reported by a number of cities, including (in addition to Chicago) Houston and the Maryland’s Attorney General.45 Most alarming were the figures reported by Amnesty International finding that African Americans are disproportionately killed by Tasers – despite Amnesty’s repeated criticism of the United States for allowing continued use of the weapon by state and local law enforcement.46

San Francisco is no exception to this discriminatory pattern. An article investigating SFPD found that the use of force among officers was not only alarmingly high but that 40% of victims of excessive force were African-Americans who make up less than 8% of San Francisco’s population.47 Nationally, police officers use Taser/CEDs on African-Americans more frequently than on white civilians.48

THE POLICE EXECUTIVE RESEARCH FORUM (PERF) REPORT OF MARCH 2016 and BASF TASK FORCE RELATED WORK WITH DATA COLLECTION, ANALYSIS, USE OF FORCE AND TRAINING

43 Executive Summary of “Recommendations for Reform: Restoring Trust between the Chicago Police and the Communities they Serve.”
44 Andrea Ritchie & Joey L. Mogul, In the Shadows of the war on terror: Persistent Police Brutality and Abuse of people of color in the U.S.
45 70% of Taser deployments between 2004 and 2007 in Houston were used on African Americans; a 2009 study conducted by the Maryland Attorney General’s Task Force found that communities of color in Maryland were also disproportionately impacted by the use of Tasers: 45% deployment against African American who make up only 21% of the population and 36% deployment on Latinos which represent 20% of the population. (Office of the City Controller, City of Houston, Report NO 2009-09, Conducted Energy Device Program Performance Audit 6, 27 (2008); Maryland Task Force on Electronic Weapons, Report of the Maryland Attorney General’s Task Force on Electronic Weapons, (2009)
47 Ritchie & Mogul, supra.
The Police Executive Research Forum ("PERF") is a "research organization of law enforcement executives that hears from police chiefs and other officials every day." See, "Why we need to Challenge Conventional Thinking on Police Use of Force," by Chuck Wexler, its Executive Director. Many of the strategies recommended, such as (CIT) Crisis Intervention Team and de-escalation are already in place in many police agencies. The PERF report reflects the current research and best practice on the use-of-force issues from the perspective of many of the nation's leading police executives.

The Report focuses especially on two types of police encounters: (1) with vulnerable populations; and (2) with "subjects who are un-armed, or are armed with a knife, a baseball bat, rocks, or other weapons, but not a firearm." (Page 5) Two news organizations – the Washington Post and the Guardian – have undertaken major projects to gather police use-of-force statistics. They reported that 990 people were shot and killed by the police in 2015. The Guardian reported 1,134 deaths last year.

On Sept. 16-17, 2014, approximately 180 police executives and others met in Chicago for this discussion. Among the three major topics they discussed were de-escalation strategies, particularly new concepts for reviewing the moments before a lethal use of force to see if officers missed opportunities for de-escalating the situation, rather than focusing solely in the moment before lethal force was considered necessary and was used.

Closer to home, the brass of both the Richmond and Oakland police departments have focused on the "change in culture" policies and practices of the PERF guidelines. Richmond has used the "de-escalation" theme in the oversight and training of its officers for several years now, and has developed a robust Use-of-Force data gathering reporting system directly tied to Risk Management and Early Warning Systems with impressive results, according to Captain Mark Gagan of the RPD. Similarly, the Oakland Police Dept. (OPD) not only follows the "de-escalation" protocols, but has adopted an exhaustive system of record keeping for each officer/citizen encounter.

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52 Interview of March 29, 2016, by three of the BASF Criminal Justice Reform Task Force members.

53 See, "PERF" Guiding Principles on Use of Force, No. 11, pg. 49 ("To build understanding and trust, agencies should issue regular reports to the public on use of force."
By working with outside experts from Stanford University, including Dr. Jennifer Eberhardt, OPD, now completing their third year with body cameras, has developed impressive uses of BWC footage for training, all applicable to risk management and early warning systems. BASF’s Task Force’s Sub-Committee on Data and Analysis has spent considerable time meeting with Oakland Police Department. In a recent visit, Assistant Chief Paul Figueroa demonstrated what is described in an article authored by him in the January 2016 Police Chief Magazine. The department employs three levels of review:

With the introduction of body-worn cameras, a wealth of information has become available. Those with access to the videos now have the ability to examine elements like facial expressions, body language, and word patterns. The richness of these data has created opportunities for deeper analysis of police-community interactions and has the potential to improve policing by identifying best practices and then using the knowledge gained to train current and future officers.

Although approaches to analysis are still being developed by many agencies, three levels of review are likely to be used by law enforcement agencies in the near future.

- First level: Straightforward analysis performed by agency supervisors, commanders, and internal affairs or auditing personnel.
- Second level: A more in-depth review conducted through formal engagement with an external academic institution or evaluation group.
- Third level: Computer-assisted analysis of large amounts of video data.\(^\text{54}\)

The analysis can then be tied directly to training - risk management and early warning systems:

The ability to evaluate and improve training through judicious use of all three types of reviews is of major importance.

For example, video can provide invaluable information about the impact of training on communication techniques. Significant knowledge is available about verbal and non-verbal communication, and effective communication training on a regular basis is required for California law enforcement officers. In the basic academy, trainees learn communication techniques such as paraphrasing, expressing empathy, and other techniques to diffuse tense situations. Officers are trained in escalating and de-escalating force depending on changing circumstances. More recent training has also emphasized the importance of incorporating the tenets of procedural justice (voice, neutrality, respect, and trustworthiness) in all police interactions.

Why not evaluate significant amounts of police enforcement actions to determine if the training is having a positive impact? Reviewing pre- and post-footage would go a long way toward providing a much richer analysis of training efforts and ultimately positively affect everyday enforcement interactions between police and the community. Video of real-life positive policing could be used to help trainees see the value of such interactions.\textsuperscript{55}

As the Data Collection and Analysis Sub-Committee of the BASF Task Force will likely include in their upcoming report, SFPD can benefit greatly by implementing additional and important data collection and analysis, by modeling protocols and tools developed by neighboring departments. It is critical that data analysis include “formal engagement with an external academic institution or evaluation group” as noted by Oakland’s Assistant Chief Paul Figueroa and by every department with which the Data Collection and Analysis Sub-Committee has met. SFPD has yet to undertake this important next step. Unless and until this data analysis (including external evaluation) and tied to training, risk management and early warning systems, the rollout of another potentially lethal weapon is unwise.

CED’s as “De-escalation”

At first glance, Tasers appear to be an attractive alternative to police use of force, especially in the wake of high-profile killings by law enforcement across the country and in San Francisco. There is a cohort of Taser\textregistered advocates that argue, “If officers had been equipped with Tasers, the killing of (Alex Nieto, Amilcar Perez-Lopez, Mario Woods, Luis Gongora, and Jessica Williams and others) wouldn’t have happened.”

Unfortunately, this line of thinking is flawed. Taser\textregistered use is “use of force” - it is not an alternative to it. In a policy shift, Taser\textregistered International now states that Taser\textregistereds should not be thought of as an alternative to deadly force.

If we acknowledge that Tasers are weapons of force and potentially lethal, the question becomes: Why is the SFPD considering introducing them at a time when they (as well as the professional police community at large) have professed their commitment to de-escalation techniques, especially the mandatory “time and distance” policy?\textsuperscript{56} Equipping police officers with a new (potentially fatal) tool with which they are authorized to use force amidst local and national movements away from force and toward de-escalation should be cause for hesitation. In practice, Taser\textregistered use and de-escalation policies are generally incompatible, not complementary.

\textsuperscript{55} Ibid.
\textsuperscript{56} See, PERF, “2016 Guiding Principles, Policy 4: De-escalation policy should also include discussion of proportionality, using distance and cover, tactical repositioning, slowing down situations...; Policy 17: “De-escalation should be the core theme of an agency’s training Program...“Whenever possible, officers should be trained to use \textit{distance} and cover to slow the situation down and create \textit{more time} for them to continue communicating and developing options.”
The PERF 2016 report’s primary recommendation on Tasers: To get officers to stop thinking that if/when Tasers fail, they can escalate immediately to deadly force. What does this say about what the best thinkers in the profession think of Tasers now? They know that in most places it is going to be difficult to rid any law enforcement department of Tasers, so they are focused on controlling their misuse.

We hope that San Francisco will be sufficiently wise to delay consideration of Taser/CEDs until a later date for all the reasons set forth in this Report.

CONCLUSION

In the view of the Taser®/CED Sub-Committee, there are serious areas of concern supporting the Findings and Recommendations at pages 2-4 of this Memorandum.

Respectfully Submitted,

Criminal Justice Task Force and
The Bar Association of San Francisco

57PERF 2016 Report, supra, Principle 27, p.67 of Guiding Principles: “Accounts of fatal police shootings often state that “the officer tried an ECW, it had no effect, and so the officer then used a firearm.” This is an inappropriate way to view force options. ECWs often do not work because the subject is wearing heavy clothing or for many other reasons. An ECW deployment that does not work does not mean officers should automatically move to their fire-arms. Under the Critical Decision-Making Model, an ineffective ECW deployment should prompt officers to re-assess the situation and the current status of the threat, and to take appropriate, proportional actions. In some cases, that may mean tactically repositioning, getting together as a team, and assessing different options.”
IMPORTANT SAFETY AND HEALTH INFORMATION

This document presents important safety warnings, instructions, and information intended to minimize hazards associated with the use of Axon Enterprise, Inc. ("Axon") TASER Conducted Electrical Weapons (CEWs). These instructions and warnings are for your protection as well as the safety of others. Read the entire document before using a CEW.

When used as directed in probe-deployment mode, CEWs are designed to temporarily incapacitate a person from a safer distance than some other force options, while reducing the likelihood of death or serious injury. However, any use of force, including the use of a CEW, involves risks that a person may get hurt or die due to the effects of the CEW, physical incapacitation, physical exertion, unforeseen circumstances, or individual susceptibilities. Following the instructions and warnings in this document will reduce the likelihood that CEW use will cause death or serious injury.

These warnings and instructions are effective May 19, 2017, and supersede all prior revisions and relevant Training Bulletins. Immediately distribute this document to all TASER CEW users. The most current warnings are also available online at www.axon.com.

1. Complete training first. Significant differences exist between different TASER CEW models. Do not use or attempt to use any CEW model unless you have been trained by a Certified TASER Instructor on that particular model.1

2. Read and obey. Read, understand, and follow all current instructions, warnings, and relevant TASER training materials before using TASER CEWs. Failure to do so could increase the risk of death or serious injury to the user, force recipient, or others.

3. Obey applicable laws, regulations, and agency Guidance. Use of CEWs must be legally justified and comply with applicable federal, state, and local laws and regulations. The decision to use a CEW in a particular manner or circumstance must follow applicable law enforcement agency Guidance.2

Always follow all current instructions, warnings, and TASER training materials to minimize CEW risks.

This document uses a signal word panel to mark specific warnings:

WARNING This signal word panel indicates a potentially hazardous situation which if not avoided could result in death or serious injury.

Warnings may be followed by instructions and information to help avoid the hazard and improve CEW safety.

SAFETY INFORMATION: CEW RISKS AND RISK AVOIDANCE

WARNING Cumulative Effects. CEW exposure causes certain effects, including physiologic and metabolic changes, stress, and pain. In some individuals, the risk of death or serious injury may increase with cumulative CEW exposure. Repeated, prolonged, or continuous CEW applications may contribute to cumulative exhaustion, stress, cardiac, physiologic, metabolic, respiratory, and associated medical risks.

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1 A Certified TASER Instructor is not an Axon agent, but maintains a current TASER instructor certification and complies with Axon's most current training requirements, materials and license agreement. Representations inconsistent with this document made by any Certified TASER Instructor are expressly disclaimed.

2 Law enforcement agencies are force experts and are solely responsible for their own Guidance. "Guidance" includes policy, custom, procedure, rule, order, directive, training, continuum, and standard. Axon has no authority to mandate Guidance, set policy, require training, or establish standards of care or conduct.
which could increase the risk of death or serious injury. Minimize repeated, continuous, or simultaneous exposures.

Physiologic and Metabolic Effects. CEW use causes physiologic and/or metabolic effects that may increase the risk of death or serious injury. These effects include changes in blood chemistry, blood pressure, respiration, heart rate and rhythm, and adrenaline and stress hormones, among others. In human studies of electrical discharge from a single CEW of up to 15 seconds, the effects on acid/base balance, creatine kinase, electrolytes, stress hormones, and vital signs were comparable to or less than changes expected from physical exertion similar to struggling, resistance, fighting, fleeing, or from the application of some other force tools or techniques.

Some individuals may be particularly susceptible to the effects of CEW use. These susceptible individuals include the elderly, those with heart conditions, asthma or other pulmonary conditions, and people suffering from excited delirium, profound agitation, severe exhaustion, drug intoxication or chronic drug abuse, and/or over-exertion from physical struggle. In a physiologically or metabolically compromised person, any physiologic or metabolic change may cause or contribute to sudden death.

Stress and Pain. CEW use, anticipation of use, or response to use can cause startle, panic, fear, anger, rage, temporary discomfort, pain, or stress which may be injurious or fatal to some people.

To reduce the risk from CEW exposure:

1. Minimize the number and duration of CEW exposures. Most human CEW lab testing has not exceeded 15 seconds of CEW application, and none has exceeded 45 seconds. Use the shortest duration of CEW exposure objectively reasonable to accomplish lawful objectives, and reassess the subject’s behavior, reaction, and resistance before initiating or continuing the exposure. If a CEW deployment is ineffective in incapacitating a subject or achieving compliance consider alternative control measures in conjunction with or separate from the CEW.

2. Avoid simultaneous CEW exposures. Do not use multiple CEWs or multiple completed circuits at the same time without justification. Multiple CEWs or multiple completed circuits at the same time could have cumulative effects and result in increased risks.

3. Control and restrain immediately. Begin control and restraint procedures, including during CEW exposure (“cuffing under power”), as soon as reasonably safe and practical to minimize CEW cumulative effects and the total duration of exertion and stress experienced by the subject.

4. Avoid touching probes/wires during CEW discharge. Controlling and restraining a subject during CEW exposure may put the CEW user and those assisting at risk of accidental or unintended shock. Avoid touching the probes and wires and the areas between the probes during the electrical discharge.

**WARNING** Cardiac Capture. CEW exposure in the chest area near the heart has a low probability of inducing extra heart beats (cardiac capture). In rare circumstances, cardiac capture could lead to cardiac arrest. When possible, avoid targeting the frontal chest area near the heart to reduce the risk of potential serious injury or death.

Cardiac capture may be more likely in children and thin adults because the heart is usually closer to the CEW-delivered discharge (the dart-to-heart distance). Serious complications could also arise in those with impaired heart function or in those with an implanted cardiac pacemaker or defibrillator.
To reduce the risk of injury:

1. **Use preferred target areas.** The preferred target areas (blue) are below the neck area for back shots and the lower center mass (below chest) for front shots. The preferred target areas increase dart-to-heart distance and reduce cardiac risks. Back shots are preferable to front shots when practicable.

2. **Avoid sensitive areas.** When practicable, avoid intentionally targeting the CEW on sensitive areas of the body such as the face, eyes, head, throat, chest area (area of the heart), breast, groin, genitals, or known pre-existing injury areas.

**WARNING**  
**Muscle Contraction or Strain-Related Injury.** CEWs in probe-deployment mode can cause muscle contractions that may result in injury, including bone fractures.

**WARNING**  
**Higher Risk Populations.** CEW use on a pregnant, infirm, elderly, or low body-mass index person or on a small child could increase the risk of death or serious injury. As with any force option, CEW use has not been scientifically tested on these populations. Use a CEW on such persons only if the situation justifies an increased risk.

CEWs in probe-deployment mode can cause muscle contractions resulting in injuries similar to those from physical exertion, athletics, or sports, including hernia rupture, dislocation, tear, or other injury to soft tissue, organ, muscle, tendon, ligament, cartilage, disc, nerve, bone, or joint; or injury or damage associated with or to orthopedic or other hardware. Fractures to bone, including compression fracture to vertebrae, may occur. These injuries may be more serious and more likely to occur in people with pre-existing injuries, orthopedic hardware, conditions or special susceptibilities, including pregnancy; low bone density; spinal injury; or previous muscle, disc, ligament, joint, bone, or tendon damage or surgery. Such injuries may also occur in drive-stun applications or when a person reacts to the CEW deployment by making a rapid or unexpected movement.

**WARNING**  
**Secondary Injury.** The loss of control resulting from a CEW exposure may result in injuries due to a fall or other uncontrolled movement. When possible, avoid using a CEW when secondary injuries are likely.

Loss of control associated with CEW use can have several causes:
- **Seizure.** Repetitive stimuli (e.g., flashing light or electrical stimuli) can induce seizure in some people, which may result in death or serious injury. This risk may be increased in a person with epilepsy, a seizure history, or if electrical stimuli pass through the head. Emotional stress and physical exertion, both likely in incidents involving CEW and other uses of force, are reported as seizure-precipitating factors.
- **Fainting.** A person may experience an exaggerated response to a CEW exposure, or threatened exposure, which may result in fainting or falling.
- **Muscle contraction, incapacitation, or startle response.** CEW use may cause loss of control from muscle contraction, incapacitation, or startle response.

To reduce these risks, consider the person’s location before using a CEW. When practicable, avoid using a CEW on a person in the following circumstances unless the situation justifies a higher risk.

When practicable, avoid using a CEW on a person who:
- is on an elevated or unstable surface (e.g., tree, roof, ladder, ledge, balcony, porch, bridge, or stair);
- could fall and suffer impact injury to the head or other area;
- could fall on a sharp object or surface (e.g., holding a knife, falling on glass);
- is less able to catch or protect self in a fall (e.g., restrained, handcuffed, incapacitated, or immobilized);
- has impaired reflexes (e.g., from alcohol, drugs or certain medications);
- is running, in motion, or moving under momentum;
is operating or riding any mode of transportation (e.g., vehicle, bus, bicycle, motorcycle, or train), conveyance (e.g., escalator, moving walkway, elevator, skateboard, rollerblades), or machinery; or
- is located in water, mud, or marsh environment if the ability to move is restricted.

SAFETY INFORMATION: INJURY OR INFECTION

A CEW may cause injury as a result of the probe or electrical discharge. The nature and severity of these effects depends on numerous factors including the area of exposure, method of application, individual susceptibility, and other circumstances surrounding CEW use, exposure, and after care. Medical care may be required.

**WARNING** Eye Injury Hazard. A TASER probe, electrode, or electrical discharge that contacts or comes close to an eye can result in serious injury, including permanent vision loss. DO NOT intentionally aim a CEW, including the LASER, at the eye of a person or animal without justification.

**WARNING** LASER Light Hazard. CEWs use a LASER targeting aid. LASERs can cause serious eye injury, including permanent vision loss. NEVER aim a LASER at an aircraft or the operator of an aircraft or moving vehicle.

**WARNING** Probe or Electrode Injury, Puncture, Scarring, or Infection Hazard. CEW use may cause a permanent mark, burn, scar, puncture, or other skin or tissue damage. Infection could result in death or serious injury. Scarring risk may be increased when using a CEW in drive-stun mode. Increased skin irritation, abrasion, mark, burning, or scarring may occur with a CEW with multiple cartridge bays when used in drive-stun or three-point deployment modes.

**WARNING** Penetration Injury. The TASER probe has a small dart point which may cause a penetration injury to a blood vessel or internal organ, including lung, bone, or nerve. The probe or dart point (which may detach or break) can puncture or become embedded into a bone, organ, or tissue, which may require immediate medical care, surgical removal, or may result in scarring, infection, or other serious injury.

To reduce the risk of serious or permanent injury:

1. **Provide medical care as needed.** Injury due to penetration of a probe or dart point into a blood vessel, organ, nerve, or bone may require medical care. A probe, dart point, or barb embedded in a sensitive area such as the eye, genitals, breast, neck, throat, or vascular structure may cause serious injury and require medical care. CEW use may cause skin irritation, puncture wound, abrasion, mark, rash, burn, or other scar or infection, which may require medical care and may be permanent. As with any injury of this type, infection or tetanus and resulting complications may occur. In accordance with your agency's Guidance, ensure access to medical care if needed.

2. **Follow agency Guidance for removing probes.** Probe removal may cause injury. Leaving a probe in the body may result in pain or injury. Follow your agency's Guidance and biohazard protocols for probe removal. In the case of embedment, organ or bone penetration, or probe, dart point, or barb detachment, immediate medical care and possible surgical removal may be required.

3. **Follow biohazard protocols.** Use appropriate biohazard protocols including isolation procedures and protective equipment (e.g., gloves, masks, and washing of hands and exposed areas as necessary). Follow your agency's Guidance and appropriate biohazard, waste, and evidence protocols when dealing with biohazards.

SAFETY INFORMATION: CEW DEPLOYMENT AND USE

**WARNING** CEWs and cartridges are weapons and as with any weapon follow safe weapon-handling practices and store your CEW securely. Follow practices herein and additional requirements in your agency's Guidance. Failure to follow these warnings may result in death or serious injury to the user or others.
WARNING Confusing Handgun with CEW. Confusing a handgun with a CEW could result in death or serious injury. Learn the differences in the physical feel and holstering characteristics between your CEW and your handgun to help avoid confusion. Always follow your agency’s Guidance and training.

WARNING Trigger Hold-Back Model Differences. If the trigger is held back, most CEWs will continue to discharge until the trigger is released or the power source is expended. With an APPM installed, the X2 and X26P can be programmed to stop a CEW discharge at 5 seconds even if the user continues to hold back the trigger, requiring a deliberate action to re-energize the deployed cartridge. Know your model and how it works. Avoid repeated, prolonged, or continuous CEW applications when practicable.

WARNING In stressful or noisy circumstances, the APPM’s audible warning may not be heard.

1. **Use properly.** Use a CEW only for its intended purpose, in legally justifiable situations, and in accordance with your agency’s Guidance. Do not use for torture.

2. **Store in a secure location.** Store CEWs, cartridges, and accessories in secure locations inaccessible to children and other unauthorized persons to prevent inappropriate access or use.

3. **Use the safety switch.** Place the CEW safety switch in the down (SAFE) position when the CEW is not in use. Remember to place the CEW safety switch in the up (ARMED) position when you intend to use the CEW.

4. **Assume CEW is loaded.** Always assume that a CEW is loaded and capable of discharging. To help avoid unexpected discharge, ensure that no live cartridge is in the CEW when inserting a battery pack; TASER CAM or TASER CAM HD recorder; or while performing spark tests (except when function testing the X2 or X3), maintenance, data downloading, or battery charging.

5. **Be aware of CEW trigger.** Keep your finger off the trigger until it is legally justifiable to use the CEW and you are ready to deploy.

6. **Know how the CEW works.** Significant differences exist between different TASER CEW models. Before using any CEW, including a multi-shot CEW, ensure you understand the functioning and effects of that model.

7. **Be aware of X2 and X3 deployment mode.** Be aware of which deployment mode (manual or semi-automatic) is set on the X2 and X3 before use.

8. **Be Aware of X2 Static (Fixed) LASER Sight Mode.** The X2 has static dual LASERS. One LASER is intended to approximately align with the top dart and the other with the bottom dart, both of which are set-up for 15’ (4.6 meters (m)) and 25’ (7.62 m) cartridges at a 15’ distance from the target. The trajectory of the 35’ (10.7 m) long range cartridge will not line up with the bottom LASER when placed in the X2.

9. **Use simulation (training) cartridges ONLY for training or practice.** DO NOT use a CEW loaded with a simulation training cartridge for field use or self-defense. Simulation cartridges are intended for practice only and will have no incapacitating effect on a subject. Simulation cartridges use non-conductive wires and will not transmit electrical pulses to the probes.

**SAFETY INFORMATION: CEW EFFECTIVENESS**

A CEW, like any weapon or force option, does not always function as intended and is not effective on every subject. As with any use of force, if a particular option is not effective, consider using other force options, disengaging, or using other alternatives per agency Guidance. Always have a back-up plan.

**WARNING Subject Not Incapacitated.** An ineffective CEW application could increase the risk of death or serious injury to the user, the subject, or others. If a CEW does not operate as intended or if subject is not incapacitated, disengage, redeploy the CEW, or use other force options in accordance with agency Guidance.

A CEW’s effects may be limited by many factors, including absence of delivered electrical charge due to misses, clothing disconnect, intermittent connection, or wire breakage; probe locations or spread; subject’s...
muscle mass; or movement. Some of the factors that may influence the effectiveness of CEW use in effecting or achieving control of a subject include:

- **Subject may not be fully incapacitated.** Even though a subject may be affected by a CEW in one part of his body, the subject may maintain full muscle control of other portions of his body. Control and restrain a subject as soon as possible, and be prepared in case the subject is not fully incapacitated.

- **Subject may recover immediately.** A subject receiving a CEW discharge may immediately regain physical or cognitive abilities upon cessation of the delivered CEW discharge. Control and restrain a subject as soon as possible, and be prepared in case the subject immediately recovers.

- **Drive-stun mode is for pain compliance only.** The use of a handheld CEW in drive-stun mode is painful, but generally does not cause incapacitation. Drive-stun use may not be effective on emotionally disturbed persons or others who may not respond to pain due to a mind-body disconnect. Avoid using repeated drive-stuns on such individuals if compliance is not achieved.

- **Probes may deviate.** CEWs are not precision-aimed weapons. Probe discharge, flight trajectory, and impact location can be affected by numerous factors, including cartridge or probe accuracy; failure of cartridge to properly deploy; strong air movements; user and subject movements; or probe striking subject, clothing, or object with insufficient force or trajectory to penetrate or adhere to subject. Deviations can result in limited or lack of effectiveness due to misses, failure to complete or maintain the electrical circuit, a small probe spread, or failure to deliver a sufficient charge to the subject.

- **CEW or cartridge may fail to fire or operate.** No weapon system, force option, or CEW is always operational or effective. If a CEW, cartridge, or accessory is inoperative or fails to function, consider reloading and redeploying, using other force options, disengaging, or using other alternatives per agency guidance.

### SAFETY INFORMATION: OTHER HAZARDS

**WARNING** Probe Recoil or Ricochet. If your target is farther away than the length of the probe wire, or if one or more probes miss the target, the probe can recoil and bounce back to strike the user or a bystander, causing injury. Probe recoil is more likely with simulation cartridges because of the nylon probe wire used.  
Always be sure your target is within range. Wear protective eyewear when deploying any CEW in training or for practice. Be sure practice targets have a firm backing that will allow the probes to stick and not bounce off and strike an unintended person, animal, or object, or continue through the backing and strike objects behind the target.

**WARNING** Untethered Discharged Probe. A discharged probe that does not impact a subject or target may become untethered from the wire and travel a significant distance causing serious injury. Always be sure your target is within range.

**WARNING** Fire and Explosion Hazard. CEW use can result in a fire or explosion when flammable gases, fumes, vapors, liquids, or materials are present. Use of a CEW in presence of fire or explosion hazard could result in death or serious injury. When possible, avoid using a CEW in known flammable hazard conditions.

A CEW can ignite explosive or flammable clothing or materials, liquids, fumes, gases, or vapors (e.g., gasoline, vapor or gas found in sewer lines or methamphetamine labs, butane-type lighters, flammable hair gels or some self-defense sprays). Do not knowingly use a CEW in the presence of any explosive or flammable substance unless the situation justifies the increased risk.

### SAFETY INFORMATION: GENERAL PRECAUTIONS

**WARNING** Unintentional CEW Deployment or Discharge Hazard. Unintentional CEW activation or unexpected cartridge discharge could result in death or serious injury to the user, subject, or others.
To reduce the risk of unintentional deployment or discharge:

1. **Avoid static electricity.** Keep cartridge away from sources of static electricity. Static electricity can cause a CEW or X26, X26P, or M26 cartridge to discharge unexpectedly, possibly resulting in serious injury.

2. **Keep body parts away from front of CEW or cartridge.** Always keep your hands and body parts away from the front of the CEW and cartridge. If the CEW discharges unexpectedly you could be injured.

3. **Avoid electronic equipment interference.** Electronic transmission equipment close to a CEW could interfere with the proper CEW operation and cause the CEW to deploy or discharge. Keep the CEW at least several inches away from other electronic equipment. Place the CEW safety switch in the down (SAFE) position whenever it is near electronic equipment, including transmitting radios and cell phones. Remember to place the CEW safety switch in the up (ARMED) position before use.

4. **Avoid dropping CEW or cartridge.** If a CEW or cartridge is dropped or damaged it may unintentionally deploy or discharge, become inoperable, or fail to function, making it unsafe for continued use. If a CEW or cartridge has been dropped or damaged refer to the procedure recommended in the current version of the TASER Training materials.

### SAFETY INFORMATION: MAINTENANCE

**WARNING** Failure to maintain a CEW as instructed may cause the CEW to malfunction or fail to function optimally, increasing the risk of death or serious injury. Follow recommended maintenance procedures.

To reduce these risks:

1. **Safely perform spark (function) test before each shift.** Testing helps verify that the CEW is functioning properly. See the current version of the TASER Training materials for further information on testing.

2. **Avoid using a damaged CEW or cartridge.** Do not use a cartridge with a missing blast door unless facing an immediate threat. CEW repair or modification by an unauthorized person may cause the CEW to fire or malfunction, will void the warranty, and may put the user or other person at risk of death or serious injury. Cartridges with blast doors that have been repaired should only be used for training and not for field use.

3. **Update CEW software.** Some CEWs have updateable software. Current CEW software may be obtained by contacting Axon’s Customer Service Department or following instructions at www.evidence.com or www.axon.com.

4. **Use only Axon-approved components, batteries, accessories, and cartridges.** The CEW is a sophisticated electronic system. For proper function, use only Axon-approved components, batteries, accessories, and cartridges with your CEW. Use of anything other than Axon-approved components, batteries, accessories, and cartridges will void the warranty, may cause malfunction, and may put the user or other person at risk of death or serious injury.

5. **Avoid exposure to wet conditions.** If the CEW is drenched or immersed in water or other liquid, DO NOT use or attempt to use the CEW until completing the procedure recommended by the manufacturer.

6. **Keep Smart Cartridge contacts clean.** If the contacts on the Smart Cartridge or inside the Smart Cartridge bay of the X2 or X3 are not kept clean the CEW may fail to deploy the Smart Cartridge.

7. **Know CEW and cartridge expected useful life.** Under normal storage, handling, and operating conditions, a CEW and cartridges have a 5-year expected useful life. Use or attempted use of a CEW or cartridge after its expected useful life may result in malfunctions and lack of effectiveness. Failure to properly care for and maintain a CEW or cartridge may substantially reduce or eliminate the expected useful life of the product.

### SAFETY INFORMATION: DISASSEMBLY AND DISPOSAL

**WARNING** Do not disassemble. Refer to your agency’s Guidance for proper handling and disposal.
SFPD TASER Deployment Cost Analysis

Questions posed by the Bar Association of San Francisco
Answers provided by Mike Leonesio, Leonesio Consulting http://leonesio.com/

1) Cost of hardware - weapon itself, plus cartridges and additional add-ons to shorten time weapon fires (in an effort reduce injury/death)

Answer:

- X2 (per officer)
  - Handle (1): 1103.31
  - Holster – belt (1): 70.54
  - Auto shutdown power magazine (1): 70.54
  - 25' Cartridge (4 @ 33.69 ea): 134.76
  - Training Cartridge (4 @ 32.73 ea): 130.92
  - Camera (1): 548.96

  Total: $2059.03

- X26P (per officer)
  - Handle (1): 964.05
  - Holster – belt (1): 57.04
  - Auto shutdown power magazine (1): 70.54
  - 25' Cartridge (4 @ 29.25 ea): 117.00
  - Training Cartridge (4 @ 25.24 ea): 100.96
  - Camera (1): 548.96

  Total: $1858.55

2) Cost to maintain weapons and/or opening testing center inside SFPD to ensure functioning. Oakland did this, and it is necessary according to national expert Mike Leonesio who started the program in Oakland for nearly 1 in 5 weapons are non-operational out of box, which puts officers at risk, and in turn members of the public as escalation in use of force typically follows the weapon’s failure (operationally – and this is to be distinguished from efficacy).

Answer: Realistically, there are three options for dealing with this important issue:

1. Sending weapons to an outside laboratory for testing;
2. Creating an in-house testing laboratory;
3. Purchasing standalone, dedicated, test equipment.

Some might suggest (the manufacturer chief among them) a fourth option; that output measurement and operational testing is unnecessary. However, in my experience this is not a viable option given the proven unpredictability of weapon performance.

Additionally, a consistent testing program, when combined with regular data and trend analysis, will save millions of dollars in unnecessary equipment replacement costs going forward.

Given the three viable weapon maintenance options, the cost breakdown is as follows:

1. Sending weapons to an outside laboratory for testing. With this option the department will select weapons for testing based on specified criteria. The weapon will them be packaged and shipped to a contracted laboratory (or to the manufacturer) for output testing.

   Typical output testing can range between $500.00 to 1200.00 per weapon.

   The biggest problem with this method are the logistics involved. Subject weapons will have to be identified and collected. They will need to be properly packaged and shipped, with appropriate tracking. The testing process will then need to be followed by department personnel throughout the testing and return process. This is especially important if the weapon is involved in an investigation, so that the chain of evidence is preserved.

2. Creating an in-house testing laboratory. This option gives the department the most control and the greatest flexibility. It is also the most expensive and labor intensive.

   A typical electronics laboratory, capable of testing the high output of these weapons, for a department the size of SFPD will run approximately $100,000.00; with annual maintenance costs of approximately $5000.00.

   In addition to the hard equipment costs, the lab will need a dedicated, secure space due to the sensitive nature of the electronic test equipment, and the fact that the weapons in-test will, many times, be considered evidence in an ongoing investigation.

   With a department the size of SFPD, I would envision a laboratory staff of approximately 4 fulltime positions.
3. Purchasing standalone, dedicated, test equipment. This option is the newest, and potentially, would give the best result for the dollars spent.

This option would involve the purchase of dedicated, individual test devices. These “testers” would be deployed around the City in station houses, administrative offices, crime laboratory, etc. These devices would be joined by a dedicated secure network allowing the program coordinator and staff to monitor weapon health and performance in real time.

I would anticipate that SFPD would need between 25 and 30 test devices for this option. Devices cost between $15,000 and $20,000 each.

3) Cost of replacement of weapons/parts/cartridges

Answer: Multiply the number of officer issued items (weapons, cartridges, power mags, etc) by 10%.

4) Cost of purchasing defibrillators to equip all police vehicles (these are necessary to maintain life after Taser use, and were included in previous SFPD policies)

Answer: $1500 to $3500 per unit depending on the make and model. I would recommend contacting SFFD to determine what make and model they use for continuity of care, to streamline the suspect/patient handoff process, and for software compatibility.

5) Cost of maintaining and/or upkeep of defibrillators

Answer: AED units typically require monthly maintenance to include interrogation (downloading), battery and charge checks, and electrode pad inspection/replacement.

Electrode pads are single use items. Once they have been opened, even if not used, they must be replaced. Pad replacement typically costs between $60 and $120, depending on the make and model of the AED. Units should carry a minimum of 2 electrode pads (another consideration is adult vs. pediatric pads).

Battery replacement typically costs between $350 and $450 depending on the make and model of the AED.

Keep in mind that you will need additional inventory of AED units, electrode pads, batteries and maintenance parts to maintain units in every police vehicle.
As above, I would recommend contacting SFFD to determine what make and model they use to assure component interoperability/compatibility.

6) **Cost of training for the officers to use weapon (length of training/frequency of training)**

(SFPD advised that they do not intend to use the TASER provided training, therefore a POST certified training will be created (can be modeled on Oakland's and SFPD has contacted Oakland and has secured some assistance from OPD)

**Answer:** I would agree with SFPD's assessment that the manufacturer's user training program should not be used as it is, in my view, inadequate. I would recommend, however, that any department designated TASER subject matter experts (SME) be manufacturer certified as instructors and technicians at minimum. Also, there should be at least one certified master instructor in the department. These certifications will require regular travel to Arizona for training, updates, and re-certification.

In addition to developing user training curriculum, the coordinator should identify and address other training needs. At minimum, I would recommend additional training programs for: line supervisors, communications dispatchers and call takers, force investigators, IA personnel, homicide investigators, DA investigators, crime scene technicians, evidence technicians, K9 units, tactical teams/units, crowd control teams/units, CIT officers, public information officers, command staff, and any other specialty units that may be required to use, investigate, or come in contact with subjects exposed to a TASER deployment.

Training curriculum should also be developed, and training given, for fire/EMS personnel, and hospital emergency department (adult and pediatric) personnel – both medical and psychiatric.

All of this curriculum should be California POST certified.

Keep in mind that a program coordinator, master instructors, instructors and technicians will need to be selected by the department and certified; and should be art of the policy development, training development, and program development and administration process.

Ideally, the coordinator and program admin positions should be dedicated, fulltime positions. Staff instructors and technicians can be ancillary positions.

7) **Cost of training to use defibrillators (length of training/frequency)**
Answer: This will be a lengthy certification and annual re-certification process. I would contact SFFD to find out if they can assist in AED training.

8) Cost to the city/hospitals (only ER rooms can remove the prongs)

Answer: This is an often-overlooked expense. Every person exposed to a TASER discharge – probe or drive-stun – must be medically cleared prior to any other police action (i.e. interrogation/interview, holding, jail admission, etc.). This means that Fire transports the suspect to a hospital ER for probe removal and medical evaluation/clearance. This can take officers off the street for extended periods of time and may require additional personnel and/or overtime expenses.

In addition to the personnel costs, the hospital will typically charge for the examination/clearance/admission. I would recommend a protocol be put in place designating post TASER deployment receiving hospitals (adult, pediatric, psychiatric), and that these hospitals be contacted to address related expenses.

9) Cost of oversight of Taser use – data collection, review of each weapon deployment (including review boards) and adjustment to training as needed based on recommendations of review board

Answer: This question requires analysis beyond my scope at this time. As I am not familiar with SFPD’s current force review processes, and/or any process changes as required by the newly introduced policies, I would not be equipped to address the expenses involved related to this issue.

Suffice to say, however, this issue will be costly based on the personnel hours required to review and render opinions and/or recommendations on each incident.

Another expense to keep in mind is the cost of policy review/revision, and training – both update and remedial – associated with the incident, policy, and training review and recommendation process.

I would be happy to work with SFPD in reviewing current and/or proposed policies and procedures related to this issue.

10) Anticipated cost of lawsuits including both payouts on settlements and litigation costs based on similar city experiences.
Answer: As above, this question requires analysis beyond my scope at this time. I would be happy to work with SFPD and the City's legal team to review and address this issue.

11) Cost of collection of data generated by the Taser use and storage of Taser generated data, cost of sharing this data with District Attorney and defense counsel when charges are filed

Answer: My understanding is that SFPD is currently fielding on-officer video cameras. Depending on the make and model, these collection and storage resources may be able to be shared and utilized with TASER weapon data. Because the weapon data files are comparatively small relative to the video data produced by cameras, the costs of storage would be negligible.

One issues I would keep in mind, however, is data management. In Oakland, I designed and wrote a data management program that tracked officer certification and training, equipment, supplies, maintenance, and weapon use/compliance. I would recommend SFPD investigate writing, or having a program created, that will track the tremendous volumes of data produced by a program such as this.

In 2006, I made inquiries to several law enforcement oriented software companies to have a program created. The estimates ranged from $10,000 to $50,000, not including necessary hardware.

12) If 1% of all calls for SFPD police service result in use of force, what is the anticipated number of times or percentage of calls that Taser use might be appropriate? Can we extrapolate this number by looking to other police agencies?

Answer: A search of the literature related to TASER use was inconclusive. I found no credible reports giving objective, science based, statistics isolating TASER use.

I would caution the stake holders to be critical of study methodology, and reporting methods and criteria when examining any study claiming to purport TASER use numbers. Every study I’ve examined has been, at best, fundamentally flawed, and at worst, a fabrication.

Other confounding factors, when it comes to reporting TASER use, is the disparity of weapon classification, officer training, policy allowances, supervision, investigation criteria and investigatory bias, etc. from department to department, state to state.
13) **Efficacy.** What do other departments report on Taser’s efficacy? *(Given efficacy is reported on earlier models and the model currently available for purchase is different, do we anticipate the Taser’s efficacy to increase/decrease?)*

**Answer:** I would anticipate, and anecdotally the evidence shows, that the new generation weapons are less effective at reliably and consistently incapacitating motivated, aggressive, and/or violent subjects.

This is an important point to consider as the new generation weapons still require officers to close the distance between the officer and the violent subject – optimal deployment distance is 7-15 feet.

As shown in a recent LAPD report, TASERs fail to incapacitate a subject nearly 50% of time. Add to this the fact that the new generation weapons produce only half the electrical output of previous models, yet still require the officer to close to within 7 to 15 feet of an aggressive, assaultive and/or violent subject, and I see a real possibility for increases in officer and subject injury, as well as increased levels of force escalation.

14) **Given the warnings issued by Taser International, does this diminish the weapon’s efficacy and/or circumstances otherwise warranting Taser use (e.g. edged weapon in the hands of someone under the influence vs. someone not under the influence)?**

**Answer:** The latest manufacturer warnings and training, as well as the Courts and current case law decisions, have absolutely limited the circumstances when a TASER can, and/or, should be used.

Combine this with the fact that the new generation weapons are generating only half the electrical output of the previous generations, and I question the current weapons’ ability for consistent, reliable, subject incapacitation; even when legally, administratively or by department training, the use is justified.

15) **Number of specific scenarios that ECWs could have been used in past OIS scenarios in SF that had fatal outcomes.** For example, in officer involved shootings over past two years, what would it cost to employ a use of force/Taser expert, such as Mike Leonesio to analyze the circumstances to advise whether any/all of these prior officer involved shootings might be appropriate for Taser use and whether the outcome would have been different had Tasers been available to SFPD.