



**REPORT OF THE
MARYLAND ATTORNEY
GENERAL'S**

**TASK FORCE ON
ELECTRONIC WEAPONS**

DECEMBER 2009

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Foreword by Attorney General Douglas F. Gansler

The strength and integrity of our criminal justice system depend on a number of factors including our ability to protect the safety of citizens while ensuring that all citizens are treated fairly. Public confidence in the justice system cannot be maintained without making certain that safety and fairness are pillars of the system. In order to preserve safety, law enforcement personnel must have effective tools to do their jobs. In order to preserve fairness, those tools must not be used in an arbitrary or unreasonable way.

On November 18, 2007, 20-year old Jarrel Gray of Frederick died after being shocked with an electronic control weapon during an altercation with local police. As a result of the controversy surrounding the death of Gray and similar incidents across the country, I created the Attorney General's Task Force on Electronic Weapons. In general, law enforcement personnel view the device as a non-lethal way to restrain uncooperative and dangerous suspects. In contrast, civil rights groups challenge the device's safety and claim that law enforcement personnel resort to electronic control weapon use too quickly and too frequently. The Task Force was given the difficult task of weighing all sides carefully and developing best practices for the use of electronic control weapons by law enforcement.

After a year of gathering information, holding public hearings and numerous meetings, and extensive deliberation, members of the Task Force compiled this report to document the information they received and to make recommendations to Maryland elected officials and law enforcement personnel. I appreciate the many hours the members of the Task Force spent compiling this report. It is my hope that the recommendations offered in the report will be carefully considered by the members of the General Assembly, and State and local law enforcement.

A handwritten signature in cursive script, reading "Douglas F. Gansler". The signature is written in black ink and is positioned centrally on the page.

Douglas F. Gansler

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I. Executive Summary

Electronic control weapons (“ECWs”) can be an effective law enforcement tool that often poses less risk to officers and civilians than other force options. However, it is critical that the legislature, law enforcement agencies deploying these devices, and officers on the street recognize the risks of serious injury and even death inherent in ECW use.

Only after both the risks and benefits of ECWs are understood can reasonable judgments be made about whether to adopt these devices, how to structure the deployment process, the appropriate training, the procedures for proper use (in particular, placement of this weapon in an agency’s use-of-force model and use in certain situations or against certain populations), medical care following discharge, and supervision and record keeping related to these weapons.

The Task Force makes 60 specific recommendations, covering each of the issues listed above. In addition, it proposes suggestions for future research and a legislative agenda. The Task Force’s complete recommendations are found below in Part XIII of this report. The Task Force’s proposed suggestions for future research and a legislative agenda are found below in parts XIV and XV, respectively.

There are a high number of detailed recommendations covering a broad range of subjects because, to date, these issues have not been adequately addressed in Maryland. While a few law enforcement agencies currently have reasonable training and procedures, the majority of law enforcement agencies are inadequate across the entire range of recommendations made by this Task Force. No agency currently follows all of the best practices recommended here.

The fact that no agency in Maryland currently meets or exceeds the standards set forth here should not be taken to mean that these recommendations are overly stringent. Although reached independently, the Task Force’s conclusions mirror those found by a long and distinguished list of similar bodies both in the United States and abroad, including the following: the Joint Non-Lethal Weapons Human Effects Center of Excellence (funded by the U.S. Department of Defense), the United States Army, the Police Executive Research Forum, the Potomac Institute for Policy Studies, the International Association of Chiefs of Police, the Wisconsin Law Enforcement Standards Board, the Canadian Police Research Centre, the United Kingdom’s Defense Scientific Advisory Council’s Subcommittee on the Medical Implications of Less-lethal Weapons, and the Braidwood Inquiry (sponsored at a national level by the Canadian government). Each of these reports was reviewed in detail and is cited where appropriate below. In addition to reviewing the work of similar bodies, the Task Force’s year-long process included a careful review of the medical literature, the policy recommendations of various advocacy groups, the invited testimony and participation of all stakeholders and the testimony offered during two public hearings. The Task Force’s findings and recommendations are in keeping with and supported by this extensive fact-finding process.

The consistency between the Task Force's recommendations and those of these other groups underscores the consensus about what needs to be done to ensure that ECWs are used as effectively and safely as possible. This consistency across so many organizations also demonstrates that the Task Force's recommendations can be implemented here as well.

ECWs are a new and emerging technology and the science about their effects is constantly evolving.¹ Prior to the work of this Task Force, there had been no effort in Maryland to sift through the available information and provide clear guidance. The law enforcement representatives on this Task Force both recognized the need for such guidance and were invaluable in shaping it.

Training materials provided by the manufacturer of these devices and early law enforcement training tended to significantly understate the risks associated with ECW use. This fact, coupled with the ease of use of this device, appear to have lead to over-reliance on ECWs by law enforcement nationwide, particularly in response to relatively low-level threats of harm and situations that have now been shown to involve a heightened risk of injury or death. These events, seen as abuses by many, appear to have arisen primarily from under-education of law enforcement officers regarding the risks associated with ECW use.

Although rare, serious unintended ECW injuries and deaths do occur. Even though these events are unusual, their impact can be substantial. Of course, any injury or death is a tragedy for the individual affected, his or her friends and family, and the officer who discharged the ECW.

Moreover, due in part to the novelty of the weapon, when serious ECW injuries or deaths do occur, they are often reported broadly by the media. Likewise, this same effect is seen when news of negative ECW outcomes is spread by word-of-mouth through the community. Community reaction can broaden the impact of unintended negative ECW outcomes beyond the subject and the officer who discharged the ECW, affecting community-police relations. In this way, misapplication of ECWs can impair the effectiveness of the agency and the safety of its officers. Finally, some agencies have stopped using ECWs as a result of community reaction to high-profile ECW injuries or deaths.

As a result of the potentially far-reaching consequences of even one ECW-related death or serious injury, it is critical to minimize the occurrence of these outcomes. This is accomplished through an appreciation of the risks of ECWs as well

¹ The current ECW market is dominated by a particular manufacturer. Its chief product employs technology involving darts fired from a distance which penetrate the body and through which electrical current is sent over attached wires with the intent of causing pain and muscle incapacitation. The same device can be used in pain-compliance mode by touching its probes to the body. This mode of use does not cause incapacitation, but seeks to gain compliance merely through the application of significant pain induced by electrical current. Because this is the current state of the art, it was necessary to address the specific effects of this technology in some of the Task Force's recommendations. However, the majority of the Task Force's recommendations are meant to and should apply to other types of electronic weapons which may be introduced in the future.

as the benefits, and by ensuring that ECWs are used appropriately and only against appropriate targets. The examples of injuries and deaths cited herein from the medical literature and anecdotal accounts should be carefully reviewed and incorporated, when possible, into officer training to help avoid the potential for reoccurrence.

Although a careful review of all of the recommendations of the Task Force is necessary in order to get full value from this report, and even though each recommendation is equally important, the following synopsis of 20 of its recommendations may assist in reviewing the balance of this Report:

Implementation Recommendations:

- To ensure community concerns are understood and addressed before deciding whether to implement an ECW program and, if implemented, what safety and accountability mechanisms should be put in place, the decision-making process should involve community stakeholders (*e.g.*, civil rights and mental health advocacy groups, medical professionals, lawmakers, and other interested parties).

Training Recommendations:

- The Maryland Police and Correctional Training Commission should incorporate the Task Force's recommendations into ECW training requirements for Maryland public safety agencies that use ECWs.
- An agency's training program must be mandatory for all officers authorized to use ECWs and should include provisions for certification and recertification, and have components for knowledge and proficiency testing, as well as scenario-based training.
- Officers must be trained that the ECW is a less-lethal weapon, and not a non-lethal or less-than-lethal weapon.

Use-of-Force Recommendations:

- ECWs should not be used against a passive or restrained subject, or otherwise to counter passive noncompliance, absent an imminent threat of physical harm.
- The act of fleeing or destroying evidence, in and of itself, should not justify the use of an ECW.
- Officers should be permitted to use ECWs only when individuals pose an imminent threat of physical injury to themselves or others. For the purposes of this standard, "physical injury" should have the same meaning as it does in Maryland's definition of second degree assault on a law enforcement officer. Specifically, "physical injury" means "any impairment of physical condition,

excluding minor injuries.” A threat of such minor injuries ordinarily does not warrant the application of a potentially lethal force option.

- Agencies should adopt a use-of-force model that recognizes that in the following situations involving a heightened risk of serious injury or death, ECWs should only be used when deadly force is otherwise legally permitted:
 - persons in elevated positions, who might be at risk of a dangerous fall;
 - persons operating vehicles or machinery;
 - persons who are fleeing on foot;
 - persons who are already restrained in handcuffs;
 - persons who might be in danger of drowning;
 - environments in which combustible vapors and liquids or other flammable substances including but not limited to alcohol-based Oleoresin Capsicum (“OC”); or
 - similar situations involving heightened risk of serious injury or death to the subject.

- Agencies should adopt a use-of-force model that recognizes that the populations listed below may be at a heightened risk of serious injury or death. When deciding whether to discharge an ECW, the officer should consider the heightened risk of serious injury or death for these groups and be able to articulate the justification for exposing a person to increased risk:
 - persons with known heart conditions, including pacemakers;
 - elderly persons or young children;
 - frail persons or persons with very thin statures (*i.e.*, may have thin chest walls);
 - women known to be pregnant;
 - persons in mental/medical crisis; or
 - persons under the influence of drugs or intoxicated by alcohol.

- Agencies should adopt a use-of-force model that recognizes that unless articulated exigent circumstances exist justifying the increased risk, ECWs should not be discharged at sensitive areas of the body, including the head, neck, chest, or genitals.

- An individual’s apparent mental health or medical crisis (including any display of symptoms that are considered by some to constitute a syndrome called “excited delirium”) should not in itself justify the use of an ECW.

- Multiple ECWs should not be simultaneously discharged against a person unless there is a specific articulable reason for doing so and should be avoided when possible.

- An officer should only administer an additional ECW discharge after an initial discharge if the officer has concluded that the subject still poses an imminent

threat of significant physical harm and other options are not appropriate. Repeated or prolonged (*i.e.*, beyond the five-second standard cycle) discharges should be avoided whenever possible due to the increased risk of serious injury or death.

- ECWs should not be used in pain compliance (drive-stun) mode except when necessary to complete the incapacitation circuit, or when the probe mode has been ineffective and use of drive-stun mode is necessary to prevent imminent harm to the officer or others.

Medical Care Recommendations:

- Agency policies and training should reflect the responsibility to ensure the rapid provision of medical care, particularly where the need for medical intervention was cited as a reason for the ECW discharge.

Reporting and Investigation Recommendations:

- Comprehensive use-of-force reports should be completed when an ECW is discharged or aimed (*e.g.*, the subject is targeted with the ECW's "laser" or "red dot"). Information recorded on use-of-force reports should include data required for consistent, state-wide reporting.
- A post-discharge investigation should be conducted of all discharges, including accidental discharges. This investigation should include interviews with the participants and other witnesses, a review of the use-of-force report, and collection and review of evidence, including cartridges, ECW data, and photographs.
- When a death occurs in temporal proximity to an ECW discharge, the State Medical Examiner should specifically indicate whether the use of the ECW may have or did contribute to the death. "Excited delirium" should not be cited as the cause of death where there is a known direct cause. The Medical Examiner should explain in the autopsy and death certification the cluster of symptoms that led to the finding of "excited delirium."

Monitoring and Data Collection Recommendations:

- Agencies should maintain comprehensive data (identified in this report) regarding use of ECWs for the purpose of tracking trends over time and determining whether some officers are using ECWs at a different rate or in a different manner than similarly situated peers. This data should be considered when determining whether to recertify or decertify officers for ECW use.

Proposed Legislative Agenda for the Maryland General Assembly:

- A requirement that the Maryland Police and Correctional Training Commission (“MPCTC”) incorporate through regulation this report’s training recommendations into the Commission’s law enforcement ECW certification and training program instituted pursuant to Chapter 320, Laws of Maryland 2009. Chapter 320 requires a law enforcement officer to complete MPCTC training before being issued an ECW and requires MPCTC to provide such training and related certification and recertification. As noted in this report, best practices reflect the need for such training to include important components to address officer safety and public safety priorities to accomplish the goals of Chapter 320. Such legislation would ensure fulfillment of the legislative intent expressed in Chapter 320.

- A requirement for state-wide collection, compilation, and analysis of uniform and comprehensive agency data regarding ECW use. The data collected should include all data listed in the report above, as well as the Medical Examiner’s report for any death for which an ECW is listed as a cause of death or a contributing factor. This data should be collected, compiled and published annually by the Governor’s Office of Crime Control and Prevention (or other appropriate state agency). The legislation should also require that each individual law enforcement agency make its reported data available to the public upon request to ensure that citizens can be informed about use of ECWs in their communities.

The highest and best use of this report is to provide recommendations which, if followed, will prevent unnecessary injuries and deaths. Each Task Force member has expended substantial time and effort over the course of a year because we view our work as no less than a life-or-death matter and the resulting product (not just this brief summary) should be reviewed in its entirety with the care required in such circumstances.

In conclusion, broad adoption of the full recommendations of the Task Force will save lives, prevent injury, improve community-police relations and allow the continued use of an effective law enforcement tool.

II. Introduction

Maryland Attorney General Douglas F. Gansler authorized the creation of the Task Force on Electronic Weapons (“Task Force”) in October 2008 to assess issues of current and critical importance to residents of Maryland and to provide policymakers with concrete judgments and recommendations for best practices regarding the use of Electronic Control Weapons (“ECWs”) within the State of Maryland. With members diverse in backgrounds and perspectives, members of the Task Force endeavored to reach a meaningful consensus on policy through private and nonpartisan deliberations. The Task Force is independent of the Attorney General and is solely responsible for the content of this report. The Task Force unanimously endorses the general policy thrust and judgments reached by the group with no dissenting opinions.

The Task Force was convened in November 2008 and its members worked diligently to fulfill the Task Force’s charge. The Chair of the Task Force is Michael Higginbotham, Professor of Law at the University of Baltimore, and the Vice-Chair of the Task Force is Byron Warnken, Associate Professor of Law at the University of Baltimore. Representing Attorney General Gansler on the Task Force is Carl Snowden, the Director for Civil Rights in the Maryland Office of the Attorney General. In addition, there are twelve other members of the Task Force, including active members of Maryland’s law enforcement community and civil rights organizations.² They are:

- Donald W. Alves, M.D., M.S., FACEP, Attending Faculty, Emergency Medicine, Johns Hopkins School of Medicine; Medical Director, Maryland State Police;
- Cindy Boersma, Legislative Director, ACLU of Maryland;
- Carol A. Crawford, First Assistant State’s Attorney, Office of the State’s Attorney for Montgomery County, Maryland;
- Cary J. Hansel, III, Attorney, Joseph, Greenwald & Laake, P.A.;
- Scott M. Hammack, Attorney, O’Melveny & Myers LLP;
- Christy E. Lopez, Attorney, Independent Assessment & Monitoring, LLP;
- James Johnson, Chief of Police, Baltimore County Police Department;
- George K. McKinney, United States Marshal (Retired), Baltimore, Maryland;
- Ken Meekins, Chief of Police, Town of Hampstead Police Department;
- Carl R. Pelton, B.S., NREMT-P, UMBC Graduate Student, Emergency Health Services; Consulting Paramedic and Law Enforcement;
- Vernon H. Ricks Jr., State Chair on Law Enforcement, NAACP of Maryland; and
- Mark Warren, Major, Baltimore County Police Department.

This report of the Task Force makes recommendations to Maryland law enforcement agencies and to elected officials. Each recommendation must be evaluated independently to determine its appropriate application to a particular agency.

² Members’ affiliations are listed for identification purposes only and do not imply institutional endorsement.

While some of the recommendations should apply to all agencies, others may be more appropriately assessed on an agency-by-agency basis.

It is important at the outset to say that the Task Force recognizes that there are many constituencies that have an interest in the subject matter of this report, including active law enforcement personnel, members of civil rights organizations, segments of the medical and legal communities, individuals shocked by ECWs, and those civilians who have interacted or may interact in the future with law enforcement officers, among others. Relevant considerations regarding ECW use are not limited solely to the spheres of science, policy, community concerns, or law enforcement desires. Rather, it is important to identify the common ground shared by all of the various stakeholders and to ensure the Task Force's recommendations reflect those commonalities. The Task Force has endeavored to properly balance the legitimate concerns that all interested parties have expressed. Because of the many interests at stake, it was not easy for the Task Force to arrive at a consensus. Yet at all times the Task Force has strived to maintain an independent, inclusive, and objective process. This goal of balance has been considered throughout the process, and the Task Force hopes it is reflected in these recommendations.

Beginning in November 2008, the Task Force convened twice per month. The first two meetings were devoted to selecting, vetting, and confirming members. The Chair and Vice-Chair strove to make certain that the Task Force membership not only was diverse in terms of race and gender, but also reflected constituencies that had previously indicated interest or concern regarding the use of ECWs, such as active law enforcement personnel and civil rights organizations. The Chair and Vice-Chair also determined that the Task Force needed members with medical and legal expertise to address areas of medicine and law that might arise during the investigation and preparation of this report.

The next six meetings in January, February, and March of 2009 focused on identifying and gathering information relevant to the use and deployment of ECWs. Literature was surveyed and presentations were made by TASER International, Inc. and the Baltimore County Police Department. The presentations included demonstrations of ECWs.

In April, the Task Force held two public hearings. The Task Force sent more than 1,000 invitations to elected officials, law enforcement personnel, civil rights advocates, academics, educators, and manufacturers of ECWs. Additionally, the hearings were announced on several radio stations and on the Attorney General's website. All persons who expressed an interest in attending or testifying at the hearings were permitted to do so.

The first public hearing took place on April 23, 2009, at the Parks and Recreation Building, 6600 Kenilworth Avenue, Riverdale, Maryland 20737, and consisted of two separate panels. The first was composed of active law enforcement personnel and included: Sergeant Angelo Giafes, Elkton Police Department; Captain Alan Goldberg, Montgomery County Police Department; Captain Kenneth Hasenei, Department of

Maryland State Police; Police Officer III Joan Logan, Montgomery County Police Department; Chief William McMahon, Howard County Department of Police; and Richard Speake, Training Coordinator, Anne Arundel County Sheriff's Office.

The second panel consisted of civil rights advocates and included: Terry Bohrer, Mental Health Association of Maryland; Mike Mage, ACLU of Montgomery County; Roger Copeland, Frederick County NAACP; Elbridge James, Montgomery County NAACP; and June Dillard, Prince George's County NAACP.

The second public hearing was conducted on April 30, 2009, at the Angelos Law Center Building at the University of Baltimore, 1420 North Charles Street, Baltimore, Maryland 21201, and consisted of four separate panels. The first panel was composed of elected officials and included: Senator Delores Kelly, Maryland State Senate; Reuben Collins, Charles County Commission; Edith Patterson, Charles County Commission; Judy Cooper, Charles County Commission; and Delegate Talmadge Branch, Maryland General Assembly. The second panel consisted of active law enforcement personnel and included: Chief Deputy Douglas Dodd, Worcester County Sheriff's Office; 1st Sergeant Jason Pulliam, Maryland Transportation Authority Police Department; 1st Sergeant Timothy Eikenberg, Maryland Transportation Authority Police Department; Police Officer II Brian Brummitt, Maryland Transportation Authority Police Department; Commissioner Frederick H. Bealefeld, III, Baltimore City Police Department; and Chief Bernadette DiPino, Ocean City Police Department. The third panel was composed of civil rights advocates and included: Guy Djoken, Frederick County NAACP; Barry Kissing, Frederick County NAACP; Coleman Bazelon, ACLU of Maryland; and Mark Shmueli, Law Office of Mark Shmueli. Peter Holran, a representative of TASER International, Inc., testified for the fourth panel.

The May meeting of the Task Force focused on medical and racial aspects of ECW discharges. The meeting included a presentation by Dr. Mary Ripple, the Deputy Chief Medical Examiner for the State of Maryland. The Task Force also discussed concerns that minorities are disproportionately victims of ECW discharges by law enforcement personnel. Based upon this discussion, the Task Force requested ECW usage data from Maryland law enforcement agencies.

During the months of June and July 2009, the Task Force formed a drafting subcommittee that was tasked with proposing recommendations to the full Task Force. Once the full Task Force reached a consensus on these recommendations during meetings in September and October, the recommendations served as the foundation of this report. The drafting subcommittee then began to draft the report based on the agreed upon recommendations. In November and December, the Task Force met on a number of occasions to debate and clarify difficult issues and to finalize the report.

III. Background

Over 14,200 law enforcement agencies in over 40 countries deploy ECWs.³ All told, over 406,000 ECWs have been sold to law enforcement agencies and over 196,000 have been sold to civilians.⁴ A recent survey of Maryland law enforcement agencies found that the use of ECWs is similarly widespread in Maryland.⁵ Of the 32 agencies that responded to the survey, 24 use ECWs.⁶

The growing availability of ECWs has led to countless examples of ECWs being used in lieu of lethal force to safely subdue violent individuals with no resulting significant injuries. Far less often, an individual has died or suffered serious injuries after being shocked by an ECW. One medical study quantified the rate of serious injuries associated with ECW use at 0.3%.⁷ Deaths are even less frequent. An Amnesty International report identified approximately 350 deaths that occurred “proximate” to the use of ECWs,⁸ which results in a rate of death of less than 0.05%.⁹ In discussing deaths following ECW use, the Task Force did not determine that the medical community has concluded that the ECW’s electrical impulse causes a lethal

³ See TASER Press Kit, available at [http://www.taser.com/company/pressroom/Documents/TASER Press Kit 06 11 09.pdf](http://www.taser.com/company/pressroom/Documents/TASER_Press_Kit_06_11_09.pdf) (hereinafter “TASER Press Kit”).

⁴ *Id.*

⁵ The ACLU of Maryland conducted the survey in conjunction with its role on this Task Force. The survey sought information from law enforcement agencies in each of Maryland’s counties as well as some of Maryland’s larger municipal jurisdictions. Thirty-two jurisdictions responded to the survey. See Appendix C.

⁶ The following jurisdictions reported that they do not use ECWs: Annapolis Police Department; Anne Arundel Police Department; Baltimore City Schools Police Department; Baltimore County Sheriff’s Office; Carroll County Sheriff’s Office; Kent County Sheriff’s Office; Talbot County Sheriff’s Office; and the University of Maryland at College Park Police Department. See Appendix C.

⁷ William Bozeman et al., “Safety and Injury Profile of Conducted Electrical Weapons Used by Law Enforcement Officers Against Criminal Suspects,” [Multicenter study] 53 *Annals Emergency Med.* 480, Apr. 2009, available at <http://download.journals.elsevierhealth.com/pdfs/journals/0196-0644/PIIS0196064408020611.pdf> (hereinafter “Bozeman Study”). The Bozeman Study found the rate of minor injuries was 21.6%. The study defined minor injuries to include “superficial puncture wounds,” contusions, lacerations, “superficial burn marks, a finger fracture, a nasal fracture, a case of epistaxis, and a chipped tooth.” *Id.*

⁸ Amnesty Int’l, “Less Than Lethal’?, The Use of Stun Weapons in US Law Enforcement,” p. 27, Dec. 2008 (hereinafter “Amnesty Int’l Report”). The Amnesty International report did not purport to find a causal relationship between the deaths and the ECW discharge, a fact that many have pointed to in arguing that the report overestimates the number of deaths actually caused by ECWs. Others have suggested that the Amnesty International report may have underestimated the number of deaths associated with ECWs. See <http://truthnottasers.blogspot.com/2008/04/what-follows-are-names-where-known.html> (listing 459 people “who died after they were tasered”). Simply put, the best available figures may understate the risk of ECW exposure in the field by including subjects shocked in sterile and controlled settings, but it may overstate the incidence of ECW-caused death by including deaths that are merely proximate to and not unequivocally caused by an ECW. There appear to be valid quarrels on both sides with these data. Nevertheless, these data are the best currently-available estimates of the incidence of death from ECW discharge.

⁹ The rate of death was calculated comparing the number of “proximate” deaths identified by Amnesty International to the approximately 660,000 times an ECW has been discharged in the field. See TASER Press Kit, *supra* note 3, p. 6. If the approximately 880,000 volunteer exposures are included, the rate of death falls even further to 0.02%. *Id.* Using the higher estimate of 459 deaths yields a rate of death of .07% (field discharges) or 0.03% (including training discharges).

arrhythmia. However, the Task Force did find sufficient consensus that secondary factors from the restraint and incapacitation caused by an ECW (e.g., a fall or stress caused by being shocked) may cause serious injury or death.

While instances of death or serious injury following ECW use are rare, such incidents nonetheless have given rise to concerns that the risks associated with ECWs are not fully appreciated by those who use them. Every well-trained officer understands that other force options, such as batons, OC spray, or physical strikes, have the potential to kill or seriously injure a subject. However, because ECWs have been widely-described as “a safer alternative to other uses of force,”¹⁰ not all law enforcement officers and agencies fully understand the potential risks associated with using an ECW, nor the circumstances that exacerbate those risks.¹¹

Furthermore, when ECW-proximate deaths have occurred, they tend to receive a high level of attention, and may give rise to community concerns and strain law enforcement-community relations. For example, on November 18, 2007, Jarrell Gray, a young African-American man, died after being shocked with an ECW during an altercation with a Frederick County Sheriff's Deputy.¹² The deputy responded to a report of an on-going fight between several males. When the deputy and other law enforcement personnel arrived at approximately 5:00 a.m. at the parking lot of a townhouse complex in Frederick, Maryland, they found four males, including Gray, engaged in a fight. After trying unsuccessfully to break up the fight with verbal commands for the suspects to raise their hands, the deputy discharged an ECW on Gray. When the first discharge failed to result in Gray's compliance with verbal commands to raise his hands, the deputy discharged the ECW on Gray a second time. Each discharge lasted five seconds with twenty-three seconds lapsing between the first and second discharges. After the second discharge, Gray fell to the ground. Medical

¹⁰ See About TASER International, <http://www.taser.com/company/Pages/AboutTASER.aspx>.

¹¹ Inquiries by other entities have reached findings consistent with the Task Force's finding that many law enforcement agencies do not sufficiently prepare their officers for the potential risks of ECWs. A recent report by the American Medical Association found that “appropriate training and supervision of ECW use is lacking in some jurisdictions.” American Medical Association, Council on Science and Public Health, “Use of Tasers by Law Enforcement Agencies,” CSAPH Rep. 6-A-09, p. 9, June 2009, available at http://www.policeone.com/policeone/data/pdfs/taser_eed_resolution.pdf (hereinafter “AMA Report”). There are many incidents indicating that the potential dangers of ECWs are not fully understood. For example, correctional officers in Florida recently discharged ECWs in drive-stun mode against their own children in three separate state prisons as part of “Take Our Daughters and Sons to Work Day.” Meg Laughlin, “Corrections Sergeant Shocks Kids with Stun Gun During Prison Visit,” St. Petersburg Times, May 2, 2009, available at <http://www.tampabay.com/news/publicsafety/article997379.ece>. In another incident, police used an ECW to force a man to comply with a court order to provide a DNA sample. Rick Pfeiffer, “TASER Use to Obtain DNA Not Unconstitutional,” Niagara Gazette, June 4, 2009, available at http://www.niagara-gazette.com/breakingnews/local_story_154132251.html. Many officers may believe that they understand the impact of ECW discharge because they have had an ECW discharged against them during ECW training. As noted in Part V of this report, this training can be misleading.

¹² The facts of this incident are taken from Steve Lash, “Maryland Task Force Looks at Taming the Taser,” Daily Record (Baltimore), May 4, 2009; Keith L. Martin, “Taser Probe Nears End, But Doubt Lingers,” Gazette (Maryland), May 15, 2008, available at http://www.gazette.net/stories/051508/walknew173737_32356.shtml; and “Maryland Man Dies After Being Tasered,” NBC4 Online News, Nov. 19, 2007, available at [http://www.officer.com/web/online/Careers-and-Recruitment/Maryland-Man-Dies-After-Being-Tasered/12\\$38952](http://www.officer.com/web/online/Careers-and-Recruitment/Maryland-Man-Dies-After-Being-Tasered/12$38952).

aid was administered immediately but Gray did not respond. After being taken by ambulance to Frederick Memorial Hospital, Gray was pronounced dead three hours later.

The Maryland Office of the Chief Medical Examiner concluded that the cause of Gray's death was "[s]udden death associated with restraint and alcohol intoxication."¹³ Although the only method of restraint specifically identified in the autopsy was "an electronic control device (TASER)," the Medical Examiner did not specifically identify the ECW as a cause of or as a contributing factor to Gray's death.¹⁴ Rather, the Medical Examiner concluded that "[t]he temporal relationship of the TASER deployment associated with alcohol intoxication and the interaction with the natural anatomic deviations to cause the sudden death of Mr. Gray is not clearly understood. Therefore, the manner of death is UNDETERMINED."¹⁵

Gray was 20-years old and deaf in one ear. In response to the initiation of a grand jury investigation, the deputy's attorney, Daniel Karp, indicated that "no reasonable well-trained officer would have known that using [an ECW] under these circumstances could have resulted in serious injury or death."¹⁶ Guy Djoken, President of the Frederick County Branch of the Maryland NAACP, indicated that Gray's death demonstrates the need for a further examination into ECW use by law enforcement officers as well as the safety of the device.¹⁷ On May 9, 2008, the grand jury investigating the case ruled that the deputy, in attempting to arrest Gray, was justified in using an ECW. Civil litigation is pending.¹⁸

¹³ See Office of the Chief Medical Examiner, State of Maryland, Post Mortem Examination, Case No. 07-8927, Apr. 23, 2008.

¹⁴ *Id.*

¹⁵ *Id.* In some of the other Maryland deaths proximate to ECW use, the Maryland Medical Examiner has found that the method of restraint was a factor that contributed to the death. An ECW was one of the restraints used, but was not singled out as a contributing factor. Further study, including review of the autopsy reports, is necessary in order to draw any meaningful conclusions from these facts, however. Further research into this area is warranted by the fact that the Task Force is concerned that, in some states, although not in Maryland, TASER International has sued medical examiners in connection with findings that its products were the cause of death. See Robert Anglen, "Judge Rules for Taser in Cause-of-Death Decisions," Arizona Republic, May, 2, 2008, available at <http://www.azcentral.com/news/articles/2008/05/02/20080502taser0503.html>. The National Association of Medical Examiners has taken the position that these suits, are "dangerously close to intimidation," and that the manufacturer is, "attempting to send a message to medical examiners that if they elect to make that determination they may face a civil suit." Adrian Humphreys, "Taser Win in Court Puts Chill on Doctors," The National Post, May 7, 2008, available at <http://www.nationalpost.com/news/story.html?id=499151> (quoting Jeff Jentzen, president of the National Association of Medical Examiners). If medical inquiry anywhere is quashed, it impacts decision making regarding ECWs here in Maryland, and is therefore a concern of this Task Force.

¹⁶ Steve Lash, "Maryland Task Force Looks At Taming The Taser," Daily Record (Baltimore), May 4, 2009.

¹⁷ See *id.*

¹⁸ On July 17, 2009, a Federal District Court denied the deputy and county commissioners' motion for summary judgment. An appeal of that ruling is currently pending. See *Gray v. Torres*, 2009 U.S. Dist. LEXIS 61994 (D. Md. July 17, 2009).

Mr. Gray is one of nine individuals in Maryland who have died after being shocked by an ECW since 2004.¹⁹ Incidents similar to the death of Mr. Gray inspired calls for more consistent ECW policies and training, and were the impetus for the authorization of this Task Force by the Attorney General. The Task Force reviewed Maryland law enforcement agencies' ECW policies and found that ECW training, use, and monitoring vary widely in many respects. While the Task Force recognizes that agency approaches to ECWs may appropriately vary in some respects because of the size and type of the agency, regardless of the particular approach an agency takes, the use of ECWs should be respectful of civil rights and as safe and effective as possible. With this in mind, and in accord with the Attorney General's mandate, the Task Force has developed recommendations for ECW best practices that should be implemented in law enforcement agencies throughout Maryland.²⁰

The Task Force's recommendations reflect a belief that, when used appropriately with a full understanding of their risks, ECWs can be a beneficial law enforcement tool that can effectively resolve situations with fewer injuries to law enforcement officers and civilians alike. At the same time, the Task Force's recommendations reflect the recognition by law enforcement officials and others appearing before the Task Force that the use of ECWs poses serious risks to suspects, law enforcement agencies, and the communities they serve. This risk is exacerbated when ECWs are used improperly or proximate to serious injury or death.

The Task Force's recommendations, listed at the end of this report and explained below, are presented as guidance and best practices to law enforcement agencies to assist them in their decision to reject or adopt the use of ECWs and, if they do elect to use ECWs, to assist them in maximizing benefits while avoiding potential negative consequences.

¹⁹ The other individuals are: Dwight Madison (6/13/09); Thomas Campbell (8/18/07); Marcus D. Skinner (5/26/07); Terrill Heath (5/14/07); Uywanda Peterson (4/23/07); Ryan Lee Meyers (3/16/07); Theodore Rosenberry (3/24/06); and Eric Wolle (4/27/04). See "Taser Inmate Dies in Hospital," *The Washington Times*, June 15, 2009 (Madison); Luke Broadwater, "Third Person Dies After Police Taser Strike," *Baltimore Examiner*, Aug. 23, 2007 (Campbell); Ruben Castaneda, "Tasers Used on Bound Suspect: Sources Say Man Was Shocked Twice Before He Died," *Washington Post*, May 31, 2007 (Skinner); Derek Valcourt, "Man Dies After Police Officer Uses Taser on Him," *WJZ CBS News*, May 15, 2007 (Heath); Derek Valcourt, "Witnesses Contradict Police in Taser Death," *WJZ CBS News*, Apr. 27, 2007 (Peterson); Adam May, "Man's Death Prompts Call for Police Taser Review," *WJZ CBS News*, May 20, 2007 (Meyers); Pepper Ballard, "Doctors Rule Heart Problem, Cocaine Cause Man's Death," *The (Hagerstown) Herald-Mail*, April 27, 2006 (Rosenberry); David Snyder, "Md. Family Grieves for Mentally Ill Man: Schizophrenic Died After Being Subdued by Officers; No Wrongdoing Found," *Washington Post*, June 26, 2004 (Wolle).

²⁰ While this report was drafted primarily with police departments' and sheriffs' offices' field operations in mind, the recommendations and their reasoning generally apply to corrections departments and the detention components of sheriffs' departments.

IV. Planning and Implementation

The Task Force's review of ECW use by law enforcement agencies in Maryland indicates that the success of adopting these weapons as a use-of-force option—in terms of injury and complaint reduction, reduction of overall uses of force, and a strengthening of police-community relationships—depends in significant part on whether the law enforcement agency has carefully researched and evaluated the impact of using ECWs, and whether it has involved the community in this process.

The Task Force found that a number of factors must be carefully considered before a law enforcement agency decides whether to acquire ECWs.

Working with Internal and Community Stakeholders

Generally, law enforcement agencies with a history of forging positive relationships with the larger community can expect less tension surrounding ECW use.²¹ A law enforcement agency that works in partnership with the community it serves will have less mistrust over the decision to use ECWs. This trust is earned by thorough training, transparency, strict oversight, accountability, and the implementation of solid policies. The process of considering whether to implement ECWs can benefit from a close police-community partnership, and can help strengthen this partnership.

The more successful ECW programs seek the involvement of a broad range of community stakeholders (*e.g.*, civil rights and mental health advocacy groups, medical professionals, lawmakers, and other interested persons and groups) in the decision-making process from the outset. This approach helps ensure community concerns are understood and addressed in deciding how to implement an ECW program and provides guidance on the safety and accountability mechanisms appropriate for the community in which the program operates.²²

²¹ Witnesses at Task Force hearings reported that the NAACP responded favorably to the Howard County Department of Police's decision to use ECWs after considerable efforts by the Police Department to work with the community on this issue. Testimony of Chief William J. McMahon, Howard County Department of Police, Apr. 23, 2009; Testimony of Terry Bohrer, Mental Health Association of Maryland, Apr. 23, 2009. In contrast, witnesses testified that the death of a man after an ECW was discharged against him by Frederick County Police exacerbated an already tension-filled relationship between the community and this police department. Testimony of June Dillard, Prince George's County NAACP, Apr. 23, 2009; Testimony of Guy Djoken, Frederick County NAACP, Apr. 30, 2009.

²² For example, the Howard County Department of Police reported to the Task Force the planning process they undertook before deciding to acquire ECWs. The department consulted with their local NAACP branch and other community organizations. They responded directly to community representatives regarding their expressed concerns. They also explained to representatives of the community why they wanted to acquire ECWs, how ECWs would be incorporated into their use-of-force practices, and the oversight that would be provided. Finally, they started with a pilot program and included the community in an evaluation of that program before expanding the number of officers issued ECWs. As a result, the department reports that they have the support of their community leaders for their ECW program. Testimony of Chief William J. McMahon, Howard County Department of Police, Apr. 23, 2009. As another example, the Montgomery County Police Department explained to the Task Force that through their work with the mental health advocacy community, the department incorporated model crisis

Law enforcement coordination with representatives of racial and ethnic minority groups is critical to ensure that agencies recognize these groups' concerns and can respond effectively. The Task Force did not find that ECWs are, in general, discharged against African-Americans or Latinos with any discriminatory intent or animus. However, the Task Force did not assess whether African-Americans or Latinos have ECWs discharged against them at a rate inconsistent with their respective arrest rates. A lack of complete data precluded such analyses. Nonetheless, the perception among African-Americans and Latinos that the use of ECWs has a disproportionately high impact on them compared to non-Latino white Marylanders is not without basis. As data provided by 23 Maryland law enforcement agencies to the Task Force confirms, African-Americans and Latinos are over-represented in the rate at which they are shocked with ECWs, compared to their percentage of the population. These data show that 45% of individuals who were shocked by ECWs were African-American, despite the fact that African-Americans make up only 21% of the population of those jurisdictions. Similarly, at least one jurisdiction reports that 36% of those shocked by ECWs were Latino compared to their 20% representation in the general population in that jurisdiction. The language barriers that exist with some communities further underscore the importance of identifying and involving relevant community representatives in the decision about whether to add ECWs and how to plan for their implementation if the jurisdiction decides to move forward.

Coordination with mental health advocates is also critical. In testimony to the Task Force, mental health advocacy organizations were united in urging law enforcement agencies to consult with local mental health experts and advocates before deciding to acquire ECWs. Law enforcement officers are increasingly the first responders to situations involving a mental health crisis where confrontational or dangerous behavior indicates a need for rapid medical attention and where a typical "command and control" approach can dangerously escalate the situation. ECWs can be an effective alternative to lethal force in situations involving persons in mental health crisis.²³ However, the introduction of ECWs without an adequate training or policy foundation can result in their overuse in situations involving persons in mental health crisis. This is particularly problematic since this population may be at a heightened risk for serious injury or death after an ECW discharge. Law enforcement agencies should work with mental health advocates to implement best practices for identifying and effectively responding to these situations. Mental health organizations should also educate law enforcement agencies about the particular population in the agency's area, providing information that may be important to the agency's evaluation about the impact ECWs may have in its community.

intervention/de-escalation techniques into their ECW training and certification. Testimony of Joan Logan, Police Officer III, Montgomery County Police Department, Apr. 23, 2009.

²³ See "Taser Tactical Conference," Law & Order Magazine, Oct. 2007, available at <http://www.hendonpub.com/resources/articlearchive/details.aspx?ID=4132> (hereinafter "TASER Tactical Conference") (identifying 23 documented incidents involving mentally disturbed individuals with edged weapons where despite lethal force being justified, an officer used an ECW instead, and as a result, none of these 23 incidents resulted in an injury).

Other community stakeholders who should be involved beginning at the planning stage are medical professionals and public officials. Medical professionals, in particular, can help develop protocols for post-ECW medical care, and help coordinate with area emergency medical services.

Law enforcement agencies should work closely with school officials and parents to develop policies and protocols concerning whether and how ECWs will be used by law enforcement personnel specifically assigned to schools. It should not be presumed or required that officers assigned to schools will carry ECWs simply because other officers in the department carry ECWs. Rather, communities, schools, and law enforcement should decide together whether officers assigned to schools will carry ECWs while on school assignment. For example, in 2005, the St. Paul (MN) Police Department and School District discussed limiting when an ECW can be used against a student in school. The school board held a public meeting in which the police department participated. Following the meeting, the school board voted to allow ECWs to be deployed only “when the officers are intervening in circumstances that could result in substantial or great bodily harm or circumstances that would permit the use of deadly force by a police officer.”²⁴

ECW vendors can be consulted and may provide helpful information during the law enforcement and community stakeholder decision making process. However, officials should remember that ECW vendors might not fully understand or appreciate the needs and values of the particular community when making recommendations about whether and how an ECW program should be implemented or modified.

An agency considering whether and how to implement ECWs should include a broad group of internal stakeholders in the decision-making process to ensure that all perspectives can be considered. In addition to the chief law enforcement executive, the planning team should include personnel responsible for the following functions:

- Operations Command;
- Planning;
- Training;
- Legal;
- Professional Standards;
- Media Relations;
- Budget;
- EMS; and
- Detention/Corrections.

The internal stakeholder team’s purpose is to provide a comprehensive and documented implementation plan that includes goals and objectives, timelines, performance measures, evaluation processes, etc., related to ECW use.

²⁴ Paul Strong, “Training Bulletin, Use of Taser in the Schools,” St. Paul Police Department, Dec. 20, 2005; see also Donna Leinwand, “Schools Restrict Use of Tasers,” USA Today, June 3, 2005.

Coordination with internal and community stakeholders should occur not only during the planning process, but also following implementation if the jurisdiction elects to use ECWs. When the program is about to be launched, the agency should share the program with relevant stakeholders, explaining how the policy addresses issues related to weapon use, medical aftercare, case prosecution, use-of-force reviews, etc. Relevant stakeholders may include:

- Agency supervisors and commanders;
- Professional standards (*i.e.*, Internal Affairs) personnel;
- Emergency responders and hospital personnel;
- Public information personnel and media representatives;
- Prosecutors and court personnel;
- Booking and detention personnel;
- Community groups; and
- Advocacy groups.

Even after implementation of an ECW program, as technology and procedures change, agencies should share the updated information with these stakeholders. This will allow the stakeholders to understand the implications related to ECW use changes. It will also provide an open line of communication with those who are already supportive of the ECW program. Including community stakeholders in the agency's ECW planning, training and education programs can help create social capital for the agency within the community, and strengthen the police-community partnership.

Planning for Policies, Training, and Accountability Systems that Address the Unique Benefits and Challenges of ECWs

In deciding whether to add ECWs as a force option, the agency and community must recognize that the inclusion of ECWs will have an impact on an agency's use-of-force program beyond simply adding a new force option. Agencies and communities that fully consider the many facets of adding ECWs will be in a better position to determine if the tool is right for their community. If the decision is made to issue ECWs, developing appropriate policies and training specific to ECWs, as well as implementing systems for comprehensive and reliable reporting, investigation, and data collection and analysis, will help maximize the benefits of ECWs, while minimizing the potential for negative consequences.

The Task Force has included in this report detailed guidance on appropriate agency policies, training, investigation, and oversight systems. In this section, the report discusses some of the unique benefits and challenges of ECWs that agencies should consider as they begin to plan development of these policies and systems.

Law enforcement agencies view ECWs as uniquely versatile and adaptable because they are useful against a wide variety of threat levels and types. ECWs provide law enforcement officers with an option to attempt verbal de-escalation techniques while maintaining a safe distance. ECWs are easier to control, and therefore limit the amount of force used, compared to some other intermediate-force

weapons, such as batons. Serialized identification tags, data downloads, and the capability for audio and video recording facilitate force documentation and accountability. The implementation of ECWs also has been associated with a decrease in law enforcement use-of-force complaints.²⁵ Law enforcement officers report that, at times, just the display of an ECW is enough to gain compliance.²⁶

Perhaps the most important basis for law enforcement agencies' support of ECW use is the belief that ECWs can reduce serious injuries to both officers and suspects. ECWs appear less likely than batons (both fixed and collapsible), fists, and similar strike weapons to break bones or cause deep tissue injuries. By allowing officers to use force without fighting or wrestling suspects, injuries to officers and suspects alike potentially can be decreased.²⁷ Although the law enforcement community does not consider ECWs an adequate substitute for lethal force, in certain situations, with appropriate cover, officers may have the tactical opportunity to de-escalate a lethal situation through ECW use rather than with a firearm.²⁸ ECW policies and training should reflect these unique benefits of ECWs. Agencies should examine whether, if ECWs are added, other use-of-force tools may need to be added, modified, or dropped from their use-of-force program altogether.

²⁵ In the first six months after TASER deployment, one jurisdiction experienced a 25% drop in use-of-force complaints. Columbus (OH) Police Intra-Divisional Correspondence, "Six Month TASER Study Executive Summary," July 5, 2005, available at http://www.taser.com/research/statistics/Documents/Columbus_TASER_Exec_Summary.pdf (hereinafter "Columbus TASER Study"). Another jurisdiction experienced a 32% reduction in use-of-force complaints after TASER deployment. Austin (TX) Police Department, "City Policy on TASER Use," 2005 (hereinafter "Austin City Policy"), available at <http://www.ci.austin.tx.us/news/2005/downloads/taserfinal.pdf>.

²⁶ See, e.g., Russ Mitchell, "Lawson Gives City Council Taser Update," Spencer Iowa Daily Reporter, Feb. 7, 2009, available at <http://www.spencedailyreporter.com/story/1499993.html> ("Since the program began, officers have turned on the weapon and pointed it at a subject 36 times. In 26 instances, the shining red guide dot was enough to get the citizen to comply.").

²⁷ In the first full year after the Cincinnati (OH) Police Department began using ECWs, the department reported that injuries to officers decreased 56%, and injuries to suspects dropped 35%. See "Cincinnati Police Department Report to the Community," Fall 2005, pp. 4-5, available at http://www.cincinnati-oh.gov/police/downloads/police_pdf13181.pdf. Similarly, in the first six months after TASERs were first deployed in Columbus, Ohio, that department reported that officer injuries declined 23.4% and suspect injuries declined 24.1%. See Columbus TASER Study, *supra* note 25. In Austin, TX, the police department reported that after TASER deployment, overall officer injuries decreased 53%, with serious injuries to officers reduced from 13 to 0, and serious injuries to suspects decreased 80%. Austin City Policy, *supra* note 25.

²⁸ See Madison (WI) Police Department, "TASER Report," 2005, available at http://www.cityofmadison.com/police/documents/MPD_Taser_Report.pdf (citing six cases where the ECW was used as an alternative to lethal force); Keith Upchurch, "TASER Use Aids Police," Herald Sun, Aug. 19, 2009, available at http://www.heraldsun.com/pages/full_story/push?article-TASER+use+aids+police&id=3247254-TASER+use+aids+police&instance=main_article (noting the Durham (NC) Police Department cited four incidents where officers had justified use of lethal force but used the TASER instead); TASER Tactical Conference, *supra* note 23 (citing 23 documented cases where lethal force would have been justified but ECWs were used instead and there were no injuries); City of Houston, "Conducted Energy Device Program Performance Audit Part I-Detailed Background and Audit Methodology," p. 2, 2009, available at http://www.houstontx.gov/controller/audit/Conducted_Energy_Device_Program_9.8.2008/Conducted_Energy_Device_Program_Performance_Audit.htm (noting 53 occasions where officers used an ECW as alternative to deadly force even though they were not required to do so).

It is equally important that ECW policies and training reflect the potential risks involved in issuing ECWs. Much of the tension between communities and law enforcement agencies' ECW use involves the community perception that ECWs are used too frequently and to counter low levels of resistance. Agencies should recognize that this perception has some basis in reality.²⁹ Even where any resulting injury is slight or where no injury occurs, the sight of a law enforcement officer discharging a weapon that knocks an individual to the ground and causes him or her obvious pain can be difficult for those who witness it to understand and, sometimes, difficult for a law enforcement agency to explain. The subsequent recording of these incidents by observers and posting on the World Wide Web can cause untold problems for the law enforcement agency and the community.

Another unique challenge of ECWs is that they can, in rare instances, be lethal, even if there was no intent to use deadly force. When a death follows an ECW discharge, especially where the use of the ECW is seen as undeserved or unnecessary, the damage to the law enforcement agency's reputation in the community can be difficult to overcome.

The creation of strong partnerships during the implementation process can help avoid this tension. But it is also critical that use-of-force policies and training address the potential for overuse and educate officers about the risk of serious injury or death following ECW discharge, as well as what officers can do to decrease that potential for a negative outcome. In particular, law enforcement agencies should review or develop de-escalation practices and policies to determine whether they are current and effective. Regardless of whether it decides to use ECWs, an agency that does not have such a crisis-intervention program should consider putting such a program in place, especially if it ultimately elects to use ECWs.

Cost-Effectiveness

Law enforcement agencies have found that a well-coordinated and properly implemented ECW program, including the training and oversight required to ensure their proper use, can be cost-effective. ECWs can reduce litigation related to serious injuries and officer-involved shooting deaths and can reduce overtime and workers' compensation costs associated with serious injuries from the use of other types of weapons such as long batons and telescoping batons.³⁰ More importantly, ECWs can reduce the incalculable human costs suffered when officers must use deadly force because a less-lethal option is unavailable.

²⁹ As stated by the AMA: "[ECWs] are used too frequently and at lower levels on the use-of-force continuum than indicated." AMA Report, *supra* note 11, p. 9.

³⁰ In 2002, the Granite City (IL) Police Department incurred \$740,000 in workers' compensation costs. After the department began using TASERs in December 2002, it had no workers' compensation costs for all of 2003 and the first nine months of 2004. Correspondence from Granite City (IL) Police Department, Sept. 20, 2004, available at [http://www.taser.com/research/statistics/Documents/Granite Ciy IL Stats 09 04.pdf](http://www.taser.com/research/statistics/Documents/Granite%20City%20IL%20Stats%2009%2004.pdf). The Durham (NC) Police Department's workers' compensation costs dropped from \$657,000 to \$187,000 in the first fiscal year after ECWs were deployed. Keith Upchurch, "TASER Use Aids Police," Herald Sun, Aug. 19, 2009, available at http://www.heraldsun.com/pages/full_story/push?article-TASER+use+aids+police&id=3247254-TASER+use+aids+police&instance=main_article.

Of course, if ECWs are used improperly, or their use results in serious injuries or deaths, ECWs may not represent a cost savings. Thus, an agency must, at the planning stage, ensure that it has the capacity for appropriate training and oversight if it is to realize cost-savings related to ECWs.

In deciding whether ECWs are a cost-effective option, law enforcement agency leadership should consider not only the purchase cost of each ECW, but also the costs of training, supervision, oversight, potential liability, and device maintenance and replacement. The latter cost issue may be particularly important over time if the ECWs either require maintenance or no longer meet the manufacturer's technical specifications. Agencies should keep this in mind as they contract with an ECW vendor.

Selection of Officers To Be Equipped with ECWs

Not all law enforcement personnel should necessarily be permitted to use ECWs. During a pilot period in particular, agencies may benefit from issuing ECWs only to officers they have identified as having developed positive reputations within their communities and having a particularly strong history of good judgment. Any personnel selected to carry ECWs should be required to meet several criteria to ensure the weapon will be used safely and with restraint. Factors that should be considered include the officer's tenure, performance ratings, training background, demonstrated judgment skills, and complaint and disciplinary record, including previous uses of force. Properly selecting which officers will carry ECWs encourages the appropriate and effective use of the weapon.

Pilot Program Evaluation

Agencies may benefit from phasing in use of ECWs.³¹ A program this complex will require a great deal of management oversight. Deploying ECWs in manageable increments gives officers and supervisors the opportunity to obtain real-time experience and training with ECWs with minimized risk. Phased deployment of ECWs to the field via a pilot program will allow the law enforcement agency to get feedback from their officers and community stakeholders who can assist and provide valuable input on the adequacy of the agency's policy and training. The resulting information will enable the law enforcement agency to quickly modify the program and retrain its officers, rather than suspending the program or recalling the weapons. This approach will also show the community that law enforcement is committed to minimizing the use of force and protecting civil rights.

Evaluation of an ECW program should occur throughout and after the pilot phase.³² As a part of the evaluation process, a review of incident reports and medical reports should be accompanied by interviews (or surveys) with both officers and citizens, as well as (again) input from the relevant stakeholders. The agency should

³¹ International Association of Chiefs of Police Executive Brief, "Electro-Muscular Disruption Technology: A Nine-Step Strategy for Effective Deployment," p. 17, 2005 (hereinafter "IACP Executive Brief").

³² *Id.* at pp. 17-18.

determine if the previously established performance measures were met, and make recommendations concerning modification or continuance of the ECW program. A timeline should also be included to ensure that necessary changes are made and that program evaluations are regularly scheduled, even after the program is fully implemented.

V. Training

Recent legislation requires the Maryland Police and Correctional Training Commission (“MPCTC”) to develop guidelines for ECW training and certification. The Task Force encourages the MPCTC to adopt a training curriculum, as well as certification and recertification standards, that conform to the Task Force recommendations contained in this report. This will ensure that uniform, quality training is available to all agencies’ officers, regardless of the size of the agency or ECW program and resources available to it. In addition, if necessary to augment training provided by MPCTC, the Task Force encourages agencies using ECWs to adopt a thorough and detailed training program requiring a high level of proficiency and reflecting the need for restraint and good judgment. This approach to training will prepare officers for appropriate ECW use and facilitate the use of minimal but effective force.

To that end, an ECW training program should not simply be a one-time introduction on the technical operation of the ECW. Rather, the training must be regularly re-evaluated and updated, and must provide officers with regular training and recertification with the weapon. Most importantly, ECW training must teach officers *when* to use an ECW, not just *how*.

In drafting comprehensive recommendations, the Task Force examined many model guidelines, including those put forth by the Police Executive Research Forum (“PERF”)³³ and the International Association of Chiefs of Police (“IACP”).³⁴ This part of the report examines each of the above issues in detail and makes recommendations to guide law enforcement agencies in achieving a thorough and detailed training program.

Program Type and Certification Standards

An agency’s ECW training program should integrate the agency’s overall use-of-force standards.³⁵ While it is necessary that the ECW training program utilize the manufacturers’ training materials for the technical information, these materials alone are insufficient.³⁶ An agency must create its own training program that teaches its use-of-force standards, the proficiency standards of the State and the agency, and any other community-specific concerns.

³³ James Cronin and Joshua Ederheimer, Police Executive Research Forum (“PERF”), “Conducted Energy Devices: Development of Standards for Consistency and Guidance Policy and Training Guidelines for Consideration,” Nov. 2006 (hereinafter “PERF Guidelines”).

³⁴ IACP Executive Brief, *supra* note 31.

³⁵ PERF Guidelines, *supra* note 33, at No. 18.

³⁶ *Id.* at No. 40.

To encourage a high level of expertise, officers assigned an ECW must not only receive initial certification but should also receive, at a minimum, annual recertification.³⁷ To meet the recommended level of high proficiency, initial certification should require several components:

- Written testing;
- Performance-based testing (*i.e.*, pull the trigger, hit a target, etc.);
- Scenario- or judgment-based components, to include simulated physical/mental stress (*i.e.*, running in place then firing a weapon); and
- Other tests and drills (*i.e.*, reloading drills, weapon retention drills, etc.) as required by the agency.³⁸

ECW Exposure During Training

Officer exposure to ECW discharge should be voluntary and not required for certification.³⁹ There are several reasons many training programs currently require officers to be shocked by an ECW during training: to give an officer an idea as to the weapon's effectiveness and limitations; to allow the officer to more credibly articulate and testify as to the need to use an ECW; to encourage officers to show more restraint in the use of the weapon; and to provide a better understanding of what to expect should they be shocked by an ECW; and to articulate why lethal force may be necessary when confronted by a subject with an ECW.

ECW exposure during training is not intended to mimic the experience of ECW use in the field. For example, instead of exposing their officers to a full five-second cycle of an ECW's incapacitation mode via darts (probes) capable of penetrating skin, some agencies use only alligator clips to attach the wires and expose the officers for a shorter duration cycle. Most agencies also make sure that an officer receiving a shock is supported by other officers to avoid a potential fall and resulting injury. Given the controlled environment in which these training shocks are administered, they may create a misleading impression of the risks associated with ECW exposure that undermines other training goals. To prevent this, agencies permitting exposure during training should explain the difference between being shocked during training and in the field so that officers understand that their experience may not be representative of the experience of those who have ECWs discharged against them in the field.⁴⁰

³⁷ *Id.* at Nos. 39 and 41.

³⁸ The Maryland Department of Public Safety and Correctional Services' proposed regulations regarding electronic control devices include similar requirements. See 36-19 Md. Reg. 1468 (Sept. 11, 2009).

³⁹ PERF Guidelines, *supra* note 33, at No. 42.

⁴⁰ The ECW jolt during training frequently is of shorter duration and is not accompanied by the same stressors associated with ECW use in the field. See Merrick Bobb et al., Police Assessment Resource Center, "A Bad Night at Powell Library: The Events of November 14, 2006," p. A2, Aug. 2007, available at http://www.parc.info/client_files/UCLA/UCLA_TASER_Report_August_Final.pdf (hereinafter "UCLA Report") (training burst is a half-second rather than the five second burst received in just one standard ECW cycle used in the field); see also AMA Report, *supra* note 11, p. 5 ("Although [ECW] activation in normal volunteers appears to be very safe, these studies do not sufficiently reproduce the risks of TASER®

There may be some risk of injury in exposing the officers to ECW discharge, but this risk may be reduced if certain proper precautions are taken.⁴¹ Prior to exposure, there should be screening to determine if the officer has a pre-existing medical condition that would prevent participation. In addition, trainers not only need to prevent injuries from secondary falls, but have emergency medical personnel, if necessary, on hand to monitor the participants.

If an agency allows voluntary exposure, it may also want to consider taking that opportunity to conduct a recovery drill where the officer must recover from the shock and utilize other weapons. This is particularly important in jurisdictions where the general public is likely to have access to an ECW.

Training on Resistance Levels and ECWs' Place in Use-of-Force Policies

Officers must be trained to understand when ECW use is appropriate pursuant to the agency's use-of-force policy. As discussed in Part VI below, there is wide variety in how ECWs are incorporated into agencies' use-of-force policies. Regardless of the type of use-of-force policy an agency has, each officer must know where the ECW falls in comparison to other use-of-force options, such as verbal control and control holds; chemical (OC spray) and chemical/kinetic hybrids (pepper ball); strikes (fists, batons, flashlights) and impact weapons (bean bag munitions); and firearms.

Complicating matters is the re-labeling of many of the weapons above as "less-lethal." Previously many of these weapons had been considered "less-than-lethal" or "non-lethal" but as deaths have occurred proximate to their use, the terminology has transitioned to "less-lethal." Regardless of the label used, ECWs are universally considered to be an option above verbal control but below firearms.⁴² Outside of that, there are a variety of opinions about the ECW's perceived location in a use-of-force model. In light of this varying terminology, scenario-based training can be invaluable in providing a practical framework, because officers must be able to show their understanding of the agency's use-of-force model and demonstrate the ability to determine the best method to de-escalate the situation; whether to use physical force or to remain at a distance; whether to use an ECW or an alternate force option; the appropriate ECW mode to use (*i.e.*, display only, red dot compliance, incapacitation

exposure among criminal suspects, in whom coexisting medical and psychiatric conditions, alcohol and drug use, and other factors are often present." The United States Department of Justice ("USDOJ") Civil Rights Division has noted that ECW training courses should be "conducted with the same level of seriousness and professionalism as that of a firearms training course." Letter from USDOJ Civil Rights Division, Special Litigation Section to Orange County Sheriff's Office, Florida, Aug. 20, 2008, p. 15, available at http://www.justice.gov/crt/split/documents/orangecty_ta_itr.pdf (hereinafter "USDOJ Letter").

⁴¹ An Oswego County (NY) Sheriff's Department deputy filed a federal lawsuit against TASER International alleging that he suffered permanent injuries after being shocked by an ECW during a training exercise. See Robert A. Baker, "Oswego County Deputy Says Training-Session Shock from Taser Left Him Disabled, Sues Its Maker," Syracuse City News, May 10, 2009, available at <http://www.syracuse.com/city/index.ssf?/base/news-5/1241945796197090.xml&coll=1>.

⁴² Police Executive Research Foundation, "Critical Issues in Policing Series: Strategies for Resolving Conflict and Minimizing Use of Force," Joshua A. Ederheimer ed., p. 110, Apr. 2007 (hereinafter "PERF: Critical Issues").

mode, or pain-compliance mode); the best weapon to transition to if the ECW is ineffective; and the safest transition method.

When trained to consider other weapons and techniques, officers may be less prone to become over-reliant on ECWs in lieu of considering other potentially more appropriate options. Scenario-based training also gives the officers the opportunity to demonstrate their verbal de-escalation (aka “verbal judo”) skills—a key to de-escalating a situation.

Scenario-based training also allows officers to be trained on how to respond when threatened by a subject with an ECW. Since Maryland allows citizens in some jurisdictions to purchase ECWs, officers are more likely to face this situation. Although deadly force is a legitimate option in that scenario, other mitigating factors may exist. For example, the presence of other officers on the scene may remove the need for deadly force, as might the lack of a cartridge in the civilian’s ECW. Further, deadly force may not be necessary against a civilian using the ECW in the pain compliance mode or if the officer knows that he or she is outside of the maximum range of the ECW cartridge.

Pre-Discharge Weapon Skills

There are many skills needed to effectively use an ECW. Officers trained properly on the following skills are less likely to resort to ECWs precipitously:

- Positioning: Officers should be trained in a variety of shooting positions to include standing, kneeling, prone, and barricade (a key element of cover with ECW use).
- Sighting: Officers should be trained to aim with both the laser dot and sights as a laser may not be functioning properly or it may be difficult to see the laser dot during the daytime.
- Aiming: In the incapacitation mode, aiming for areas of high muscle mass, like the back, promotes weapon effectiveness. Officers should be trained to avoid aiming at the groin area, chest, or head, which puts the eyes, face and neck at risk.⁴³ Further, officers should be trained on proper aiming to avoid unnecessary burns or serious injuries.
- Firing distances: Officers must be trained to fire at optimum distances which increases the potential for effectiveness.⁴⁴ Training at or beyond maximum distances may result in ineffective discharges and unnecessary injuries.
- Weapon draw: Officers should be trained to keep the ECW on the non-firearms side to avoid drawing the firearm by mistake.⁴⁵
- Trigger pull: Officers should be trained to discharge the ECW with both hands, just as they are with firearms.

⁴³ PERF Guidelines, *supra* note 33, at No. 12.

⁴⁴ *Id.* at No. 26.

⁴⁵ *Id.* at No. 25.

- Use of warnings: Officers should be trained to warn fellow officers that they intend to discharge the ECW, not only for their safety, but as a cue to prepare to take the suspect into custody. Further, it lets officers know that the ECW, and not a firearm, is being drawn, which may avoid an unnecessary and tragic firearm discharge by support personnel.⁴⁶

Training on Risk Factors and Aftercare

Agencies should be diligent in updating their policies and training programs as new information and best practices become available. As studies emerge, law enforcement agencies have an obligation to evaluate them and determine their impact on the agency's ECW program.⁴⁷ Because the health effects of ECWs on humans are not yet fully understood, officers must not only be trained with regard to what is known, but should be instructed about the uncertainty and risks involving the use of ECWs.

Due to this uncertainty regarding the effects of ECWs on human health, particularly for some heightened-risk populations, the ability to recognize a suspect's medical condition plays an important role in an officer's decision regarding whether or how to use the ECW, as well as how to handle the suspect post-discharge. While the Task Force recognizes that officers often may be unable to ascertain a suspect's physical or medical condition, officers must be trained to, where feasible, ask the right questions and gather as much information as possible prior to making the decision to discharge an ECW.

Specifically, officers must be trained to consider the following factors that may indicate a subject's heightened risk for serious injury or death, when apparent:⁴⁸

- known heart conditions, including pacemakers;
- old or young age;
- frailty or small stature (*i.e.*, may have thin chest walls);
- pregnancy;
- mental/medical crisis; or
- under the influence of drugs or alcohol.

Officers should be trained in the appropriate response and levels of force to use when these risk factors are presented. The Task Force's recommendations for the appropriate use-of-force policy for responding to persons in populations at heightened risk for serious injury or death are discussed below in Part VI of the report.

In addition to the potential risks outlined above, ECWs carry risks of secondary injuries or death (*e.g.*, from falling, drowning, etc.). That is especially true when the suspect is fleeing or operating a vehicle; restrained in handcuffs; in an elevated position; or in close proximity to water or flammable objects (such as alcohol-based OC spray

⁴⁶ *Id.* at Nos. 28 and 29.

⁴⁷ The still-developing field of knowledge about the effects of ECW use, particularly on certain populations, is discussed below in Parts VI and VIII of this report.

⁴⁸ PERF Guidelines, *supra* note 33, at No. 33.

that may be used by some agencies).⁴⁹ Officers must be trained not only to recognize these risk factors, but to consider alternatives to ECW use when these factors are present.⁵⁰

The situation involving a fleeing suspect warrants particular emphasis in training, due to risks of both secondary injuries and potential onset of “excited delirium.” In some scenarios involving increased risk of secondary injury the ECW may still be effective, assuming the suspect remains fairly stationary. However, law enforcement officers frequently encounter suspects who are moving, which can limit an officer’s ability to use the weapon in a safe and effective manner. For example:

- In a foot pursuit, the suspect will be difficult to target and, if hit, may fall out of the range of the cartridge, effectively rendering the weapon useless.
- If an ECW is used against a suspect driving a vehicle (or riding a motorcycle or bike), the vehicle may go out of control with a great potential to harm the suspect or even innocent bystanders.
- In a vehicle extraction, use of an ECW is difficult and may cause a stationary vehicle to begin moving, with the same risk of injury mentioned above.
- From a moving police vehicle, an officer cannot safely discharge an ECW and control the vehicle, much less be able to safely take the suspect into custody.

Officers should be trained to not use an ECW against a subject who is fleeing unless there are exigent circumstances because of the increased risk of serious injury or death and the potential lack of effectiveness.⁵¹ As with the other heightened risk scenarios where the risk of secondary injury is present, officers should be discouraged from using an ECW unless circumstances justifying the risk of potentially lethal force exist. Officers must also be trained to have a contingency plan in place when they do choose to use an ECW when these risk factors are present. They should be trained not only to attempt to take the suspect into immediate custody to minimize injuries but also to provide immediate medical attention, when appropriate.

Regardless whether the suspect against whom an ECW is discharged is a member of a heightened-risk population, officers must be trained about appropriate aftercare for the suspect.⁵² Part VII of this report includes the Task Force’s recommendations for the assessment, care, and referrals an officer should provide after discharging an ECW.

Training on Response to Communication Barriers

Law enforcement officers must be trained to be aware of and to resolve communication barriers. Many Maryland communities are culturally and linguistically diverse and interactions between police and non-English speaking persons are

⁴⁹ *Id.* at Nos. 9 and 17.

⁵⁰ *Id.* at Nos. 7, 8, and 9.

⁵¹ PERF: Critical Issues, *supra* note 42, p. 120 (“Proximity death cases seems more likely to involve . . . a subject . . . fleeing”); PERF Guidelines, *supra* note 33, at No. 23.

⁵² PERF Guidelines, *supra* note 33, at Nos. 13 and 14.

common. Agencies must understand the specific needs of the community they serve and train their officers, as practical, in language skills necessary to effectively communicate basic information, including commands related to potential weapon discharge. This may reduce not only the number of unnecessary or inappropriate ECW uses, but also problematic uses-of-force in general. Officers should also be trained that deafness, autism, and other disabilities may affect a suspect's ability to understand and comply with instructions. Officers should be trained to recognize that mere non-compliance because of an inability to communicate does not give rise to a threat of imminent physical harm and, as such, does not warrant the use of an ECW or other uses of force.

Simultaneous Use of Weapons, Repeated Discharge of an ECW, and De-escalation after Discharge

Another tactic that should be discussed in training is the simultaneous use of weapons, in general. Officers should be trained to holster one weapon before pulling out another. This will prevent an officer from having an ECW in one hand and a firearm in the other, with potentially fatal results. Similarly, officers should be trained to avoid using multiple ECWs simultaneously, unless there is an articulable reason to do so. Although multiple ECW discharges provide a redundancy should one of them fail, two simultaneous successful discharges are difficult to attain and may provide no more effectiveness than a single ECW discharge. Further, due to insufficient data, it is uncertain whether there are any deleterious health effects from simultaneous ECW discharges.⁵³ For that reason, PERF has recommended that “[n]o more than one officer at a time should activate an [ECW] against a person.”⁵⁴

Once the ECW has been discharged, officers must then take action to de-escalate the situation and take control of the suspect. Training should include the following issues:

- Cycle evaluation: Officers should be trained to quickly evaluate each ECW cycle to determine its level of effectiveness.
- Multiple cycles and cycle length: To minimize the force used and avoid potential injuries officers must be trained to limit not only the number of cycles used, but the length of each cycle.⁵⁵

⁵³ Research in this area is discussed further in Part VIII of this report. TASER International released a Training Bulletin in June 2005, stating, “Repeated, prolonged, and/or continuous exposure(s) to the TASER electrical discharge may cause strong muscle contractions that may impair breathing and respiration, particularly when the probes are placed across the chest or diaphragm. Users should avoid prolonged, extended, uninterrupted discharges or extensive multiple discharges whenever practicable in order to minimize the potential for over-exertion of the subject or potential impairment of full ability to breathe over a protracted period of time [People experiencing “excited delirium”] are at significant and potentially fatal health risks from further prolonged exertion and/or impaired breathing.” TASER Int’l, “Training Bulletin 12.0 Regarding Restraint During TASER System Application,” June 28, 2005, available at <http://www.charlydmiller.com/LIB06/2005JuneTASERIntTrainBulletin.pdf>.

⁵⁴ PERF Guidelines, *supra* note 33, at No. 2.

⁵⁵ *Id.* at No. 3.

- Weapon transition: Officers must be trained to move to another option within the use-of-force continuum after multiple ECW cycles have been ineffective.⁵⁶

To gain quicker control of a suspect, training must combine both ECW use and physical control techniques, with an emphasis on the use of verbal commands. It should also emphasize greater teamwork and multiple-officer scenarios, not only for the purpose of cover, but for evaluating the subject's compliance level. To that end, officers should be trained to attempt to place the suspect in handcuffs as quickly as possible.

An officer should only administer an additional shock after an initial shock if the officer has concluded that the subject still poses an imminent threat of physical harm and other options are not appropriate. Repeated and prolonged discharges should be avoided whenever possible. If the subject has not become compliant after multiple cycles, officers should be trained to consider other use-of-force options (as noted above) to quickly de-escalate the situation and minimize the potential for serious injury.

Other Training Considerations

Officers must be trained on additional areas related to ECW use, including critical issues such as:

- Communication of ECW use to the dispatcher and supervisor prior to and/or immediately after ECW use;
- Reporting and other accountability procedures; and
- Preservation of ECW-related evidence.

VI. Use-of-Force Policies

When Use of an ECW is Justified

The Task Force's review of Maryland law enforcement agencies' use-of-force policies reveals that there is not a uniform approach to authorizing the use of an ECW. Most agencies properly classify ECWs as "less-lethal" devices,⁵⁷ but the standard for when an ECW may be discharged is inconsistent. The most commonly applied standard among the surveyed agencies is to permit ECW use against an individual who either poses a physical threat to the officer or others, or who is "actively resisting" the officer.⁵⁸ The policies generally define "actively resisting" to include actions that fall short of causing an imminent threat of harm, such as "bracing" or "tensing" one's arms

⁵⁶ *Id.* at No. 5.

⁵⁷ While ECWs are not intended to be lethal, they are not non-lethal weapons and so should be appropriately identified as "less-lethal" rather than "less-than-lethal."

⁵⁸ The following agencies that follow that policy include: Anne Arundel County Sheriff's Office, Baltimore City Police Department, Baltimore County Police Department, Bowie Police Department, Caroline County Sheriff's Office, Cecil County Sheriff's Office, Dorchester County Sheriff's Office, Howard County Department of Police, Montgomery County Sheriff's Office, Queen Anne's County Sheriff, St. Mary's County Sheriff's Office, and Wicomico County Sheriff's Office. See Appendix C.

to avoid being placed into handcuffs—even if the person is otherwise unthreatening.⁵⁹ By allowing their officers to use ECWs against individuals who are “actively resisting” *without any imminent risk of harm*, these agencies are authorizing their officers to use ECWs solely as a device to coerce compliance with the officer’s orders. The risks associated with ECW usage, from the potential for death or injury to straining police-community relationships, should preclude the use of ECWs as a device to merely achieve compliance.

The remaining surveyed agencies allowed even more permissive use of ECWs. These agencies have adopted use-of-force policies that contain vague standards that can be read to permit use in a wide variety of situations, even when the individual is not posing a threat to anyone. Among the standards employed by these agencies to determine when ECW use is proper are the following: “to control the situation,” “to bring an unlawful situation under control,” “to safely effect an arrest,” and against “non-compliant individuals.”⁶⁰ Such exceedingly vague standards provide a law enforcement officer with no meaningful guidance on when ECW use is reasonable and may therefore facilitate inappropriate use. Instead, law enforcement agencies should provide their officers with a use-of-force policy for ECWs that clearly articulates when ECW use is warranted, taking into account the risks posed by ECWs, while allowing for reasonable officer discretion.

While most injuries caused by ECWs are minor, there are a number of documented cases finding that ECWs caused death or serious injury, and there is some evidence that the number of deaths associated to ECW use has been underestimated.⁶¹

⁵⁹ For example, the Gaithersburg City Police Department permits use of ECWs against a person who is “bracing” or “tensing.” Some agencies distinguish active resistance from passive resistance (*i.e.*, where the subject simply refuses to obey commands). The Baltimore County Police Department, Caroline County Sheriff’s Office, Cecil County Sheriff’s Office, Howard County Department of Police and Queen Anne’s County Sheriff’s Office expressly prohibit the use of ECWs against passive subjects. See Appendix C. Likewise, the PERF Guidelines recommend that “ECWs should not be used against a passive suspect.” PERF Guidelines, *supra* note 33, at No. 1.

⁶⁰ Jurisdictions with vague ECW use-of-force standards include: Allegany County Sheriff’s Office (“circumstances are tense, uncertain, and rapidly evolving”); Calvert County Sheriff’s Office (“when the use-of-force is necessary to gain control of an individual for a lawful purpose”); Charles County Sheriff’s Office (“to incapacitate a resistive person”); Frederick County Sheriff’s Office (“when . . . attempts to subdue or control the subject by other conventional tactics have been, or will likely be, ineffective”); Gaithersburg City Police Department (on “non-compliant individuals”); Garrett County Sheriff’s Office (“circumstances are tense, uncertain, and rapidly evolving”); Harford County Sheriff (“to bring an unlawful situation safely and effectively under control”); the Maryland State Police Tactical Assault Team (“to safely effect an arrest”); Montgomery County Police Department (“to safely effect an arrest”); Prince George’s County Sheriff’s Office (“effect an arrest”); Washington County Sheriff’s Office (“to safely effect an arrest”); and Worcester County Sheriff’s Office (“to safely effect an arrest” or “to control the situation”). See Appendix C.

⁶¹ TASER International reported that its products “are often used in aggressive confrontations that may result in serious, permanent bodily injury or death to those involved. Our products may cause or be associated with these injuries.” TASER Int’l, Inc. Form 10-K Annual Report for period ending December 31, 2005. A June 2009 report from the AMA noted a review of 2,002 arrest-related deaths between 2003 and 2005 in 47 states and the District of Columbia that showed that ECWs were involved in 36 arrest-related deaths during this period. In 17 of these deaths, an ECW was causally linked to the death. However, these numbers undercount the number of deaths involving ECWs and may not be accurate

Importantly, the full effect an ECW may have when deployed in the field or why its use is associated with deaths in some circumstances is not yet fully understood.

Unfortunately, not all law enforcement officers and agencies fully understand the potential risks associated with ECW deployment.⁶² Too often law enforcement agencies mistakenly view ECWs as harmless, non-lethal devices that simply temporarily incapacitate subjects with little or no risk of injury.

When practical, ECWs should be used instead of other force options, such as batons or firearms, that would cause greater injury or even death. To help ensure they are used in this manner, and given the risk, albeit slight, for serious injury or death following ECW usage, an agency's use-of-force policy should make clear that ECWs should not be used merely to gain a suspect's compliance, but should be discharged only as tool to protect the officer or others against the risk of physical harm. To properly use ECWs as a law enforcement tool, ECWs must be appropriately placed along a use-of-force spectrum that both recognizes the value of ECWs as a less-lethal weapon but also acknowledges the risks of injury and death created by the discharge of an ECW.

Use-of-force policies should strive to balance the risks of ECW use against the actual threat of harm against an officer or another individual. To that end, the Task Force recommends that ECW use should be permitted only when an individual's actions pose an imminent threat of physical harm to themselves or others. For the purposes of this standard, "physical injury" should have the same meaning as it does in Maryland's

regarding the number of deaths causally linked to ECWs: "This report acknowledges that the ability of ECWs to cause death is a subject of debate, and that due to reporting gaps, these 36 cases do not represent a complete count of all deaths in which the use of a ECW was involved." AMA Report, *supra* note 11, p. 7; see also Braidwood Commission on Conducted Energy Weapon Use, "Restoring Public Confidence: Restricting the Use of Conducted Energy Weapons in British Columbia," p. 14, June 2009, available at <http://www.braidwoodinquiry.ca/report/> (hereinafter "Braidwood Report") ("Although there is often a lack of physical evidence on autopsy to determine whether arrhythmia was the cause of death, if a person dies suddenly and from no obvious cause after being subjected to a conducted energy weapon, death is almost certainly due to an arrhythmia."). A December 2008 report from Amnesty International found that ECWs were listed as a cause or contributory factor in 37 of the 98 autopsy reports available, as well as in two inquest transcripts. In 18 of the 37 cases, ECWs were listed as a cause of death, "usually along with other factors such as heart disease or physiologic stress." Amnesty Int'l Report, *supra* note 8, p. 27.

⁶² Inquiries by other entities reach findings consistent with those of the Task Force's finding that many law enforcement agencies do not sufficiently prepare their officers for the potential risks of ECWs. A recent report by the AMA found that "appropriate training and supervision of [ECW] use is lacking in some jurisdictions." AMA Report, *supra* note 11, p. 9. There are many incidents indicating that the potential dangers of ECWs are not fully understood. For example, correctional officers in Florida recently discharged ECWs in drive stun mode against their own children in three separate state prisons as part of "Take Our Daughters and Sons to Work Day." Meg Laughlin, "Corrections Sergeant Shocks Kids with Stun Gun During Prison Visit," St. Petersburg Times, May 2, 2009, available at <http://www.tampabay.com/news/publicsafety/article997379.ece>. In another incident, police used an ECW to force a man to comply with a court order to provide a DNA sample. Rick Pfeiffer, "TASER Use to Obtain DNA Not Unconstitutional," Niagara Gazette, June 4, 2009, available at http://www.niagara-gazette.com/breakingnews/local_story_154132251.html. Many officers may believe that they understand the impact of ECW discharge because they have had an ECW discharged against them during ECW training. As noted in Part V of this report, however, this training can be misleading.

definition of second degree assault on a law enforcement officer.⁶³ Specifically, “physical injury” means “any impairment of physical condition, excluding minor injuries.”⁶⁴ A threat of such minor injuries does not ordinarily warrant the application of a potentially lethal force option. Officers should not have to actually suffer an injury before use of an ECW may be justified. As is the case with any decision to use force, officers should consider the totality of the circumstances at hand, including the nature of threatened physical harm as well as the risks associated with using the ECW against the particular individual in the circumstances presented.

ECWs should not be used against a passive subject or otherwise to counter passive non-compliance, absent an imminent threat of physical harm.⁶⁵ For example, if a group of protesters were obstructing traffic by linking arms and refusing to obey an officer’s commands to disperse, an ECW should not be used to force them to comply. The same is true for an individual engaged in so-called “active” resistance that does not pose an imminent threat of physical harm, absent extraordinary articulable exigent circumstances. As an example, an officer would not be justified to use an ECW on an individual who was merely “bracing” or “tensing” his or her arms or moving evasively to avoid being handcuffed, but who otherwise did not threaten physical harm. In this situation, the risks associated with the ECW are disproportionate to the risk of harm posed on the officer or others. If, on the other hand, an individual was not merely bracing his or her arm to resist an officer’s instructions, but rather initiated a physical struggle with an officer, the officer could determine that the threat to his or her safety was substantial enough to justify using the ECW. When confronted with an unarmed individual who does not comply with an officer’s orders, officers should attempt to determine whether the individual actually received and understood the officer’s commands. Often language barriers or hearing disabilities may make an individual appear non-cooperative, when in reality they are unaware of the officer’s commands. Using an ECW against such an individual simply because the subject did not understand (and thus not comply with) the officer’s commands is especially unwarranted.

Because subjects who are restrained presumptively are no longer a threat to safety, ECWs should not be used against a restrained subject unless the subject, despite being restrained, poses an imminent threat of physical harm. A number of Maryland law enforcement agencies have already placed such restrictions on using ECWs against persons in handcuffs.⁶⁶ Similarly, because ECWs should only be used to

⁶³ See MD. CODE ANN., CRIMINAL LAW § 3-203(c).

⁶⁴ *Id.* § 3-203(c)(1).

⁶⁵ See PERF Guidelines, *supra* note 33, at No. 1. At least one federal Court of Appeals has concluded that using an ECW to shock a person who does not pose an immediate threat of harm violates a clearly established constitutional right. In *Landis v. Baker*, 297 Fed. Appx. 453 (6th Cir. 2008), the court held that it was unconstitutional to use an ECW against a person “who was resisting arrest but not threatening anyone’s safety or attempting to evade arrest by flight,” and where there “is no immediate threat to the safety of the officers or others” *Id.* at 464 (internal quotations and citations omitted).

⁶⁶ The Baltimore City Police Department, Baltimore County Police Department, Bowie Police Department, Caroline County Sheriff’s Office, Cecil County Sheriff’s Office, Charles County Sheriff’s Office, Gaithersburg City Police Department, Howard County Department of Police, Prince George’s

prevent imminent physical harm, their use is not warranted by the mere fact that a subject is fleeing, nor is their use warranted to prevent the destruction of evidence.⁶⁷

By ensuring that an ECW is used only to prevent harm, and not merely as a tool to obtain compliance, a law enforcement agency can avoid not only needlessly exposing a subject to potential injury or death, but also can avoid alienating the community, undermining the public's confidence in the agency, and enduring costly and disruptive litigation. Indeed, many of the ECW incidents that have generated the most public outrage occurred when an officer used an ECW to force an uncooperative individual to comply with an order, but where no harm was imminent. As just one of many examples, in 2006, campus police repeatedly shocked a UCLA student when he refused to leave a library. The student was uncooperative, but unthreatening. The incident, a videotape of which gained national prominence, generated a widespread outcry about the abusive use of ECWs. A university-commissioned review of the incident concluded that the officer who shocked the student acted unreasonably because he "did not take advantage of other options and opportunities reasonably available to de-escalate the situation without the use of the Taser."⁶⁸ The university overhauled its ECW use-of-force policies. A suit filed by the student was settled for \$220,000.

Integrating ECWs and De-Escalation Techniques into an Agency's Use-of-Force Policy

As with any weapon, an agency's policy on ECWs should be integrated into its overall use-of-force policy.⁶⁹ An integrated use-of-force policy should emphasize that ECWs are one among several tools available to the officer and should not always be used as a matter of first resort. In determining which of the available options to use, use-of-force policies should emphasize that officers should use the least amount of force necessary to bring a situation under control and to select the tool or technique that best achieves this goal. Specifically, these policies should treat an ECW as a force option considerably less lethal than a firearm, but one that, nonetheless, in certain circumstances discussed in this report, can become lethal. As such, the policies should instruct officers that when an individual does not present an imminent threat of physical harm, the officer must select a force option lower than an ECW.

Use-of-force policies should also integrate de-escalation techniques and other non-force options, which should be employed prior to any use-of-force—including

County Police Department, and Queen Anne's County Sheriff's Office prohibit the use of ECWs against a person in handcuffs unless exigent circumstances exist. See Appendix C.

⁶⁷ The PERF Guidelines recommend: "That a subject is fleeing should not be the sole justification for police use of an ECW." PERF Guidelines, *supra* note 33, at No. 6.

⁶⁸ See UCLA Report, *supra* note 40, p. 64.

⁶⁹ The PERF Guidelines recommend that ECW policies be integrated in an agency's overall use-of-force policies. See PERF Guidelines, *supra* note 33, at No. 18 ("Agencies should create stand-alone policies and training curriculum for ECWs and all less-lethal weapons, and ensure that they are integrated with the department's overall use-of-force policy."); see also "Report of the Use of Force Working Group of Allegheny County, Pennsylvania," p. vi, Oct. 8, 2009, available at <http://www.law.pitt.edu/files/harris/Taser-Working-Group.pdf> (hereinafter "Allegheny Report") (recommending that an agency's ECW "policy should incorporate, reference, and form a part of the department's overall policy on the use of force").

ECWs—unless doing so would be ineffective or would place the officer or another individual under a threat of physical harm. De-escalation techniques specific to situations involving persons in mental health crisis, or “crisis intervention” techniques, including containment, should also be part of an agency’s use-of-force policy and training program. The role of such techniques in deciding whether to use ECWs in situations involving persons in mental health crisis is discussed below in the section on ECW Use in Response to Medical or Mental Health Crisis.

Restriction on Use in Circumstances Where an Increased Risk of Indirect Injury or Death Exists

By momentarily depriving a person of control of his or her muscles, ECWs frequently lead to falls, some of which may cause injury or even death. For example, in June 2009, a man being held at the Harford County Jail in Maryland became combative while correctional deputies were seeking to fingerprint him. An ECW was discharged against him and he fell, striking his head on the floor and dying later that same day.⁷⁰ In another example, a man died after he was subjected to ECW discharge while he was standing on a storefront ledge, causing him to fall two stories and hit his head on the sidewalk. The police department found that officers had violated guidelines prohibiting the use of ECWs in such circumstances.⁷¹ Because ECWs render individuals unable to stop themselves from falling or to protect vital parts of their body if they do, there is a likelihood of a dangerous fall when an ECW is discharged against persons in elevated positions.

ECWs may indirectly contribute to injuries or death in other ways.⁷² ECWs discharged against a person in the water may cause that person to drown, and the spark from an ECW can fatally ignite flammable materials (e.g., gasoline; some types of OC (pepper) spray).⁷³ ECWs used against a person driving a motor vehicle (or bicycle), or fleeing on foot, also may result in serious injury or death.⁷⁴

⁷⁰ Harford County Sheriff’s Office News Release: Prisoner Death at Detention Center, June 13, 2009, available at http://www.harfordsheriff.org/_application/files/press_releases/2009/hcso.press_release.2009-06-13_1.pdf.

⁷¹ Kareem Fahim & Christine Hauser, “Taser Use in Man’s Death Broke Rules, Police Say,” *New York Times*, Sept. 25, 2008.

⁷² Braidwood Report, *supra* note 61, p. 266 (discussing the increased risk that various “external circumstances” such as heights, water, or operating machinery entail).

⁷³ TASER, Inc., “Product Warnings-Law Enforcement,” Apr. 28, 2009 (noting that risks of TASER discharge include falling, ignition of flammable materials, injury to sensitive areas such as the eyes or groin, and burns or scars); see also Lorie A. Fridell, “Sample Policy with Commentary: Electronic Control Devices (ECD’s) or ‘Tasers,’” p. 8 (hereinafter “Fridell Sample Policy”) (ECWs will not be used: [1] When the subject has come in contact with flammable liquids or is in a flammable atmosphere; [2] In areas where compressed oxygen is present, such as Medical Facilities and Emergency Rooms; [3] Houses where ether or methamphetamine labs are suspected; [4] When the subject is in a position where a fall may cause substantial injury or death; [5] When the subject is in water deep enough to cause drowning in the event the subject falls into it; [or 6] Against an individual who has his/her finger on the trigger of a firearm.); PERF Guidelines, *supra* note 33, at No. 9 (ECWs should not be used where falls may cause injury or death); *id.* at No. 17 (ECWs should not be used in presence of combustible vapors and liquids or other flammable substances like OC spray); *id.* at No. 23 (ECWs should not be used against persons

Because of the risk that using an ECW could unintentionally cause serious injury or death, they should be used only where deadly force is otherwise authorized in these situations:

- Against persons in elevated positions who might be at risk of a dangerous fall;
- Against persons operating vehicles or machinery;
- Against persons who are fleeing on foot;
- Against persons already restrained in handcuffs;
- Against persons who might be in danger of drowning;
- In environments in which combustible vapors and liquids or other flammable substances, including but not limited to alcohol-based OC spray, are present;
or
- In other situations involving heightened risk of serious injury or death to the subject.

Although exigent circumstances infrequently may justify the use of an ECW in one of these heightened risk situations, the decision to use the weapon must always be a reasoned and proportionate one,⁷⁵ with the risks of injury or death balanced against the need to subdue the subject.

Restrictions to Minimize Risk of Direct Injury or Death

Aside from the indirect injuries described above, ECWs can directly injure a subject. While serious injuries are relatively rare, injuries following ECW use include puncture wounds, burns and abrasions, and seizures. Puncture wounds in some areas of the body could be particularly damaging. For example, an ECW dart (probe) in the eye can cause loss of vision.⁷⁶ There are also documented incidents of ECWs discharged into the head/scalp area causing full-blown seizures with long-term effects in otherwise healthy people.⁷⁷

Recently, TASER International modified its usage recommendations to discourage ECW discharge on a subject's upper chest. Finding that "a close distance between the ECW dart (probe) and the heart is the primary factor in determining

operating motor vehicles); "TASERed Homeless Man Catches on Fire," CBS News, Aug. 19, 2009, available at <http://www.cbsnews.com/stories/2009/08/19/national/main5251739.shtml>.

⁷⁴ See the discussion of dangers and potential ineffectiveness of ECWs when used against fleeing persons above in Part V of this report.

⁷⁵ *But see* Allegheny Report, *supra* note 69, p. vii (recommending that ECWs never be used in the above situations because of the "very high risks of danger due to fire, explosion, falls or other circumstances").

⁷⁶ National Institute of Justice, "Study of Deaths Following Electro Muscular Disruptions: Interim Report," p. 3, June 2008, available at <http://www.ncjrs.gov/pdffiles1/nij/222981.pdf> (hereinafter "NIJ Interim Report").

⁷⁷ See discussion in Part VIII of the report.

whether an ECW will affect the heart,⁷⁸ TASER International now recommends that officers should avoid chest shots when possible.⁷⁹

Agency use-of-force policies and training should reflect the fact that ECW use may result in direct injury and that in a small number of cases these injuries can be serious. Model policies, and agencies reflecting such policies, prohibit ECW discharge at sensitive areas of the body, including the head, eyes, mouth, neck, chest, and genitalia.⁸⁰

Restrictions on Use Against Certain Populations Subject to a Heightened Risk of Injury or Death

While additional research is necessary, the risk of serious injury or death from ECWs may be increased when used against certain populations.⁸¹ Recognizing this, best practices require that the use of ECWs against persons at heightened risk of injury be avoided whenever reasonably possible.⁸²

Research indicates that ECWs may be more likely to cause cardiac complications in certain populations, including elderly people and people with heart

⁷⁸ TASER Int'l, "Training Bulletin 15.0 Regarding Medical Research Update and Revised Warnings," Oct. 15, 2009, available at [http://www.taser.com/legal/Documents/Training Memo with Training Bulletin and Warnings.pdf](http://www.taser.com/legal/Documents/Training%20Memo%20with%20Training%20Bulletin%20and%20Warnings.pdf) (hereinafter "TASER Training Bulletin").

⁷⁹ *Id.*

⁸⁰ See, e.g., Fridell Sample Policy, *supra* note 73 ("Never aim the TASER at sensitive tissue areas such as the eyes, face, or groin."); PERF Guidelines, *supra* note 33, at No. 12 ("Officers should avoid firing darts at a subject's head, neck and genitalia."); American Bar Association, "Proposed ABA Standards for Criminal Justice (Third Edition) Volume 23: The Treatment of Prisoners," June 12, 2009 (hereinafter "Proposed ABA Standards") (Standard 23-5.8(a)(iv) proposes to prohibit the use of electronic weaponry directly on vital parts of the body, including genitals and, for electronic weaponry, eyes, mouth, and neck).

⁸¹ See NIJ Interim Report, *supra* note 76 ("The purported safety margins of [ECW] deployment on normal healthy adults may not be applicable in small children, those with diseased hearts, the elderly, those who are pregnant and other at-risk individuals. The effects of [ECW] exposure in these populations are not clearly understood and more data are needed. The use of a [ECW] against these populations (when recognized) should be avoided but may be necessary if the situation excludes other reasonable options."); see also UK Defense Scientific Advisory Council's Subcommittee on the Medical Implications of Less-lethal Weapons, "Statement on the Comparative Medical Implications of Use of the X26 Taser and the M26 Advanced Taser," p. 4, Mar. 7, 2005, available at <http://police.homeoffice.gov.uk/publications/operational-policing/police-taser-DOMILL-statement?view=Binary> (hereinafter "UK Defense Scientific Advisory Council's Statement") (risk of serious injuries or deaths from TASERs very low but "the possibility that other factors such as illicit drug intoxication, alcohol abuse, pre-existing heart disease, and cardioactive therapeutic drugs may modify the threshold for generation of cardiac arrhythmias cannot be excluded"). Part VIII of the report further discusses the medical literature supporting the Task Force recommendation that ECW use against certain populations be restricted.

⁸² See, e.g., IACP Executive Brief, *supra* note 31, p. 15 (Officers should be aware of the greater potential for injury when using a ECW against "persons with pacemakers, persons in a drug induced state of delirium, women who are known to be pregnant, persons of small stature irrespective of age, and the very old and very young"); PERF Guidelines, *supra* note 33, at No. 7 ("[ECWs] should not generally be used against pregnant women, elderly persons, young children, and visibly frail persons unless exigent circumstances exist.").

conditions or cardiovascular disease.⁸³ Also, certain populations are even more at risk of being seriously injured by a fall than others.⁸⁴ Persons generally suspected to be at higher risk from injury or death due to ECW include: (1) persons of small stature and slight build (including children and small adults);⁸⁵ (2) persons with cardiovascular disease or otherwise diseased hearts, including those with pacemakers; (3) elderly persons; (4) pregnant women;⁸⁶ (5) persons with known heart conditions;⁸⁷ (6) persons in mental/medical crisis; and (7) persons under the influence of drugs or alcohol.⁸⁸

In Maryland and elsewhere, individuals from these populations have died after officers used ECWs against them.⁸⁹ As discussed at the beginning of this report, in November 2007, Jarrell Gray, who was small and slightly built, died after being shocked by an ECW.⁹⁰ In April 2007, an ECW was discharged against Uwyanda Peterson. Ms. Peterson, who was slightly built, fell on the ECW probe. The ECW probe passed through her chest wall and into her lung and heart. According to emergency medical personnel, her heart was in ventricular fibrillation when first recorded.⁹¹ Ms. Peterson lost consciousness at the scene and was pronounced dead a half an hour later.⁹²

According to the American Medical Association, the impact of ECWs when used against individuals in actual law enforcement scenarios is unknown:

Although [ECW] activation in normal volunteers appears to be very safe, these studies do not sufficiently reproduce the risks of TASER® exposure

⁸³ See AMA Report, *supra* note 11, pp. 4-6 (discussion of ECW cardiac effects). Part VIII of this Report further discusses the medical literature supporting the Task Force recommendation that ECW use against persons with known heart conditions be restricted.

⁸⁴ AMA Report, *supra* note 11, p. 5 (“The strong muscle contractions induced by [ECWs] cause falls and impact-related injuries (e.g., fractures and head injuries), particularly in elderly individuals or pregnant women.”).

⁸⁵ See, e.g., TASER Int’l, “Volunteer Warnings, Risks, Liability Release and Covenant Not to Sue,” Oct. 28, 2009 (hereinafter “TASER Liability Release”) (“ECD use on a . . . low body-mass index (BMI) person could increase the risk of death or serious injury.”); IACP Executive Brief, *supra* note 31, p. 15 (Officers should be aware of the greater potential for injury when using a ECW against “persons of small stature irrespective of age”).

⁸⁶ See, e.g., TASER Liability Release, *supra* note 85 (“ECD use on a pregnant, infirm, elderly, small child, or low body-mass index (BMI) person could increase the risk of death or serious injury.”); IACP Executive Brief, *supra* note 31, p. 15; PERF Guidelines, *supra* note 33, at No. 7 (“[ECWs] should not generally be used against pregnant women, elderly persons, young children, and visibly frail persons unless exigent circumstances exist.”); NIJ Interim Report, *supra* note 76, p. 4 (“The purported safety margins of ECW deployment on normal healthy adults may not be applicable in small children, those with diseased hearts, the elderly, those who are pregnant and other at-risk individuals. The use of ECWs against these populations (when recognized) should be avoided, but may be necessary if the situation excludes other reasonable options.”).

⁸⁷ AMA Report, *supra* note 11, pp. 4-5.

⁸⁸ *Id.* at p. 5.

⁸⁹ The outside parameters of the populations at heightened risk of injury are unknown. It has been reported, for example, that some fatalities after ECW discharge involved persons who had asthma or epilepsy. See Amnesty Int’l Report, *supra* note 8, p. 45.

⁹⁰ Sarah Fortney, “Man Dies After Being Struck by Taser,” Frederick News Post, Nov. 19, 2007, available at http://www.fredericknewspost.com/sections/archives/display_detail.htm?StoryID=75587.

⁹¹ Amnesty Int’l Report, *supra* note 8, p. 73.

⁹² *Id.*

among criminal suspects, in whom coexisting medical and psychiatric conditions, alcohol and drug use, and other factors are often present. Human volunteers report that [ECW] exposure is an extremely unpleasant experience, inducing both physiologic and psychological stress. Some experimental studies have begun to address these confounding factors.... Such studies cannot fully evaluate the responses of individuals who are confrontational, have taken drugs, or are desperate for escape, highly agitated, and combative.⁹³

Thus, the challenge for law enforcement in avoiding ECW use against persons at heightened risk of injury is twofold. First, more research is needed to determine which populations are at a heightened risk of death or injury and the extent of that risk. Second, in many situations it may not be readily apparent to a law enforcement officer faced with a rapidly evolving situation whether an individual falls within one of these groups. Taken in combination, these challenges mean that a law enforcement officer making the decision whether to use an ECW is sometimes faced with a unique and difficult conundrum: a use-of-force option that normally is not deadly, may in some instances be lethal even where the officer had no intention of using lethal force, did not believe lethal force was necessary, and used the force tool in a manner that normally would not increase the risk of death.

Given this conundrum, unless and until research demonstrates that ECWs are as safe for the individuals against whom they are used in real life law enforcement scenarios as they are for individuals in training or experimental contexts, law enforcement agencies' use-of-force policies should not permit ECW use to combat lower level resistance, and officers must be trained to stage medical assistance prior to ECW use where possible and to recognize indicia of medical crisis after ECW use. This is true even where the person is not a recognized member of a known heightened-risk population. In addition, until further research clarifies ECW risks related to heightened risk populations, law enforcement agencies should ensure that agency use-of-force policies and training: (1) inform officers of the uncertainties and potential dangers of ECW use against heightened risk populations; (2) educate officers in identifying heightened risk individuals where possible;⁹⁴ and (3) emphasize alternatives to ECW use for heightened risk populations.

⁹³ AMA Report, *supra* note 11, p. 5.

⁹⁴ Where circumstances permit, this information can sometimes be obtained from family members or other persons if the individual is unable to provide it. Forthcoming ABA standards addressing the use of ECWs in jails and prisons require assessments to determine whether the individual is particularly vulnerable to harm by ECW or whether ECW discharge would be contraindicated by the individual's medical condition. Standard 23.2.1 addresses considerations at intake related to ECWs. Standard 23.2.1(b)(iii) requires an "initial assessment whether any characteristic of the prisoner makes use of chemical agents or electronic weaponry against that prisoner particularly risky, in order to facilitate compliance with Standard 23-5.8(d)." Standard 23.5.8(d) requires: that "[w]hen practicable, before using either chemical agents or electronic weaponry against a prisoner, staff should determine whether the prisoner has any contraindicated medical conditions, including mental illness and intoxication and make a contemporaneous record of this determination." See Proposed ABA Standards, *supra* note 80.

ECW Use in Response to Medical or Mental Health Crisis

ECW use against persons in medical or mental health crisis warrants particular focus because law enforcement officers increasingly are using ECWs on subjects displaying symptoms of a medical or mental health crisis, including those with symptoms that are sometimes referred to as “excited delirium.”⁹⁵ As noted above, there are numerous accounts of incidents where the use of lethal force against such individuals would have been justified, but ECWs were used instead and no injuries resulted. There is also concern, however, that ECWs are sometimes used precipitously against persons in medical or mental health crisis and that in some circumstances the use of the ECW does more harm than good.

Some argue that ECWs should never be used against persons already exhibiting signs of high stress, such as those in a manic state or drug induced psychosis,⁹⁶ because some research indicates that ECWs may have contributed to the stress experienced by a person who ultimately died of stressors related to the arrest.⁹⁷ Other reports have noted a temporal association between fatalities and the use of ECWs against persons exhibiting symptoms termed “excited delirium.”⁹⁸

⁹⁵ This term is used to refer to acute physical and emotional changes that are often seen during police confrontations. There are differing views of what constitutes “excited delirium,” and even whether “excited delirium” exists. According to a recent AMA report:

Although not a validated diagnostic entity in either the International Classification of Diseases or the Diagnostic and Statistical Manual of Mental Disorders, “excited delirium” is a widely accepted entity in forensic pathology and is cited by medical examiners to explain the sudden in-custody deaths of individuals who are combative and in a highly agitated state. Excited delirium is broadly defined as a state of agitation, excitability, paranoia, aggression, and apparent immunity to pain, often associated with stimulant use and certain psychiatric disorders. The signs and symptoms typically ascribed to “excited delirium” include bizarre or violent behavior, hyperactivity, hyperthermia, confusion, great strength, sweating and removal of clothing, and imperviousness to pain. Speculation about triggering factors include sudden and intense activation of the sympathetic nervous system, with hyperthermia, and/or acidosis, which could trigger life-threatening arrhythmias in susceptible individuals. Biochemical studies have shown alterations in the function of dopamine neurons and specific gene activation products in the central nervous system of such individuals. The intense pain associated with [ECW] exposure, the psychological distress of incapacitation, and hazards associated with various restraint methods also could contribute.

AMA Report, *supra* note 11, pp. 6-7 (internal citations omitted).

⁹⁶ Braidwood Report, *supra* note 61, p. 309 (“The unanimous view of mental health presenters was that the best practice is to de-escalate the agitation, which can best be achieved through the application of recognized crisis intervention techniques.”).

⁹⁷ See NIJ Interim Report, *supra* note 76, p. 3 (“[ECW] technology may be a contributor to ‘stress’ when stress is an issue related to cause of death determination.”).

⁹⁸ Amnesty International reports that “[t]he most common cause of death given by coroners or medical examiners (more than 30 [percent] of cases where information was available [*i.e.*, 111 of 250]) was heart failure caused by the ingestion of cocaine or other stimulant drugs, often together with a conditions described as excited delirium. In some cases excited delirium alone was given as a cause of death.” Amnesty Int’l Report, *supra* note 8, p. 26.

In certain circumstances, individuals experiencing mental health- or drug-induced crises, or similar episodes, may be experiencing a dire medical emergency that needs to be quickly treated.⁹⁹ In some of these circumstances, law enforcement officers, sometimes with the assistance of mental health professionals, may be able to take the individual into custody without resorting to force. However, in other circumstances, non-force strategies may not be an option or will be ineffective.

The decision whether to use ECWs or another type of force to restrain an individual when non-force options have failed or are not feasible should be left to the discretion of properly trained and supervised law enforcement officers on the scene. However, this discretion must be properly informed. ECWs may allow the individual to be taken into custody with less stress and harm to all involved than would a possible protracted hands-on struggle or resort to long batons or similar weapons.¹⁰⁰ However, law enforcement officers should understand that the use of ECWs in such circumstances poses risks. Aside from the general risks associated with ECW usage, research has been unable to ascertain the effect of an ECW use on individuals experiencing a medical or mental health crisis.¹⁰¹ A recent AMA report appears to acknowledge the possibility that medical symptoms associated with “excited delirium” may be exacerbated by any attempts to restrain an individual, including restraint by an ECW.¹⁰² The United States Department of Justice has warned a local jurisdiction under investigation that there is a risk of ECW discharge leading to sudden death when used against persons who are under the influence of drugs, or who present behaviors associated with the condition of “excited delirium.”¹⁰³

With these risks in mind, use-of-force policies should make clear that an individual’s apparent mental health or medical crisis (including any display of symptoms that are considered by some to constitute “excited delirium”) should not in itself justify

⁹⁹ “Excited delirium” is often cited as such an emergency. In one widely cited example, doctors at an emergency room at Vanderbilt University hospital in Nashville, Tennessee tranquilized three people whose heart rates and body temperatures were soaring. All three recovered. Laura Sullivan, “Death by Excited Delirium: Diagnosis or Cover-up?,” National Public Radio, July 11, 2007, available at <http://www.npr.org/templates/story/story.php?storyId=7608386>. Others argue that persons experiencing excited delirium are not particularly treatable after a certain point, obviating the need to quickly restrain them for any medical purpose. See Samuel J. Stratton et al., “Factors Associated with Sudden Death of Individuals Requires Restraint for Excited Delirium,” 19 Am. J. Emergency Med. 187 (May 2001) (study of 18 cases in which persons with excited delirium were put in an ambulance after being restrained and monitored by paramedics, and finding that all 18 died).

¹⁰⁰ This belief is widely held and has intuitive appeal. See, e.g., Testimony of Bernadette DiPino, Chief of Ocean City Police Department, Apr. 30, 2009; Testimony of Alan Goldberg, Captain, Montgomery County Police Department, Apr. 23, 2009. Whether ECWs in fact cause less dangerous physical stress than other methods of restraint in such circumstances has not been determined.

¹⁰¹ See AMA Report, *supra* note 11, p. 5 (noting that the research to date “cannot fully evaluate the responses of individuals who are confrontational, have taken drugs, or are desperate for escape, highly agitated, and combative”).

¹⁰² *Id.* at p. 6 (“The intense pain associated with [ECW] exposure, the psychological distress of incapacitation, and hazards associated with various restraint methods also could contribute [to triggering excited delirium].”).

¹⁰³ See USDOJ Letter, *supra* note 40, p. 9.

the use of an ECW against that individual.¹⁰⁴ Instead, officers on the scene should consider policies and training on dealing with persons in mental health/medical crisis to determine whether non-force options—including de-escalation techniques and containment—are feasible.

Maryland mental health advocates urged in testimony to the Task Force that priority should be placed on integrating crisis intervention and de-escalation techniques into law enforcement use-of-force policies and procedures.¹⁰⁵ Mental health experts noted that police are often called as first responders by family members to deal with emotionally disturbed individuals who display extreme behaviors. In such crisis situations, emotionally disturbed individuals are often at an impaired level of consciousness; they may not know who or where they are; they may be delusional, anxious, or frightened; and they may be unable to process or comply with an officer's commands. When police arrive, such individuals can become even more anxious and appear even more dangerous.

The unanimous position of mental health experts is that the best practice in such situations is to de-escalate the agitated suspect with a crisis intervention approach instead of a typical command-and-control approach.¹⁰⁶ This type of crisis intervention approach is used safely and effectively in numerous police departments nationwide and a few Maryland jurisdictions. Both the Maryland Mental Health Association and the National Alliance on Mental Illness of Maryland in their testimony to the Task Force urged that all Maryland jurisdictions incorporate this approach in their use-of-force policies; and that in departments that use electronic weapons, those policies should make it clear that de-escalation techniques should be invoked before resorting to an electronic weapon.

If de-escalation techniques or containment are not feasible or are ineffective, and the decision is made to arrest or otherwise restrain a person in a mental health or medical crisis, use-of-force policies should direct the officers to consider whether there are means to quickly and safely restrain the individual without resort to an ECW. Policies should also require that, where possible, the restraint of a person who is in mental health or medical crisis should be made in conjunction with mental health and medical personnel to help minimize the chance of injury to officers, the subject, or bystanders and to ensure the prompt provision of appropriate medical or mental health care. An ECW should be used to restrain an individual in mental health or medical crisis only if the officer determines that alternative means of restraint are unavailable

¹⁰⁴ See generally AMA Report, *supra* note 11, pp. 6-7.

¹⁰⁵ Testimony of Terry Bohrer, Mental Health Association of Maryland, Inc., Apr. 23, 2009; Written Testimony submitted by National Alliance of Mental Illness of Maryland, Apr. 23, 2009.

¹⁰⁶ See *id.*; see also British Columbia Division, Canadian Mental Health Association, "Study in Blue and Grey," 2003, available at <http://www.cmha.bc.ca/files/policereport.pdf>; Braidwood Report, *supra* note 61, pp. 248-61 (summarizing the testimony of Dr. Shaohu Lu, Dr. Joseph Noone, Dr. Maelor-Vallance, Dr. John Butt, and Dr. Michael Webster).

and that the individual's condition poses an imminent threat of physical harm to the individual or another person.¹⁰⁷

It is critical that agencies have policies and training related to medical and mental health crises that are thorough and accurate. Officers who have a complete understanding of the complexities of this scenario may be more willing to first attempt lower force options where feasible and to better understand the restrictions against repeated or prolonged ECW discharge, especially in these circumstances. Agencies that understand this may better recognize the need to train their officers and community mental health and medical personnel to develop strategies that can help restrain persons using less force, even while they increase safety for all concerned.¹⁰⁸

Restrictions Against Multiple or Prolonged Discharges

Many of the deaths following ECW use, including some in Maryland, are associated with repeated or continuous discharges.¹⁰⁹ Research of this phenomenon to date has been insufficient to resolve why these deaths occur.¹¹⁰ A TASER International “product warning” notes that “muscle contractions may impair a subject’s ability to

¹⁰⁷ Braidwood Report, *supra* note 61, p. 310 (recommending that officers be “required to use de-escalation and/or crisis intervention techniques before deploying a conducted energy weapon, unless they are satisfied, on reasonable grounds, that such techniques will not be effective in eliminating the risk of bodily harm.”).

¹⁰⁸ Many agencies, including Montgomery County, have in place their own versions of the widely influential “Memphis Model” of developing Crisis Intervention Teams to respond to persons with mental illness, including training for officers on how to deescalate potentially violent incidents. One recognized attribute of the model is that the risk of injury can be significantly reduced. See *e.g.*, Presentation by Bob Kurtz, NC-NAMI Conference, Mar. 9, 2007, available at [http://www.naminc.org/dihoff_documents/Conference_2007/recap/presentations/Bob Kurtz CIT Presentation.ppt](http://www.naminc.org/dihoff_documents/Conference_2007/recap/presentations/Bob_Kurtz_CIT_Presentation.ppt) (slide on “Outcomes for Memphis CIT Model”) (noting the reduced officer and consumer injury rate, the reduced need for lethal force, and the improved officer de-escalation skills).

¹⁰⁹ Eric Wolle died in 2004 after an ECW was discharged against him four times. See David Snyder, “Maryland Family Grieves for Mentally Ill Man,” *Washington Post*, June 26, 2004. Jarrel Gray died in November 2007, several hours after an ECW was discharged against him twice, 23 seconds apart. See Keith L. Martin, “Family Files \$145 Million Lawsuit in Taser-Related Death,” *Gazette* (Maryland), May 29, 2008, available at http://www.gazette.net/stories/053008/polinelw202517_32370.shtm. While most deaths associated with repeated or prolonged ECW discharges involve only a few discharges, in one death actually attributed directly to ECW, the decedent had an ECW discharged against him nine times in 14 minutes. The coroner in that case found that the death was due to those repeated ECW discharges. See Patrik Jonsson, “Are Stun Guns Too Deadly? Louisiana Case Adds to Debate,” *Christian Science Monitor*, Aug. 12, 2008.

¹¹⁰ See NIJ Interim Report, *supra* note 76, p. 4 (“The medical risks of repeated or continuous [ECW] exposure are unknown and the role of [ECW]s in causing death is unclear in these cases. There may be circumstances in which repeated or continuous exposure is required but law enforcement should be aware that the associated risks are unknown. Therefore, caution is urged in using multiple activations of [ECW] as a means to accomplish subdual.”) A study commissioned by the U.S. Department of Defense recently expressed concern that “the effects of multiple simultaneous exposure” to ECW shocks on the heart required additional evaluation. Joint Non-Lethal Weapons Program, U.S. Department of Defense, “Human Effectiveness and Risk Characterization of the Electromuscular Incapacitation Device—A Limited Analysis of the TASER,” p. 28, Mar. 1, 2005, available at [http://www.taser.com/research/Science/Documents/The Joint Non-Lethal Weapons Human Effects Center of Excellence.pdf](http://www.taser.com/research/Science/Documents/The_Joint_Non-Lethal_Weapons_Human_Effects_Center_of_Excellence.pdf) (hereinafter “Joint Non-Lethal Weapons Program Report”).

breathe” and that “in some circumstances, in susceptible people, it is conceivable that the stress and exertion of extensive, repeated, prolonged, or continuous application(s) of the TASER device may contribute to cumulative exhaustion, stress, and associated medical risk(s).”¹¹¹ While the TASER International warning singles out “susceptible” people, such discharges are also associated with deaths of even healthy adults. According to a recent AMA report, studies indicate that heart rhythms usually can be disrupted with “prolonged discharges and electrode placements that bracket the heart.”¹¹²

Many governmental and law enforcement reports have concluded that multiple and prolonged ECW shocks may increase the risk of death or serious injury.¹¹³ Furthermore, studies indicate that people who are shocked by an ECW frequently are dazed after the shock and may be unable to immediately obey an officer’s commands.

Given the apparent risks, use-of-force policies should make clear that repeated or prolonged discharges should be avoided wherever possible and that an officer should only administer an additional shock if the officer has concluded that the subject still poses an imminent threat of physical harm and other options are not appropriate.¹¹⁴ If

¹¹¹ TASER Int’l, “Volunteer Warnings, Risks, Liability Release and Covenant Not to Sue,” Apr. 12, 2006, available at <http://www2.taser.com/SiteCollectionDocuments/Controlled Documents/Warnings/LG-FORM-VOLUNTER-001 REV A Volunteer Exposure Release Form.pdf>.

¹¹² AMA Report, *supra* note 11, p. 4.

¹¹³ For example, in reviewing the results of two national surveys it conducted, PERF found that “the results indicated that multiple and continuous activations of ECWs may increase the risk of death or serious injury, and that there may be a higher risk of death in people under the influence of drugs.” PERF Guidelines, *supra* note 33, at p. 7. As a result, PERF concluded that “multiple activations and continuous cycling of a [ECW] appear to increase the risk of death or serious injury and should be avoided where practical.” *Id.* at No. 4. PERF therefore recommends that officers should use an ECW “for one standard [five-second] cycle and stop to evaluate the situation. If subsequent cycles are necessary, agency policy should restrict the number and duration of those cycles to the minimum activations necessary to place the subject in custody.” *Id.* at No. 3; *see also* PERF: Critical Issues, *supra* note 42, p. 120. The AMA has similarly recommended that “[t]raining protocols should emphasize that multiple activations and continuous cycling of ECWs appear to increase the risk of death or serious injury.” AMA Report, *supra* note 11, p. 9. Courts have held that multiple applications can amount to excessive force. *See, e.g., Lee v. Metro. Gov’t of Nashville & Davidson County*, 596 F. Supp. 2d 1101, 1117 (M.D. Tenn. 2009) (“[U]nder appropriate circumstances, gratuitous, repeated applications of the TASER over a short period of time can amount to excessive force.”). TASER International’s September 30, 2009 product warning also recommends minimizing ECW use where practical. TASER Int’l, “Important ECD Product Safety and Health Information,” p. 5, Sept. 30, 2009, available at <http://www.taser.com/legal/Documents/Training Memo with Training Bulletin and Warnings.pdf> (hereinafter “TASER Product Warning”) (“Reasonable efforts should be made to minimize the number of ECD exposures.”). The USDOJ Civil Rights Division has also provided detailed guidance on the length and number of ECW cycles that should be allowed. *See* USDOJ Letter, *supra* note 40, pp. 11-12. Numerous Maryland law enforcement agencies prohibit or restrict officers from discharging multiple shocks against subjects. These include the Anne Arundel County Sheriff’s Office, Baltimore County Police Department, Bowie Police Department, Calvert County Sheriff’s Office, Gaithersburg City Police Department, Harford County Sheriff’s Office, Howard County Department of Police, and St. Mary’s County Sheriff’s Office. *See* Appendix C.

¹¹⁴ *See* Allegheny Report, *supra* note 69, p. vi (recommending “that officers activating a TASER™ should use it once, for one five-second standard cycle, and then pause to evaluate whether further use might be necessary. If subsequent cycles are necessary, agency policy should restrict the number and duration of those cycles to the minimum necessary to place the subject in custody”). Several Maryland

no such threat is present, no further ECW shocks should be permitted. Policies should require that where an officer administers additional shocks, the officer's use-of-force report of the incident should explain why each additional shock was necessary. For the same reasons, use-of-force policies should permit simultaneous ECW use only when there is a specific, articulable reason to do so.¹¹⁵ Further guidance regarding multiple and simultaneous use of ECWs is provided in the Part V of this report.

Warnings and Display of ECWs

Before an officer discharges an ECW, the officer should provide a suspect with an opportunity to comply with the officer's instructions unless delaying discharge would be unsafe or the element of surprise is necessary to minimize the risk of harm. Because the mere threat of being shocked by an ECW often causes an individual to cease his or her potentially dangerous behavior, providing a warning may eliminate the need to actually discharge the ECW. In addition, the display of an ECW itself may be considered a use of force. Thus, officers should not aim or threaten to use an ECW unless they reasonably believe that doing so will de-escalate the situation.

A warning is also useful to prevent other officers on the scene from mistaking the ECW discharge for firearms discharge. Some ECWs look very much like firearms, and when an ECW is discharged it produces a noise that sounds similar to a shot from a firearm. Issuance of a verbal warning before discharging an ECW will help avoid any confusion about the type of weapon used and will help ensure that a tense situation is not mistakenly escalated.¹¹⁶

Use of Drive-Stun (Pain Compliance) Mode

Use-of-force policies should treat the ECW's drive-stun (pain compliance) mode differently than the ECW's conventional incapacitation (probe) mode. Whereas the probe mode is capable of incapacitating an individual's muscle movements, the drive-stun mode is designed to gain compliance solely through the administration of pain.¹¹⁷

law enforcement agencies already prohibit or restrict officers from discharging multiple shocks against subjects along these lines. These include the Anne Arundel County Sheriff's Office, Baltimore County Police Department, Bowie Police Department, Calvert County Sheriff's Office, Gaithersburg City Police Department, Harford County Sheriff's Office, Howard County Department of Police, and St. Mary's County Sheriff's Office. See Appendix C.

¹¹⁵ The PERF model guidelines provide, "No more than one officer at a time should activate a [ECW] against a person." PERF Guidelines, *supra* note 33, at No. 2.

¹¹⁶ The Anne Arundel County Sheriff's Office, Baltimore County Police Department, Bowie Police Department, Calvert County Sheriff's Office, Cecil County Sheriff's Office, Charles County Sheriff's Office, Gaithersburg City Police Department, Howard County Department of Police, Maryland Police Tactical Assault Team, Montgomery County Sheriff's Office, Prince George's County Sheriff's Office, Queen Anne's County Sheriff's Office, St. Mary's County Sheriff's Office, Washington County Sheriff's Office, and Wicomico County Sheriff's Office all require that barring exigent circumstances, officers must issue a warning before discharging an ECW. See Appendix C. Similarly, the PERF Report recommends that "[a] warning should be given to a person prior to activating the [ECW] unless to do so would place any other person at risk," and "[w]hen applicable, an announcement should be made to other officers on the scene that a [ECW] is going to be activated." PERF Guidelines, *supra* note 33, at No. 29.

¹¹⁷ Braidwood Report, *supra* note 61, p. 133.

Because the officer must be in direct contact with an individual to use the drive-stun mode, using it places the officer at a higher risk of harm. To avoid this risk, ECWs should only be used in drive-stun mode when necessary to complete the incapacitation circuit or when the probe mode has been ineffective and use of drive-stun mode is necessary to prevent imminent physical harm to the officer or others. The drive-stun mode should not be used merely to gain compliance from a subject.

VII. Medical Care

Agency policies should delineate the obligation of officers to provide a basic assessment for medical needs following the discharge of an ECW. Training should reinforce the importance of the officer initiating first aid to the suspect as soon as the situation is safely controlled, and officers should have standard first aid items, gloves, and resuscitation equipment available to them. Training should address the use of this equipment, as well as emphasize the appropriate utilization of EMS to provide advanced life support (“ALS”) and stabilization, when medically necessary. Every officer should be able to perform a basic assessment of an individual in their custody to determine if there is reasonable concern that a serious or potentially life threatening medical condition exists. In situations where the use of an ECW was based upon a need for medical intervention, such as with an individual displaying signs and symptoms that may represent presentation of “excited delirium,” then the rapid transition to paramedics for continuous monitoring and care is essential. In those situations, if possible, EMS should be alerted in advance of engaging the subject, in order to expedite ALS care and transport to an emergency department.

Once an individual is taken into custody, he or she should be restrained in a fashion that assures the safety of both the subject and those around him or her. This includes restraining and positioning the person in a manner that does not interfere with breathing. The decision as to who removes the electrical probes from the subject and when they may do so should be predetermined by the agency, taking into consideration that the probes should be treated as “sharps” contaminated by body fluids, whether or not fluids are visible, and treated appropriately to reduce the risk of injury and disease transmission.

Law enforcement agencies deploying ECWs should meet with local EMS and emergency department representatives in order to understand the capabilities and limitations of these resources. This will allow the information to be included in the training of officers who will carry ECWs, and will help prevent delays in patient care or disagreements in the field. Officers who understand EMS protocols and the limitations of field providers will have more realistic expectations of what can be done in the field, and what is more appropriately handled in an emergency department. Additionally, working with medical staff at the local emergency department, in conjunction with planning meetings with booking and jail representatives, will allow for the creation of reasonable guidelines for evaluation of the subject in custody, as well as the determination of where such evaluations should take place. Once an evaluation is completed, a subject should be housed in a fashion to allow some form of monitoring in order to speed the identification of any late-presenting medical complications. These

expectations and agreements should be documented in writing in order to minimize confusion or misunderstanding among parties.

VIII. Medical Support

The recommendations of this Task Force are strongly supported by the medical literature. As an initial matter, the Task Force endorses law enforcement deployment of ECWs under appropriate circumstances. This recommendation is founded, in part, on the fact that the medical literature generally recognizes the relative safety of ECWs when compared with other force options, such as firearms.¹¹⁸ The Task Force acknowledges the fact that ECWs are less lethal than certain of the other alternatives available to law enforcement officers in the field.

Equally important to recognizing the efficacy and relative safety of ECWs, however, is understanding their potential risk. The medical literature is replete with research and reports regarding both direct and indirect injury resulting from ECW

¹¹⁸ See, e.g., G.J. Ordog et al., "Electronic Gun (Taser) Injuries," [Comparative Study] 16 *Annals Emergency Med.* 73, Jan. 1987. Some have raised concerns about reliance on information from researchers who either are or were on the TASER International external medical and scientific review board, or who own stock in that company, or who have previously been paid to speak as a subject matter expert on ECWs. In fact, one medical journal editor has noted his personal opinion that, "despite . . . scientific demonstration of potentially lethal effects in animals and humans" and "overwhelming circumstantial evidence" of the risks associated with ECWs, the major ECW manufacturer has "sponsored research to prove the taser's safety." "Just about all the research, as it turns out." Matthew B. Stanbrook et al., eds., "Editorial: Tasers in Medicine: An Irreverent Call for Proposals," 178 *Can. Med. Ass'n J.* 1401, 2008, available at <http://www.cmaj.ca/cgi/content/full/178/11/1401>. The editor continues, "[t]he scientific literature bears witness to a small group of dedicated researchers who diligently write letters to journals pointing out flaws in studies reporting harm from [ECW]s," which are then published by other journals' editors who are under no obligation to do so. *Id.* "Unfortunately, some of these researchers occasionally neglect to mention their participation on TASER International's medical advisory board or board of directors." *Id.* Likewise, he notes that, the ECW manufacturer, "sometimes goes further, to the extent of suing a researcher for publishing scientific results critical of [ECWs] in a peer-reviewed journal and a medical examiner for the 'error' of listing [ECW] exposure on a death certificate as the cause of death." *Id.* This strongly-worded opinion from the editor of a peer-reviewed journal certainly gives rise to concerns about research funded or performed by the manufacturer, members of its board, or those it routinely employs, even though his comments are not peer reviewed. However, as the editor notes, much of the available research falls into this category and this is not uncommon with at least the initial reports on any new drug or medical device. Readers of the scientific literature must make their own evaluation of the study, its methods, its results, and the conclusions based upon those results. The researchers are required to identify and address any potential conflicts of interest, and all submissions are subject to blinded review by peers in the field who likewise must report any potential conflicts. If a paper passes the review process by two or more unrelated professionals, then it is published and becomes part of the medical literature. In order to facilitate the reader's interpretation of the authors of the works cited in the medical section, a literature review and Internet search identified the following persons as serving, or previously serving, in an external review board position, or as having acknowledged stock ownership in or receipt of honoraria from TASER International: Jeffrey D. Ho, William Bozeman, Donald M. Dawes, Mark W. Kroll, Hugh Calkins, Charles Swerdlow, Michael Graham, William Heeggard, and James Sweeney. As a means to try to assure the integrity of the materials presented in the medical section, letters to the editor and other non-peer-reviewed works from any of these individuals are not cited as sole support for a claim.

discharge.¹¹⁹ The Task Force makes significant recommendations in each of these areas, all of which are directly supported by the reports of ECW-related risks in the medical literature.

To begin with, every successful ECW discharge results in some degree of injury if the darts enter the human body and if the individual is incapacitated and falls to the ground. This injury can range from extremely minor to catastrophic. On the relatively minor end of the spectrum, some of the lesser possible complications associated with ECW discharge include contusions, abrasions, lacerations, and mild muscle tissue damage.¹²⁰

Much more significant injuries, including those requiring hospitalization, are also reported in the literature. The use of ECWs may also lead to cardiovascular, respiratory, obstetric, ocular and traumatic injuries as well as potentially biochemical abnormalities.¹²¹ In a case series of four patients subdued with ECWs, researchers identified injuries including: (1) a fracture at the base of the skull and intracranial bleeding, necessitating brain surgery; (2) a concussion, facial laceration, multiple nasal fractures, and orbital floor fracture; (3) penetration completely through the skull by an ECW probe with seizure-like activity reported by the officer when the ECW was discharged; and (4) a forehead bruise and laceration.¹²² Although no dates were provided, it appears that these cases may have been gathered over as long a period as two years. The same authors concluded that, although seemingly rare, individuals against whom ECWs are discharged may be exposed to the potential for significant injury and that trauma surgeons and law enforcement agencies should be aware of the potential danger of significant head injuries as a result of loss of neuromuscular control.¹²³

ECW barbs are particularly dangerous to a subject's eyes. The medical literature includes at least four cases in which ocular injuries were sustained by impalement with an ECW dart, resulting in serious ophthalmic injuries.¹²⁴ ECWs have led to retinal detachment secondary to blunt trauma and cataract formation, both serious eye injuries.¹²⁵ Another case study discusses the perforation of a man's eye by an ECW

¹¹⁹ ECW injuries reported in the literature fall, very broadly, into two categories. The first is direct or primary injury. This category includes all injuries from the ECW acting alone, whether due to the entry of darts into the body or the electrical current discharged. The second category of injuries is indirect or secondary injury. Secondary injuries include ECW-induced falls. Both types of injury are causally related to ECW discharge given that absent the ECW, the injury would not have occurred.

¹²⁰ G.J. Ordog et al., "Electronic Gun (Taser) Injuries," 16 *Annals Emergency Med.* 73, Jan. 1987

¹²¹ M. Robb et al., "Review Article: Emergency Department Implications of the TASER," 21 *Emergency Med. Australasia*, Aug. 2009.

¹²² B.E. Mangus et al., "Taser and Taser Associated Injuries: A Case Series," [Case Study] 74 *Am. Surgeon* 862, Sept. 2008.

¹²³ *Id.*

¹²⁴ J.S. Han, A. Chopra & D. Carr, "Case Report: Ophthalmic Injuries from a TASER," 11 *Can. J. Emergency Med. Care* 90, Jan. 2009.

¹²⁵ R.K. Seth, "Case Report: Cataract Secondary to Electrical Shock from a Taser Gun," 33 *J. of Cataract & Refractive Surgery* 1664, Sept. 2007.

dart, causing iris, lens, and retinal injury and later, retinal detachment.¹²⁶ Another medical case study concluded that any ECW-dart injury around the orbits should raise the suspicion of a penetrating ocular injury.¹²⁷ In such cases, the authors concluded that removal of the dart should be performed in an operating theater under general anesthesia.¹²⁸

There is at least one reported case in which a patient developed pharyngeal perforation following the use of an ECW.¹²⁹ The fact that ECW use may inadvertently result in the penetration of an individual's throat provides additional support for the Task Force and manufacturer recommendation to avoid ECW discharge against vulnerable parts of the body.

ECW discharge can lead to seizures. In a case reported in the medical literature, during a police chase on foot, a previously well police officer was hit mistakenly by an ECW shot meant for the suspect.¹³⁰ Within seconds, the officer collapsed and experienced a generalized seizure with loss of consciousness and postictal confusion.¹³¹ More than one year after receiving the ECW shock, the officer's "symptoms of anxiety, difficulties concentrating, irritability, nonspecific dizziness and persistent headaches have not completely resolved."¹³² The authors stated that their report "shows that a taser shot to the head may result in a brain-specific complication such as generalized seizure. It also suggests that seizure should be considered an adverse event related to taser use."¹³³

These reports strongly support the Task Force's call for appropriate training prior to ECW deployment as well as its recommendations to obtain proper post-discharge medical treatment when necessary, and to avoid ECW discharge towards sensitive areas of the body such as the head, eyes, and groin.

¹²⁶ S.L. Chen et al., "Perforating Ocular Injury by Taser," 34 *Clinical & Experimental Ophthalmology* 378, May – June 2006.

¹²⁷ W. Ng et al., "Case Report: Taser Penetrating Ocular Injury," 139 *Am. J. Ophthalmology* 713, Apr. 2005 (discussing the case of a 50-year-old man who suffered impalement by an ECW dart 1.5 cm below the right lower eyelid margin, causing a full-thickness wound adequately large for vitreous to escape from the eye when the TASER was removed).

¹²⁸ *Id.*

¹²⁹ M. Al-Jarabah et al., "Case Report: Pharyngeal Perforation Secondary to Electrical Shock from a Taser Gun," 25 *Emergency Med. J.* 378, June 2008.

¹³⁰ Esther T. Bui, Myra Surkes & Richard Wennberg, "Case Report: Generalized Tonic-Clonic Seizure After a Taser Shot to the Head," *Canadian Medical Association Journal*, Mar. 17, 2009, available at <http://www.cmaj.ca/cgi/reprint/180/6/625> (hereinafter "CMAJ Case Report"). TASER International responded that it was "aware of a few incidents during training in which an officer experienced a seizure following a hit by a TASER device." Sue Bailey, "Medical Journal Article Says Taser Stun to the Head Can Cause Seizures," *Canadian Press*, Mar. 16, 2009. A TASER International product warning notes that the risk of seizure "may be heightened if electrical stimuli or current passes through the head region." See also TASER Product Warning, *supra* note 113, p. 6.

¹³¹ CMAJ Case Report, *supra* note 130.

¹³² *Id.*

¹³³ *Id.*

In addition to injuries to superficial body structures or those sustained in the post-discharge fall, complications from ECW use include injury to deep structures of the abdomen and chest.¹³⁴ For instance, while currently rare in the medical literature, there is at least one case report of a 16-year old male patient who suffered a collapsed lung after an ECW discharge.¹³⁵ This report strongly supports the recommendation to avoid ECW use against very thin individuals given the risk of piercing the chest wall and causing serious injury internally. It also forms a medical basis to avoid ECW use against those who are running and at risk of falling on the darts, forcing them further into the body.

A case report in the *Annals of Emergency Medicine* found that the fall due to an ECW discharge caused a thoracic spine compression fracture in the victim.¹³⁶ It is recognized elsewhere that ECW discharge may result in spinal fractures, and it has been suggested that “physicians consider obtaining back radiographs to rule out a vertebral compression fracture in any individual who has sustained a TASER discharge and has ongoing or persistent back pain.”¹³⁷ Here again, the medical literature supports the recommendation for officers to seek medical assistance for subjects against whom ECWs are discharged, when necessary.

The medical literature reviewed includes one case report of a woman losing her child to miscarriage seven days after an ECW was discharged against her.¹³⁸ This report underpins the Task Force recommendation to avoid ECW discharge against women known to be pregnant.

There are theoretical concerns expressed in the literature related to the effects of ECWs on respiration. One study found that repeated or long-duration discharges of ECWs may result in more potentially harmful effects (as reflected in blood factor changes), including a lack of effective respiration, as compared to shorter discharges.¹³⁹ This study concludes that it is not known if all human subjects exposed to ECW discharges in the field (often “on drugs” or exhibiting a set of symptoms sometimes called “excited delirium”) would be able to maintain adequate breathing. This study strongly supports the Task Force recommendations regarding repeated or long-duration ECW discharges as well as the Task Force recommendations regarding the discharge of ECWs against individuals who are known to be under the influence of drugs, or who are experiencing “excited delirium.”

¹³⁴ P.R. Hinchey & G. Subramaniam, “Pneumothorax as a Complication After TASER Activation,” 13 *Prehospital Emergency Care* 532, Oct. – Dec., 2009.

¹³⁵ *Id.*

¹³⁶ J.E. Winslow et al., “Thoracic Compression Fractures as a Result of Shock from a Conducted Energy Weapon: A Case Report,” 50 *Annals Emergency Med.* 584, Sept. 2007.

¹³⁷ C.M. Sloane, “Case Report: Thoracic Spine Compression Fracture after TASER Activation,” 34 *J. Emergency Med.* 283, Apr. 2008.

¹³⁸ L.E. Mehl, “Case Report: Electrical Injury from Taser and Miscarriage,” 71 *Acta Obstetrica et Gynecologica Scandinavica* 118, Feb. 1992.

¹³⁹ J.R. Jauchem, “Repeated or Long-Duration TASER® Electronic Control Device Exposures: Acidemia and Lack of Respiration,” *Forensic Sci., Med. & Pathology*, Nov. 20, 2009.

There are theoretical concerns raised in the literature and elsewhere regarding the interaction of ECWs with the heart. ECWs can acutely alter cardiac function in swine, including by inducing ventricular fibrillation, a dangerous condition which can lead to cardiac arrest and death.¹⁴⁰ In fact, one study found two deaths in 11 swine immediately after ECW discharge from acute onset ventricular fibrillation.¹⁴¹ In another study of 25 pigs shocked with ECWs, fatal ventricular fibrillation was induced in one.¹⁴² These cardiac concerns provide a medical basis for the recommendation to avoid ECW use against those with known heart conditions.¹⁴³

ECW deployment and discharge have also been associated in the medical literature with the risk of death from non-cardiac causes. After finding that the rate of in-custody sudden death increased 6.4-fold in the first full year after ECW deployment compared with the average rate in the 5 years before deployment, one study concludes that, "TASER deployment was associated with a substantial increase in in-custody sudden deaths in the early deployment period."¹⁴⁴

TASER International noted in a submission to the U.S. Securities and Exchange Commission that their products "are often used in aggressive confrontations that may result in serious, permanent bodily injury or death to those involved. Our products may cause or be associated with these injuries."¹⁴⁵

One case series identified 75 "TASER-related deaths" occurring over four years beginning in January 2001 and noted that use of an ECW was considered a potential or contributory cause of death in 27% of these cases.¹⁴⁶ This research provides further support of the finding that ECWs should, in certain circumstances, be considered deadly weapons.

In assessing this data, it is important to consider that approximately 60% of the discharges at issue were in a sterile training environment and may not represent real-world circumstances. However, conducting a field-based study would be technically

¹⁴⁰ D.J. Valentino et al., "Taser X26 Discharges in Swine: Ventricular Rhythm Capture Is Dependent on Discharge Vector," 65 J. Trauma 1478, Dec. 2008.

¹⁴¹ A.J. Dennis et al., "Acute Effects of TASER X26 Discharges in a Swine Model," 63 J. Trauma 581, Sept. 2007.

¹⁴² R.J. Walter, "TASER X26 Discharges in Swine Produce Potentially Fatal Ventricular Arrhythmias," 15 Acad. Emerging Med. 66, Jan. 2008.

¹⁴³ See also Kumaraswamy Nanthakumar, et al., "Case Report: Cardiac Stimulation with High Voltage Discharge from Stun Guns," Canadian Medical Association Journal, p. 1451, May 20, 2008, available at <http://www.cmaj.ca/cgi/reprint/178/11/1451> ("Despite theoretical analyses and animal studies which suggest that stun guns cannot and do not affect the heart, 3 independent investigators have shown cardiac stimulation by stun guns. Additional research studies involving people are needed to resolve the conflicting theoretical and experimental findings and to aid in the design of stun guns that are unable to stimulate the heart."); see also *id.* pp. 1456-57 ("In our view, it is inappropriate to conclude that stun gun discharges cannot lead to adverse cardiac consequences in all real world settings.").

¹⁴⁴ Byron K. Lee et al., "Relation of Taser (Electrical Stun Gun) Deployment to Increase in In-Custody Sudden Deaths," 103 Am. J. of Cardiology 877, Mar. 2009.

¹⁴⁵ TASER Int'l, Inc., Form 10-K Annual Report for period ending December 31, 2005, p. 15.

¹⁴⁶ J. Strote et al., "Taser Use in Restraint-Related Deaths," 10 Prehospital Emergency Care 447, Oct.- Dec. 2006.

and ethically difficult, since it involves an unpredictable occurrence rate, and the study would be of persons in uncooperative or altered states of mind, who at least in theory, are at elevated risk of serious injury or death from the device to be studied (ECW). Institutional review boards would be extremely unlikely to approve such field studies of ECW use for these reasons. So, despite obvious differences between research subjects, and persons in states of psychiatric crisis, often with intoxication by illegal stimulant drugs, for the foreseeable future, available research will be limited to retroactive review of uncontrolled uses by law enforcement in the field and controlled studies of human volunteer research subjects. This limitation applies to all of the research, including that cited immediately above.

Given their widespread deployment, and an incidence of death of 0.02% to 0.07% associated with ECW use, deaths are likely to occur in Maryland following ECW discharge. Based on these figures, as the Task Force has found, ECWs are “less lethal” than some other force options. They are not “non-lethal,” however. While the rates of ECW-related death are very low, and the benefits still outweigh the risks of deployment, it is important to keep the high value of human life in perspective when addressing ECW deployment and discharge.

The statistical figures above related to deaths do not include primary or secondary injuries caused by ECWs. The incidence of primary or secondary injury from ECW discharge is even more difficult to quantify than the risk of death. First, deaths are reported more broadly and studied more closely. Second, there are definitional and other difficulties in isolating ECW injuries. For instance, some primary injury is inherent in every successful ECW discharge (the mere entry of the darts into the body, for example). A recent study that attempted to quantify the incidence of injuries associated with ECWs found a significant injury rate of 0.3% and a minor injury rate of 21.6%.¹⁴⁷

In reviewing the literature, it is important to keep in mind that while individual reports of any particular injury (e.g., the very rare penetration of the skull reported *once* in the literature) may be extremely rare complications on an individual basis, when the individual risks of each type of potential injury are compounded, the total risk of ECW discharge is greater than the specific risk of any particular injury. However, a review of the reported medical literature does suggest that the risk per discharge of serious long-

¹⁴⁷ A 2009 study by Wake Forest Medical Center claims to be the first published large independent study of injuries from ECWs. The study reports that 99.7% of subjects had no injuries or mild injuries following ECW use. Skin punctures bruises and cuts comprised 95.5% of the mild injuries. The “significant” injury rate (*i.e.*, moderate or severe injuries) in this study was 0.3%. These injuries included a cerebral contusion (bruise of the brain tissue); an indirectly caused epidural hematoma (a collection of blood between the skull and the brain); and a case of rhabdomyolysis (the destruction of skeletal muscle tissue which can be caused by thermal or electrical injury, among other things) that developed two days after ECW use. Two persons died after the ECW use, although not immediately and both deaths were determined to be unrelated to ECW use. It is unclear whether the cause of death determination was made at the time and/or by persons conducting the study. The study found the rate of minor injuries was 21.6%. The study defined minor injuries to include “superficial puncture wounds,” contusions, lacerations, “superficial burn marks, a finger fracture, a nasal fracture, a case of epistaxis, and a chipped tooth.” See Bozeman Study, *supra* note 7.

term injuries associated with the ECW is relatively low when compared with other force options.¹⁴⁸

Nevertheless, as demonstrated herein, injuries do occur with sufficient frequency to warrant careful consideration. In addition, even though some of the more serious complications from ECW use reported in the literature are relatively unusual, the severity of these events requires that they be examined here and understood by officers in the field.

In addition to serving as training guides for law enforcement personnel and providing background and context for the Task Force's recommendations, these and other examples throughout this report are meant to raise awareness of the seriousness of an agency's decision to deploy ECWs and an officer's decision to discharge one. Nonetheless, the Task Force is in favor of appropriate ECW deployment and use within the context of the risks outlined herein.

Finally, this report also calls for additional research in a variety of areas. This is supported by the recognition, in the medical literature, that there is only limited research into the overall safety or efficiency of ECWs currently available.¹⁴⁹

It is important to note that numerous bodies similar to this Task Force have reached strikingly similar conclusions about the state of the medical research and the potential risks associated with ECWs. For instance, the Canadian Police Research Centre noted that "police officers need to be aware of the adverse effects of multiple, consecutive cycles of a [ECW] on a subject" because "the issue related to multiple [ECW] applications and its impact on respiration, pH levels and other associated physical effects, offers a plausible theory on the possible connection between deaths, [ECW] use and people exhibiting symptoms of [ECW]."¹⁵⁰

Likewise, the Joint Non-Lethal Weapons Human Effects Center of Excellence, which produced a study for the United States Department of Defense, found that, "[d]ue to the absence of specific threshold information in young children, the elderly, individuals with underlying heart conditions, or individuals with concurrent drug use, it is not known whether there are sensitive individuals in these groups that could experience [ventricular fibrillation] under normal use of an [ECW] device."¹⁵¹

The UK's Defense Scientific Advisory Council's Subcommittee on the Medical Implications of Less-lethal Weapons released a statement in March 2005 stating that

¹⁴⁸ See, e.g., *id.*; Police Executive Research Forum, "Comparing Safety Outcomes in Police Use-of-Force Cases for Law Enforcement Agencies that Have Deployed Conducted Energy Devices and a Matched Comparison Group that Have Not: A Quasi-Experimental Evaluation," p. 7, Sept. 2009, available at http://www.policeforum.org/upload/CED_outcomes_193971463_10232009143958.pdf (hereinafter "Comparing Safety Outcomes").

¹⁴⁹ D.J. O'Brien, "Electronic Weaponry—A Question of Safety," 20 *Annals Emergency Med.* 583, May 1991.

¹⁵⁰ D. Manojlovic, "Review of Conducted Energy Devices: Technical Report TR01-2006," *Can. Police Res. Centre*, p. 18, Aug. 2005.

¹⁵¹ Joint Non-Lethal Weapons Program Report, *supra* note 110, at p. 42.

“[t]he possibility that other factors such as illicit drug intoxication, alcohol abuse, pre-existing heart disease and cardioactive therapeutic drugs may modify the threshold for generation of cardiac arrhythmias cannot be excluded.”¹⁵²

The Wisconsin Law Enforcement Standards Board developed standards for ECW use across Wisconsin and, on June 7, 2005, recommended that ECWs not be used against suspects who are running away, children, the elderly, and those engaged in civil disobedience.¹⁵³ The Board also recommended that officers be trained to recognize medical conditions that might precipitate death if an ECW is used, especially “excited delirium.”¹⁵⁴

The Braidwood Inquiry, sponsored at a national level by the Canadian government, studied ECW use, and found as follows:

in deaths proximate to use of a conducted energy weapon, there is often a lack of physical evidence on autopsy to determine whether arrhythmia was the cause of death, which opens the door to debate about whether the weapon or some preexisting medical condition was responsible. While alcohol or drug intoxication may complicate the pathological analysis in some cases, other explanations must be found in cases where alcohol or drugs were not involved.¹⁵⁵

A broad array of law enforcement and military agencies have also recognized the legitimate concerns raised in the literature. A Customs and Border Protection spokesman stated that there were “enough questions about the safety of the [ECW] device” to preclude the agency from deploying them and Immigration and Customs Enforcement (“ICE”) similarly banned the use of ECWs on December 10, 2003, after a review by their Firearms and Tactical Training Unit. An ICE spokesman said that “the decision [to ban ECWs] was made out of an abundance of caution related to safety.”¹⁵⁶

A February 2005 memorandum from the Aberdeen Proving Ground, a United States Army weapons test site in Maryland, discouraged shocking soldiers with ECWs in training. Although the Army’s occupational health sciences director affirmed the ECW’s effectiveness, the director warned that “the practice of using these weapons on U.S. Army military and civilian forces in training is not recommended, given the potential risks.”¹⁵⁷

¹⁵² UK Defense Scientific Advisory Council’s Statement, *supra* note 81.

¹⁵³ See Law Enforcement Standards Board, Wisconsin Department of Justice, “Advisory Committee Recommendations for Training for Employment of an Electronic Control Device by Law Enforcement Officers in Wisconsin,” June 7, 2005, available at <https://wilenet.org/html/taser/TSReport.pdf>.

¹⁵⁴ *Id.*

¹⁵⁵ Braidwood Report, *supra* note 61, p. 228.

¹⁵⁶ Kevin Johnson, “Federal Bureaus Reject Stun Guns,” USA Today, Mar. 17, 2005.

¹⁵⁷ Department of the Army, “The U.S. Army Center for Health Promotion and Preventive Medicine’s Position on Whether TASER Electro Muscular Incapacitation Launched Electrode Stun Weapons are Safe to Use on U.S. Army Military and Civilian Personnel During Training,” p. 4, Feb. 7, 2005, available at <http://mcdetflw.tecom.usmc.mil/INIWIC 05/Reference Docs/03MQ-05 TASER.PDF>.

The National Institute of Justice issued an Interim Report in 2008 consistent with many of the findings of this report. It provides:

The potential for moderate or severe injury related to [ECW] exposure is low. However, darts may cause puncture wounds or burns. Puncture wounds to an eye by a barbed dart could lead to a loss of vision in the affected eye. Head injuries or fractures resulting from falls due to muscle incapacitation may occur.

[ECW]s can produce secondary or indirect effects that may result in death. Examples include deploying a device against a person who is in water, resulting in drowning, or against a person on a steep slope resulting in a fall, or ignition risk resulting from deployment near flammable materials such as gasoline, explosives or flammable pepper spray that may be ignited by a spark from a device.

There is currently no medical evidence that [ECW]s pose a significant risk for induced cardiac dysrhythmia when deployed reasonably. Research suggests that factors such as thin stature and dart placement in the chest may lower the safety margin for cardiac dysrhythmia.¹⁵⁸

Likewise, PERF has endorsed training in connection with many of the same issues for which we recommend specific officer guidance:

Another training issue is the inappropriate use of the [ECW]. Misuse can range from outright abusive or illegal use of the weapon to less obvious cases of officers turning to a [ECW] too early in a force incident. These problems can be managed with policies, training, monitoring and accountability systems that provide clear guidance (and consequences) to officers regarding when and under what conditions [ECW]s should be used and when they should not be used.¹⁵⁹

In addition to wide consensus in the field at large regarding many of the recommendations of this report, others have also concluded, as the Task Force does, that more research is necessary in certain areas. “The peer review and open literature [on ECWs] contains very limited objective scientific research data on mechanism of action, efficacy, safety, and acute and long term effects of these devices.”¹⁶⁰ This group also found that “key data gaps and uncertainties preclude the development of effectiveness and risk probabilities.”¹⁶¹

The Potomac Institute for Policy Studies prepared a report based on information gathered at a conference that sought to bring together experts and professionals in the field to “offer insights and suggestions on filling the current gaps in knowledge”

¹⁵⁸ NIJ Interim Report, *supra* note 76, p. 3.

¹⁵⁹ Comparing Safety Outcomes, *supra* note 148.

¹⁶⁰ Joint Non-Lethal Weapons Program Report, *supra* note 110, p. 25.

¹⁶¹ *Id.* at p. 73.

surrounding the efficacy and safety of ECWs. The report concluded by “strongly recommend[ing] that additional research be conducted at the organism, organ, tissue and cell levels.”¹⁶²

The law enforcement response to the medical literature, like the response of this Task Force and others like it, has also been to recognize certain inadequacies and call for additional research. “Independent data does not yet exist concerning in-custody deaths, the safety of [ECWs] when applied to drug or alcohol-compromised individuals, or other critical issues.”¹⁶³

In short, the Task Force’s findings and recommendations are in keeping with and supported by the medical literature, the work of similar bodies, and the conclusions of many law enforcement groups. This Task Force recognizes that the benefits of ECWs justify the risks involved in deploying them. However, the Task Force also agrees with the many authorities cited above that there are substantial risks associated with ECWs. The Task Force’s mission requires that these risks be acknowledged so that: (1) agencies may take them into account in deciding whether to adopt this tool and where to place it in use-of-force training; and (2) potential ECW operators can be educated about the risks so that they have the tools necessary to make appropriate judgments about when and why to discharge this weapon.

IX. Reporting and Investigation

To maintain community confidence, agencies must vigilantly investigate and document ECW use. The Task Force believes that a use-of-force investigation should occur in operational settings regardless of whether an ECW discharge is accidental or intentional. In addition, investigations should be conducted regardless of the weapon mode used. Even when the weapon is merely cycled or the laser dot is used to gain compliance, investigation and documentation are crucial to ensure the weapon is being used appropriately. Reporting and investigating weapon cycling and laser dot aiming not only allows law enforcement to justify use and demonstrate restraint when allegations of abuse arise, but such efforts also provide a rare instance where a prevented outcome can reasonably be measured.

The foundation for that investigation starts with supervisory engagement. Supervisors have a role prior to ECW discharge, and once force is used they need to respond immediately to ensure the investigation is thorough and detailed and that evidence is properly gathered.¹⁶⁴

The Task Force recognizes that the actual supervisor may not always be able to respond immediately to the scene of the use of force. The supervisor may instead go to the hospital where the suspect is located, or may be unavailable for any number of

¹⁶² Dennis K. McBride et al., Potomac Institute for Policy Studies, “Efficacy and Safety of Electrical Stun Devices (Report No. 05-04),” p. 5, Mar. 29, 2005, available at http://www.potomac institute.org/images/stun_devices_report_final.pdf.

¹⁶³ See, e.g., IACP Executive Brief, *supra* note 31, p. 5.

¹⁶⁴ PERF Guidelines, *supra* note 33, at Nos. 30 and 31.

reasons. If the supervisor cannot personally respond to the scene, he or she should direct someone other than the officer who discharged the ECW to respond to the scene to conduct the investigation and ensure evidence is properly gathered. That investigation should include, at a minimum:¹⁶⁵

- Collection of information from officer(s), suspect(s) and witnesses;
- Photographs of the scene and all evidence;
- Photographs of injuries to the officer(s) and/or suspects;
- Collection of physical evidence, including cartridges, probes/prongs, confetti/identification tags, video from vehicle/weapon, etc.;
- Documentation of data downloads from the ECW;
- Radio transcripts, if necessary;
- Test results for the weapon's operability and electrical output, for cases involving life-threatening injury or death; and
- Complete documentation of the incident, including standard incident reports and use-of-force reports.

The Task Force also recognizes that typical ECW uses that involve either no injury or minor injury and involve no apparent policy deviance can be investigated within the discharging officer's chain-of-command, subject to a command review. In more serious cases, however, the review should be conducted by an independent unit such as Internal Affairs or other Professional Standards-type unit for law, policy, and training compliance. The cases necessitating an independent investigation include those where an ECW:

- resulted in serious injury or death of a suspect;
- was used against a heightened-risk individual (e.g., elderly, young, pregnant, etc.);
- was used in a high-risk situation (e.g., elevated areas, in water, etc.);
- was discharged multiple times or for a duration exceeding standard policy/training standards; or
- was otherwise potentially misused.

Entities investigating and reviewing ECW use should not only assess whether the officer's actions were in compliance with law and policy, but should also take the opportunity to determine whether the incident indicates any need for changes to the agency's policies, training, or equipment. To that end, agencies should also consider conducting periodic reviews and critiques of ECW cases to learn from these situations.

For cases involving death, the State Medical Examiner should determine and document whether ECW use may have contributed or did contribute to that death. Due to fluctuating interpretations, "excited delirium" should not be cited as the cause of death if another direct cause is known. In addition, when "excited delirium" is listed as either the cause of death or a contributing factor, the Medical Examiner should list the cluster of symptoms that lead to that finding. While the Task Force commends the State

¹⁶⁵ *Id.* at No. 35.

Medical Examiner's Office for their efforts up until this point, the Task Force hopes that providing more specific information will better assist law enforcement agencies, researchers, and communities in general in understanding the effects of ECWs.

X. Monitoring, Data Collection, and Evaluation

Accountability is fundamental to a law enforcement agency's successful use of ECWs.¹⁶⁶ Without accountability, both at an individual officer and agency level, ECWs can be abused and misused in ways that could undermine the legitimacy of the officer, the agency, and the use of ECWs. While many Maryland agencies already collect extensive data regarding ECW use, few compile such data or make it easily accessible to the public. Nor do agencies collect data in a comparable format, hindering accurate statewide assessment of ECW benefits and risks. The lack of any centralized statewide repository for such information further complicates the public's ability to review ECW usage data. To the extent such data is currently available, it would have to be obtained in a piecemeal fashion from each individual agency. Thus, to further ensure that law enforcement agencies are properly utilizing ECWs and to inform future policy judgments regarding the regulation or promotion of ECWs, the data regarding ECW discharges collected by Maryland agencies should be uniform and collected, maintained, and made available to the public via a state-wide process. Many law enforcement agencies and best practices support these objectives, including PERF, IACP, the Braidwood Commission on Conducted Energy Weapon Use,¹⁶⁷ the Allegheny Working Group,¹⁶⁸ and the Illinois Law Enforcement Training and Standards Board.¹⁶⁹

Sufficient data collection is also necessary for law enforcement agencies and the broader community to assess the costs and benefits of ECWs, especially as compared to other tools available. One of the most significant problems in developing this report—and as noted by most other organizations and task forces that have researched the appropriate role of ECWs¹⁷⁰—is the paucity of objective data, which places law enforcement agencies and policymakers at a disadvantage when making policy choices concerning ECWs.

¹⁶⁶ See Allegheny Report, *supra* note 69, p. 12-13; Braidwood Report, *supra* note 61, p. 61.

¹⁶⁷ Braidwood Commission on Conducted Energy Weapon Use, "Restoring Public Confidence: Restricting the Use of Conducted Energy Weapons in British Columbia, June 2009, available at <http://www.braidwoodinquiry.ca/report/>.

¹⁶⁸ Report of the Use of Force Working Group of Allegheny County, Pennsylvania, convened by Stephen A. Zappala, District Attorney (Oct. 8, 2009), available at <http://www.law.pitt.edu/files/harris/Taser-Working-Group.pdf>.

¹⁶⁹ Illinois Law Enforcement Training and Standards Board, "Policy Development Guidelines for Deployment of Electro-Muscular Disruption Devices," available at <http://www.ptb.state.il.us/pdf/EMD Policy Guidelines.pdf> (hereinafter "Illinois Law Enforcement Guidelines").

¹⁷⁰ See, e.g., Allegheny Report, *supra* note 69, pp. 17-18 ("The Working Group believes that the goals of accountability and public education can be served by basic statistical tracking of all TASER™ uses, along with data tracking important contextual factors. All uses of TASERs by any police officer that would constitute a use-of-force should be tracked, and appropriate data on the situation should be tracked along with it. That data should be gathered systematically, and analyzed rigorously by a neutral third party such as a university or a think tank, to insure public confidence. Further, any system of data tracking should make the data and the analysis available to the public in convenient, widely available forms, such as on the internet."); Braidwood Report, *supra* note 61, pp. 329-34.

Because of their role in incidents that have led to deaths or serious injuries, ECWs are subject to intense scrutiny as indicated by the number of studies commissioned to examine the propriety of their use. This scrutiny is likely to become even greater in the wake of TASER International's recent recommendation that TASERs should not be aimed at the chest.¹⁷¹ As the scrutiny of ECWs increases, it is especially important that comprehensive and reliable data be available to accurately assess the actual risks and benefits associated with ECW use. It is difficult to credibly evaluate claims about ECWs without such data—both with respect to their benefits and their risks. For instance, proponents of ECWs often claim that their use leads to a decrease in fatalities, while opponents of ECWs claim that they lead to an increase in the overall incidences of use of force. Neither claim can be reliably assessed without accurate, uniform, and comprehensive data collection and compilation.

Agency Collection of Data

One of the advantages of ECWs is that most devices, including those devices most commonly used by Maryland law enforcement, create an electronic record of each discharge, which details a variety of information, including the time that the discharge occurred, the number of times the ECW was discharged, and the duration of each discharge. Law enforcement agencies should require regular downloading of this data from all ECWs. In addition to the data automatically recorded by ECWs, other data related to ECW use is routinely recorded in arrest and use-of-force reports. Uniform data from all sources should be timely collected and maintained and should include:¹⁷²

- The date, time, and location of incident;
- Whether the ECW was displayed and if the display alone gained compliance;
- Identifying and descriptive information of the suspect (including weight, height, age, membership in an at-risk population and the race, ethnicity, and gender of the subject), all officers firing ECWs, all officer witnesses, and all other witnesses;
- The type and brand or model of ECW used;
- The number of ECW cycles, the duration of each cycle, the duration between cycles and the duration that the subject was actually shocked;
- The level of aggression encountered;
- Any weapons possessed by the subject;
- The type of crime/incident the subject was involved in;
- The type of clothing worn by the subject;
- The range at which the ECW was used;
- The type of mode used (display only, red-dot compliance, incapacitation, pain compliance, or combinations thereof);

¹⁷¹ See, e.g., "Heart-Stopping," Frederick News Post, Nov. 1, 2009, available at http://www.fredericknewspost.com/sections/opinion/display_editorial.htm?StoryID=97224§ion=ed (editorial criticizing TASER International for recent revelations regarding safety of TASERs).

¹⁷² See generally PERF Guidelines, *supra* note 33; see also International Association of Chiefs of Police, "Electronic Control Weapons: Concepts and Issues Paper," p. 5, rev. Aug. 2005 (offering similar guidance on what should be included in reports after ECW use).

- The point of impact of probes on a subject (when ECW was used in incapacitation mode);
- The point of impact on a subject (when ECW was used in drive-stun (pain compliance) mode);
- The location of missed probe(s), if any;
- Terrain and weather conditions during ECW use;
- Lighting conditions;
- Medical care provided to the subject;
- Any injuries incurred by an officer or subject;¹⁷³
- The serial number from Anti-Felon Identification (“AFID”) “confetti” from the discharged cartridge;
- The serial number of all cartridges used in the discharge;
- The results of any toxicology tests administered;
- The results of any medical evaluations conducted;
- The purpose of discharge and how or if the discharge complied with the use-of-force standards, especially if a discharge occurred under exigent circumstances; and
- A determination of whether deadly force would have been justified.

All information should be immediately collected and timely reported. Some information may not be immediately available (e.g., toxicology results) but should be provided when it does become available.

Agency Review of Data

Agencies should regularly analyze the data collected in order to observe the distribution of discharges among officers and geographic areas, to track trends over time, and to determine whether some officers or agencies are using ECWs at a different rate or in a different manner than similarly situated peers. In utilizing an Early Warning System or other procedure for identifying potential misuse of the ECW, it is important that comparisons of ECW usage across officers and departments take into account what portion of officers in a given shift carry ECWs, the differences in the jurisdictions (e.g., rural vs. urban), and any other differences that might skew the comparisons. For instance, in a precinct where only a small number of officers are equipped with ECWs, an agency should consider that the ECW-equipped officers may be specifically summoned to other officers’ calls by a supervisor, and may thus artificially appear to be overusing the ECW. Regular audits of this data are essential to ensure compliance with the agency’s policies and to ascertain whether any changes to policy or training are advised. Agencies should also regularly compare the data recorded by the ECW to the filed use-of-force reports to ensure there are no discrepancies.

¹⁷³ PERF Guidelines, *supra* note 33, at No. 28; see also Illinois Law Enforcement Guidelines, *supra* note 169, p. 3.

Evaluation and Recertification

As described in the training section above, officers who carry ECWs should undergo an annual recertification process. As part of this process, an agency should review an officer's downloaded data and use-of-force reports to determine if the officer's past history of ECW use indicates that he or she is not using the device appropriately. In analyzing the relevant data, it is important that the officer be compared to other similarly-situated officers. Based on the officer's past history of ECW use, an agency can recommend the officer take additional training or decline to renew an officer's certification. Pursuant to an audit of an officer's ECW usage history outside of the recertification process, an agency may also elect to suspend or withdraw an officer's ECW certification if the data suggests the officer is not using the ECW properly or could benefit from additional training.

State-Wide Collection and Aggregation of ECW Data

To allow effective tracking of long-term usage statistics and trends, the State should require state-wide collection, compilation, and analysis of uniform and comprehensive agency data regarding ECW use. The data collected should include all data listed above, as well as the Medical Examiner's report for any death for which an ECW is listed as a cause of death or a contributing factor. This data should be collected, compiled and annually published by the Governor's Office of Crime Control and Prevention ("GOCCP") (or other appropriate state agency). Each individual law enforcement agency should also make its reported data available to the public upon request to ensure that citizens can be informed about the use of ECWs in their communities.

ECW Inspection and Testing

To facilitate safety and effectiveness, ECWs should be tested regularly for proper operation and output. At the start of each shift, officers should inspect and test their ECWs. Each inspection should be recorded in a log book. Supervisors should also conduct random inspections of ECWs during roll call or other times that they inspect the officers. Further, all ECWs should be taken for quarterly inspection and maintenance to qualified personnel who can ensure that each weapon is operating within the manufacturer's recommended parameters.

XI. Research

During the course of the Task Force's work, including receiving testimony, reviewing the literature related to ECWs, reviewing law enforcement agencies' policies and training materials related to ECWs, and listening to presentations from industry representatives, Maryland stakeholders, and others, the Task Force has become convinced that additional research into various aspects of ECW use is urgently needed. Much of the in-depth inquiry about how ECWs work and what impact they have when used has taken place in court rooms in the form of competing, and often contradicting, expert testimony. Many areas have not yet been studied in a rigorous manner.

Research in other areas lacks credibility because it has been based on very small studies, has used questionable methodologies, or was conducted by entities funded by or affiliated with TASER International, the primary vendor of ECWs. The Task Force recommends that independent, peer-reviewed research in the following areas be conducted.

Physiological Effects of ECWs, Especially When Used Repeatedly, for Prolonged Periods, Simultaneously, or on Persons in Heightened-Risk Populations

There has been insufficient independent, peer-reviewed research on the physiological effects of ECWs. In particular, more research is needed to understand the extent to which ECWs pose a greater risk of injury to certain groups of persons, and how and why this greater risk exists. Deaths and serious injuries have been associated with certain groups of persons, including children, the elderly, pregnant women, persons with thin chest walls, small persons (regardless of age), persons with serious heart or other medical conditions, and persons in mental health or medical crisis.

There have been multiple deaths associated with multiple and prolonged ECW discharges. More research is also needed to determine any increase in risk when ECWs are discharged repeatedly, simultaneously, or for longer than five seconds.

Additional independent, peer-reviewed research in these areas should help law enforcement agencies and the communities they serve make safer and more informed decisions about when and how ECWs are used.

Physiological Effects of ECWs When Discharged Against Certain Areas of the Body

Deaths and serious injuries have been attributed to ECW discharge in a person's chest area, neck, and head, but there is insufficient research to determine conclusively whether the relationship is one of cause and effect and whether any harm caused by dart/probe placement is independent of, or exacerbated by, the impact of using an ECW on a person at heightened risk for injury.

There are accounts of deaths that appear related to where the ECW barbs/probes strike an individual's body. The neck and chest area appear to be two such sensitive areas. One ECW-proximate death in Maryland occurred after an ECW barb pierced the heart of the woman against whom it was discharged. The Amnesty International report on ECWs similarly recounts a number of deaths or serious injuries in which the ECW barbs/probes were implanted in vulnerable areas.¹⁷⁴ TASER International recently released guidelines recommending that chest shots with ECWs be

¹⁷⁴ For example, Amnesty International recounts an incident that occurred in April 2007, where a TASER was discharged against the slightly built Uywanda Peterson who then fell on the TASER probe. It is reported that the TASER probe passed through her chest wall and into her lung and heart, and that according to emergency medical personnel, her heart was in ventricular fibrillation when first recorded. Ms. Peterson lost consciousness at the scene and was pronounced dead half an hour later. Amnesty Int'l Report, *supra* note 8, pp. 73-74.

avoided in order to “avoid[] the controversy about whether ECWs do or do not affect the human heart.”¹⁷⁵

The head also appears to be a higher-risk target. An Ontario, Canada, law enforcement officer “collapsed and went into a full-blown seizure—foaming at the mouth—for about one minute,” after being accidentally hit with an ECW by his partner. He was still experiencing headaches and has difficulty concentrating over a year later.¹⁷⁶ TASER International responded to this incident by stating that it was “aware of a few incidents during training in which an officer experienced a seizure following a hit by a TASER device.” A TASER Product Warning notes that the risk of seizure “may be heightened if electrical stimuli or current passes through the head region.”¹⁷⁷

Additional research is needed given the apparent links between some ECW-proximate deaths with where the ECW struck the body.

Comparison of Incidents of Deadly Force Used in Agencies with and without ECWs

More research is needed to help determine the extent to which the use of ECWs may decrease law enforcement agencies’ use of lethal force, and the deaths and injuries associated with such force. One of the most persuasive arguments in favor of adopting ECWs as a use-of-force option in a law enforcement agency is that ECWs reduce the use of deadly force by the agency. However, in most cases in which deadly force is used, the officer had determined that a less-lethal force option was not feasible, raising the question of how often an ECW can be used to counter significant threats. Moreover, the argument goes, without reducing the use of lethal force, the perceived safety of ECWs may encourage officers to quickly resort to the ECW rather than first trying the non-force options available to the officer, thus increasing the overall number of uses-of-force by the agency.

Researchers are beginning to compile large independent studies into the relative rates of injuries (including serious injuries) in law enforcement agencies that have ECWs and those that do not.¹⁷⁸ The Task Force is aware of only one large-scale study directly investigating the extent to which deadly force is used less in agencies that have ECWs than those that do not, or used less in agencies after the adoption of ECWs as a force option. This study found no difference in suspect deaths in agencies that had adopted ECWs.¹⁷⁹ Further research in this area is needed to assist jurisdictions in deciding whether and how to adopt ECWs.

¹⁷⁵ TASER Training Bulletin, *supra* note 78.

¹⁷⁶ CMAJ Case Report, *supra* note 130 (noting that more than one year after receiving the ECW shock, the officer’s “symptoms of anxiety, difficulties concentrating, irritability, nonspecific dizziness and persistent headaches [had] not completely resolved”).

¹⁷⁷ TASER Product Warning, *supra* note 113, p. 6.

¹⁷⁸ A recent Wake Forest University study claims to be the first published large independent study of injuries from ECWs. See Bozeman Study, *supra* note 7.

¹⁷⁹ See Comparing Safety Outcomes, *supra* note 148. The main thrust of the report is the significant and encouraging finding that the agencies under review had better outcomes in six of the nine criteria studied (e.g., fewer or less severe injuries). In addition to finding no difference in suspect deaths, the

Feasibility of Having Automatic External Defibrillators Readily Available to Officers

Studies have found that providing police with automatic external defibrillators (“AEDs”) improves survival of persons in ventricular fibrillation.¹⁸⁰ While AEDs are beneficial in a broad array of scenarios, the medical community has not conclusively determined whether ECWs cause ventricular fibrillation. Should additional research show a correlation between ECWs and ventricular fibrillation, law enforcement agencies may have an additional reason to consider equipping police vehicles with AEDs.

Recognizing the high cost of AEDs, as well as the fact that incidents involving ECW discharge are only a fraction of those in which AEDs could save lives, the Task Force recommends that the State conduct further directed inquiry into whether law enforcement agencies should equip squad cars with automatic external defibrillators.

Medical and Operational Impacts of New and Developing ECW Weapons

TASER International is continually developing and marketing new weapons based on ECW technology. Recently, for example, they have introduced the TASER X3, which can engage multiple targets (*i.e.*, shock three people simultaneously using one device); and a TASER XREP wireless shocking “shotgun.” The benefits and risks of these new weapons are not known and the findings of current and developing research based on the TASER X26 and similar weapons are likely not valid for these weapons. The Task Force recommends that research into the functions, physiological effects, and operational uses of each ECW be evaluated as they are developed. Of equal importance, new weapons may present new risks and law enforcement agencies and other stakeholders should not automatically rely upon research based on previously developed weapons sold by ECW vendors when deciding whether and how to adopt new weapons based on the same technology.

XII. Civilian Use of Electronic Control Weapons

Recent legislation has highlighted the ability of citizens to purchase ECWs in most jurisdictions,¹⁸¹ and the Task Force is concerned that manufacturers will seek to increase their sales of ECWs to civilians in Maryland. One ECW manufacturer advertises civilian ECW models in magazines and has a price point significantly lower than the law enforcement costs for similar weapons. In addition, it is unknown whether the manufacturer will make available to citizens new technology like ECW shotgun rounds or cartridges that have multiple sets of probes.

Law enforcement has great concern about civilian purchase and use of ECWs, and whether the existing legislation will adequately cover either current or emerging

report found no difference in severe officer injury or in officer injury resulting in an officer being taken to a hospital. (There were no officer deaths so no analysis could be made.)

¹⁸⁰ See, e.g., V. Mosesso, Jr., et al., “Use of Automated External Defibrillators by Police Officers for Treatment of Out-of-Hospital Cardiac Arrest,” [Prospective Controlled Trial] 32 *Annals Emergency Med.* 200 (1998).

¹⁸¹ MD. CODE ANN., CRIMINAL LAW § 4-109.

ECW technology. That concern was also shared by the vast majority of those who testified at the Task Force hearings.

Screening

ECWs are not classified as firearms by the Bureau of Alcohol, Tobacco, and Firearms (“BATF”). Civilians purchasing ECWs are therefore exempt from typical federal firearms regulations, such as background checks and waiting periods, which are designed to screen out persons of questionable character, those with significant criminal backgrounds, or those who may be mentally instable. In Maryland, civilian ECW purchasers are also exempt from an application process for use or wear-and-carry permit requirements.

Maryland’s current law requires a record check, but places that burden on the ECW manufacturer. Under the law, what constitutes a record check is not clearly defined, and there is little in the way of criteria or standards to apply to the record check results. Moreover, it is an open question whether an out-of-state manufacturer can be forced to comply with a Maryland law.

Conversely, police officers are screened to ensure that only the most qualified are certified to use an ECW. Law enforcement agencies sometimes assess performance ratings, firearms proficiency, use-of-force incidents, and the demonstrated ability to exercise good judgment under stress. Civilians, however, simply do not face such scrutiny.

Training

Police officers receive a great deal of ECW training, must pass knowledge and proficiency testing, and are subjected to periodic recertification. On the other hand, citizens receive little, if any, training, none of which is regulated or mandated. There is no testing on their knowledge or proficiency and no recertification mandates. This breeds the potential for mishaps, misuse, or abuse.

The importance of such training is demonstrated by the technology differences between law enforcement versions and civilian versions of the ECW. Law enforcement must go through a great deal of mandated training for a weapon that typically delivers a five-second cycle of current. Although civilian versions of the ECW have slightly less power, they are considered equally effective and deliver up to a 30-second cycle of current. Despite having a cycle almost six times longer than the law enforcement version, civilians will receive little or no training prior to use of their weapon.

Accountability

Police officers must follow standards and procedures for ECW use that are based on best practices and subjected to periodic refinement for operational and legal sufficiency. In addition, each ECW use is evaluated to determine if standards were followed and remedial action is taken when they are not. Conversely, civilians are not bound by or subjected to such safeguards and restrictions.

Dealer Regulation, Secondary Sales and Other Regulations

There are no regulations regarding ECW dealers, and once a civilian has purchased an ECW, there are no regulations governing the re-sale of the ECW to another individual. In addition, there is no limit to the number of ECWs that may be purchased by a civilian. This lack of regulation allows those legally able to purchase the weapon to sell them to those who cannot meet the State's minimum standards. Furthermore, the current law mandates that ECW manufacturers provide investigatory information to law enforcement, but again, it may not be enforceable for out-of-state manufacturers.

Criminal Use

Accessibility to ECWs will provide yet another weapon for use during the commission of a crime. There have already been reports of ECW use in crimes where other citizens have been victims. For example, in June 2009, a suspect entered a check-cashing establishment in Silver Spring, Maryland. According to the statement of charges, while the clerk was distracted by her work activities, she was assaulted and shocked with an ECW by the suspect. She was allegedly incapacitated and lost consciousness for several seconds. When she regained her faculties, she discovered that the suspect had stolen \$14,000 and fled the scene.¹⁸²

Part of the reason for an expected increase in criminal use is that some ECWs are similar in size, shape, and color to standard firearms. Law enforcement officers report a similar trend with other look-alike weapons such as "Airsoft" non-lethal toy guns, which have been used in the commission of crimes. Unlike "Airsoft"-type toy guns, however, ECWs actually have the ability to incapacitate the persons against whom they are used.

Criminals may also be drawn to ECWs because, as noted above, they aren't considered a firearm as defined by the BATF. Therefore, its use in the commission of a crime may mean that juveniles are not tried as adults, and that adults may not receive mandatory sentencing or enhanced penalties that usually occur when a firearm is used. In addition, the ECW is a newer technology, and it is unknown as to what type of criminal charge will be filed when an ECW is used in the commission of a crime (e.g., felony or misdemeanor, first degree assault or second degree assault, etc.).

Another reason criminals may choose to use an ECW is the weapon's utility. As a result, subjects who had not done so in the past may now elect to arm themselves. For example, a suspect committing a robbery may not use a firearm, but to be effective in the commission of that offense, the suspect had to face the victim and imply having the weapon. With an ECW, however, the suspect could easily sneak up on the victim and commit the crime in a stealth manner, with the potential to cause injuries. Not only would this limit the victim's ability to identify the suspect, but the suspect would not fear being charged with homicide or, arguably, aggravated assault.

¹⁸² See Case No. 3d00231199 (Dist. Ct. Montgomery County, 2009).

Potential for Other Abuse and Misuse

Lack of training poses a risk of self-harm to the civilian ECW user, as well as the risk of injuries to the ECW user's family, friends, or even animals. Since the ECW is not considered as dangerous as a firearm, civilians might not make the same efforts to limit ECW access to children and others, resulting in both accidental and intentional injuries. While there are laws controlling access to firearms, these laws do not apply to ECWs.

As a result, many children and adults may view the ECW as a toy and injuries will occur while simply playing with the ECW, or in other situations like hazing, drinking games, etc. More importantly, civilians may use the ECW to intentionally abuse family members or even pets out of anger or for other reasons.

Officer Safety

Civilian use of ECWs will be yet another threat to the safety of police officers. Unfortunately, citizens may not understand the ramifications for the use of an ECW against a police officer. For example, citizens understand that threatening a police officer with a firearm may be met with lethal force. They may not, however, realize that the same result may occur should they threaten an officer with an ECW. Their assumption may be that an ECW is a non-lethal weapon, and that law enforcement cannot therefore respond in a lethal fashion.

However, because officers may not be able to determine at the time of a critical incident that the suspect has an ECW, they must assume that it is a conventional firearm. Even if it can be determined that the weapon is, in fact, an ECW, the officer may still use lethal force. For if an officer is momentarily incapacitated, he or she may lose control of the police service firearm, creating an even more dangerous and potentially tragic situation.

XIII. Task Force Recommendations

Planning and Implementation Recommendations:

1. Agencies should recognize that the inclusion of a new use-of-force tool such as an ECW will have an impact on an agency's use-of-force program beyond the simple addition of a new force weapon. Among other things, ECWs may: reduce the need for other weapons; provide the opportunity to increase the use of other skills such as verbal de-escalation techniques; cause an increase in the use of force; lower rates of injury; and in some instances put too many weapons on an officer's belt, encumbering an officer's movement.
2. To ensure community concerns are understood and addressed before deciding whether to implement an ECW program and, if implemented, what safety and accountability mechanisms should be put in place, the decision-making process should involve community stakeholders (e.g., civil rights and mental health advocacy groups; medical professionals; lawmakers; and other interested parties).

3. Agencies should develop and adopt comprehensive policy and training specific to ECW use prior to implementation to provide as much guidance as possible for officers armed with ECWs.
4. Systems for comprehensive and reliable ECW reporting, investigation, data collection, and analysis must be fully developed.
5. A plan for providing training in crisis intervention techniques, including de-escalation techniques, should be provided to officers so they have alternative tools to deploy in situations involving persons experiencing mental health crisis and to help avoid over-reliance on ECWs and help ensure that ECW use does not unnecessarily alienate communities.
6. Law enforcement agencies should consider many factors when selecting which officers will be permitted to use ECWs. These factors may include the officer's:
 - Time on the job;
 - History of use of force;
 - Weapon proficiency history;
 - Demonstrated level of judgment; and/or
 - Overall job performance.
7. Law enforcement agencies should phase in and periodically evaluate the use of ECWs to: (1) ensure proper management of the program; (2) ensure goals and objectives are being met; and (3) identify and remedy any policy or training deficiencies.
8. When determining whether and how to adopt or continue the use of ECWs, officials should closely consider the specific needs and values of their agency and their community. Officials should remember that ECW vendors might not fully understand or appreciate those needs and values when making recommendations about whether and how an ECW program should be implemented or modified.
9. Each law enforcement agency should work closely with its community and school system to develop policies and protocols for whether and how ECWs will be used by law enforcement personnel specifically assigned to schools. Communities, schools, and law enforcement should decide whether officers assigned to schools will carry ECWs while on school assignment. It should not be automatically presumed or required that officers assigned to schools will carry ECWs simply because other officers in the department carry ECWs.

Training Recommendations:

10. The Maryland Police and Correctional Training Commission should incorporate the Task Force's recommendations into ECW training requirements for Maryland public safety agencies that use ECWs.
11. The training program must emphasize the need for restraint and good judgment.
12. ECW training and use programs must supplement any materials provided or presented by an ECW vendor to ensure that training comprehensively addresses all aspects of ECW operations covered by these recommendations (e.g., when use is warranted, how to provide pre-discharge warnings in languages commonly spoken in the community, risk factors, de-escalation techniques, reporting requirements, etc.).
13. An agency's training program must be mandatory for all officers authorized to use ECWs and should include provisions for certification and recertification, and have components for knowledge and proficiency testing, as well as scenario-based training.
14. Each agency must decide whether to expose officers to an ECW discharge. Exposure need not be a part of the training. Agencies that do permit exposure to ECW discharge as part of training should explain the difference between exposure during training and an ECW discharge in the field so that law enforcement officers understand that their experience may not be representative of the experience of those who have ECWs discharged against them in the field.
15. Officers must be trained that the ECW is a less-lethal weapon, and not a non-lethal or less-than-lethal weapon.
16. Officers must be trained in where ECW use falls in the agency's use-of-force model. This training should include when and how de-escalation techniques can be used instead of ECWs.
17. Officers must be trained in identifying and responding to subjects whose ability to understand, respond to, and comply with officer orders may be impaired due to language, physical disability, or cognitive impairment. Officers must be trained to recognize that mere non-compliance stemming from a communication breakdown does not warrant ECW use absent an imminent threat of physical harm.
18. Officers must be trained about the medical complications that may occur after ECW use, and that certain individuals may be at a heightened risk for serious injury or death when an ECW is discharged. Populations currently believed to be at a heightened risk for serious injury or death include pregnant women, elderly persons, young children, visibly frail persons or persons with thin

stature, persons with known heart conditions, persons in medical/mental crisis, and persons under the influence of drugs or alcohol.

19. Officers must be trained about the heightened risk of injury and/or death associated with ECW discharge in some circumstances, due to the subject's loss of muscle control and other factors related to ECW technology. Research is evolving and such circumstances include, but may not be limited to:
 - persons in elevated positions;
 - persons operating vehicles or machinery;
 - persons who are fleeing on foot;
 - persons who are already restrained in handcuffs;
 - persons who might be in danger of drowning; and
 - environments in which combustible vapors and liquids or other flammable substances including but not limited to alcohol-based Oleoresin Capsicum ("OC").
20. ECW training programs must integrate training on how to recognize and de-escalate incidents involving persons in mental health crisis, including the application of recognized crisis intervention techniques, and how to call on any available mental health resources. Officers must be trained on what actions may unnecessarily escalate or aggravate a mental health crisis and the risks of doing so.
21. Officers must be trained to understand ECW technology so that they understand how they work and what they are capable of, including functions, situations when they may not be effective, and the risks associated with the technology.
22. Officers must be trained to understand that repeated discharges and continuous cycling of ECWs appear to increase the risk of death or serious injury and should be avoided wherever possible.
23. Officers must be trained to understand the weapon's limitations and how to transition to other force options when the ECW is not effective after a discharge.
24. All relevant personnel must be trained in post-ECW use evidence collection, reporting, and maintenance, as well as how to arrange for the care of persons against whom ECWs are discharged.
25. Knowledge of ECWs is changing rapidly. ECW recertification should occur at least annually and should include a review of each officer's ECW history. Certification and recertification training materials should be updated regularly to incorporate changes in technology, research, law, information from reviews of ECW use within the agency, and community concerns.

26. Law enforcement supervisors and commanders who may be asked to review, investigate, or report on ECW use, or to conduct or approve policies or training related to ECW use, must be trained in the appropriate tactical use and potential risks of ECW use.
27. To encourage good community-agency relations, law enforcement agencies should conduct community outreach programs to educate civilians about ECWs, their advantages to other weapons used by the agency, the risks posed by their use, how the agency intends to use them, and the public oversight that will be available.

Use-of-Force Recommendations:

28. ECWs should not be used against a passive or restrained subject, or otherwise to counter passive non-compliance, absent an imminent threat of physical harm.
29. The act of fleeing or destroying evidence, in and of itself, should not justify the use of an ECW.
30. Officers should be permitted to use ECWs only when an individual poses an imminent threat of physical injury to themselves or others. For the purposes of this standard, “physical injury” should have the same meaning as it does in Maryland’s definition of second degree assault on a law enforcement officer. Specifically, “physical injury” means “any impairment of physical condition, excluding minor injuries.” A threat of such minor injuries ordinarily does not warrant the application of a potentially lethal force option.
31. An agency should adopt a use-of-force policy that integrates ECWs and all other available force options. The policy should recognize that, as less-lethal (but not less-than-lethal) weapons, ECWs have the potential to result in a fatal outcome even when used in accordance with policy and training. The policy should also integrate de-escalation techniques and other non-force options, which should be employed prior to any use of force unless doing so would be ineffective or would place the officer or another individual under a threat of physical harm. Non-force options should be tried where feasible before using an ECW or other force options.
32. Agencies should adopt a use-of-force model that recognizes that in the following situations involving a heightened risk of serious injury or death, ECWs should only be used when deadly force is otherwise legally permitted:
 - persons in elevated positions, who might be at a risk of a dangerous fall;
 - persons operating vehicles or machinery;
 - persons who are fleeing on foot;
 - persons who are already restrained in handcuffs;
 - persons who might be in danger of drowning;

- environments in which combustible vapors and liquids or other flammable substances including but not limited to alcohol-based Oleoresin Capsicum (OC); or
- similar situations involving heightened risk of serious injury or death to the subject.

33. Agencies should adopt a use-of-force model that recognizes that the populations listed below may be at a heightened risk of serious injury or death. When deciding whether to discharge an ECW, the officer should consider the heightened risk of serious injury or death for these groups and be able to articulate the justification for exposing a person to increased risk:

- persons with known heart conditions, including pacemakers;
- elderly persons or young children;
- frail persons or persons with very thin statures (*i.e.*, may have thin chest walls);
- women known to be pregnant;
- persons in mental/medical crisis; or
- persons under the influence of drugs or intoxicated by alcohol.

Agencies should adopt a use-of-force model that recognizes that unless articulated exigent circumstances exist justifying the increased risk, ECWs should not be discharged at sensitive areas of the body, including the head, neck, chest, or genitals.

34. An individual's apparent mental health or medical crisis (including any display of symptoms that are considered by some to constitute a syndrome called "excited delirium"), should not in itself justify the use of an ECW. The officer(s) at the scene should consider policies and training on dealing with persons in mental health/medical crisis to determine whether non-force options—including containment—are feasible. If the decision is made to arrest or otherwise restrain a person in mental health or medical crisis, the officer(s) should consider whether there are means to quickly restrain the individual without resort to ECW. When possible, the restraint of a person who is in mental health or medical crisis should be made in conjunction with mental health and medical personnel to help minimize the chance of injury to officers, the subject, or bystanders, and to help ensure the prompt provision of appropriate medical or mental health care. As with any individual, an ECW should not be used against a person in apparent mental health or medical crisis unless the person poses an imminent threat of physical harm to self or others.

35. Officers should not aim or threaten to use an ECW unless they believe the threat of using an ECW would itself help de-escalate the situation.

36. Before using an ECW an officer should warn a subject and give the subject a chance to comply with verbal orders, unless delaying discharge would be unsafe or the element of surprise is necessary to minimize the risk of harm.
37. Multiple ECWs should not be simultaneously discharged against a person unless there is a specific articulable reason for doing so and should be avoided when possible.
38. An officer should only administer an additional ECW discharge after an initial discharge if the officer has concluded that the subject still poses an imminent threat of significant physical harm and other options are not appropriate. Repeated or prolonged (*i.e.*, beyond the 5-second standard cycle) discharges should be avoided whenever possible.
39. ECWs should not be used in pain compliance (drive-stun) mode except when necessary to complete the incapacitation circuit, or when the probe mode has been ineffective and use of drive stun-mode is necessary to prevent imminent harm to the officer or others.
40. ECW use by officers while off duty should be regulated in the same manner as service firearms.

Medical Care Recommendations:

41. Agency policies and training should reflect the responsibility to ensure the rapid provision of medical care, particularly where the need for medical intervention was cited as a reason for the ECW discharge.
42. Law enforcement agencies and local medical personnel should work together to establish protocols for providing medical care subsequent to ECW use and for persons in mental health or medical crisis.
43. When possible, emergency medical personnel should be notified when it is anticipated that an ECW may be used against an individual, especially those in apparent mental health crisis or exhibiting symptoms of “excited delirium,” and emergency medical units should be on-scene prior to the discharge of the ECW.
44. Persons who have had an ECW discharged against them should receive an evaluation conducted pursuant to appropriate agency and medical protocols.
45. When medical necessity (including “excited delirium,” etc.) is cited as the reason to quickly restrain a person, whether using an ECW or another force option, law enforcement should request that the individual is provided medical care on scene by first responders, then quickly transported to a hospital for additional medical care, and should carefully monitor the individual’s well being until transport occurs.

46. After receiving medical care, persons who have had an ECW discharged against them should be monitored while in custody so that any medical complications might be more quickly identified.
47. Following an ECW discharge, officers should use a restraint technique that does not impair respiration.
48. ECW probes (darts) should be treated as a biohazard and should be removed only by individuals trained to remove them.
49. Agencies using ECWs should ensure that officers carry basic resuscitation equipment.

Reporting and Investigation Recommendations:

50. Comprehensive use-of-force reports should be completed when an ECW is discharged or aimed (e.g., the subject is targeted with the ECW's "laser" or "red dot"). Information recorded on use-of-force reports should include data required for consistent, state-wide reporting.
51. In the event of an ECW discharge, a supervisor should respond to ensure the collection of evidence and to initiate a prudent investigation.
52. A post-discharge investigation should be conducted of all discharges, including accidental discharges. This investigation should include interviews with the participants and other witnesses, a review of the use-of-force report, and collection and review of evidence, including cartridges, ECW data, and photographs.
53. When there is a serious injury or death following the use of an ECW, evidence of (including complaint of) misuse of the ECW, or when the ECW was used against a person from a heightened-risk population or in precarious situations, the agency's chief law enforcement executive should ensure the completion of a timely investigation and review of the incident and determining whether the ECW use was in compliance with policy and whether the outcome indicates the need for any training or policy changes. In the case of death or a life-threatening injury, the investigation should be presented to an entity outside the agency for independent review.
54. In cases of death or serious injury, the ECW used should be tested for proper operation and output.
55. When a death occurs in temporal proximity to an ECW discharge, the State Medical Examiner should specifically indicate whether the use of the ECW may have or did contribute to the death. "Excited delirium" should not be cited as the cause of death where there is a known direct cause. The Medical Examiner should explain in the autopsy and death certification the cluster of symptoms that led to the finding of "excited delirium."

Monitoring and Data Collection Recommendations:

56. Agencies should maintain comprehensive data (identified in this report) regarding use of ECWs for the purpose of tracking trends over time and determining whether some officers are using ECWs at a different rate or in a different manner than similarly situated peers. This data should be considered when determining whether to recertify or decertify officers for ECW use.
57. Early warning systems should incorporate data regarding ECW usage to track trends over time and to determine whether some officers are using ECWs at a different rate or in a different manner than similarly situated peers.
58. The Governor's Office of Crime Control and Prevention or other appropriate State agency should require state-wide collection and analysis of the comprehensive agency data regarding ECW use to track trends and identify emergent concerns and should make such data publicly available.
59. ECWs should be regularly tested for proper operation and output. Agencies should consider contracting with their ECW provider to repair or replace any devices that no longer meet manufacturer specifications.
60. Agencies should routinely audit ECW use and ECW training to ensure compliance with the agency's policies and determine whether any changes to policy or training are advised.

XIV. Proposed Research Suggestions:

1. Additional research should be conducted on the physiological effects of ECWs, especially when used repeatedly, for prolonged periods, simultaneously, or on persons in heightened-risk populations or in mental health or medical crisis.
2. Additional research should be conducted on the physiological effects of ECWs when discharged against certain areas of the body, including a person's chest area, neck, and head.
3. There should be a comparison of incidents of deadly force used in agencies with and without ECWs.
4. Additional research should be conducted on the feasibility and utility of having automatic external defibrillators ("AEDs") readily available to officers.
5. Additional research should be conducted on the medical and operational impacts of new and developing ECW weapons as they emerge.

XV. Proposed Legislative Agenda for the Maryland General Assembly

1. A requirement that the Maryland Police and Correctional Training Commission (“MPCTC”) incorporate through regulation this report’s training recommendations into the Commission’s law enforcement ECW certification and training program regulations instituted pursuant to Chapter 320, Laws of Maryland 2009. Chapter 320 requires a law enforcement officer to complete MPCTC training before being issued an ECW and requires MPCTC to provide such training and related certification and recertification. As noted in this report, best practices reflect the need for such training to include important components to address officer safety and public safety priorities to accomplish the goals of Chapter 320. Such legislation would ensure fulfillment of the legislative intent expressed in Chapter 320.
2. A requirement for state-wide collection, compilation, and analysis of uniform and comprehensive agency data regarding ECW use. The data collected should include all data listed in the report above, as well as the Medical Examiner’s report for any death for which an ECW is listed as a cause of death or a contributing factor. This data should be collected, compiled and published annually by the Governor’s Office of Crime Control and Prevention (or other appropriate state agency). The legislation should also require that each individual law enforcement agency make its reported data available to the public upon request to ensure that the public can be informed about use of ECWs in their communities.
3. A requirement that civilians who intend to purchase an ECW complete an MPCTC-approved ECW training program and meet certification and recertification standards which demonstrate knowledge and proficiency with the weapon.
4. A requirement for a uniform state-wide ECW application/permit process for purchase and ownership as well as for wearing, carrying, and transporting an ECW. The process should include provisions for:
 - Applications being made under oath and subject to the penalty of perjury;
 - Collection of specific identifying information on the applicant and the weapon to be obtained;
 - A background check, to include national and local criminal history;
 - Denial of the application if the individual is under the age of 21, is a fugitive from justice or a habitual drunkard, is addicted to or habitually uses controlled dangerous substances, or has spent more than 30 consecutive days in a medical institution for treatment of a mental disorder;
 - A designated waiting period from the time of application submission to the time the applicant may obtain the ECW; and

- Seizure of the ECW as contraband by a law enforcement agency when obtained in violation of the above process.¹⁸³
5. A requirement that ECW dealers must conform to the ECW application process noted above.
 6. A prohibition regarding persons or dealers knowingly selling or transferring an ECW to a person prohibited from owning one.
 7. A provision for enhanced criminal penalties for the use of an ECW in the commission of a crime, especially when used against law enforcement officers, similar to the statutory crime of “Use of Handgun in the Commission of a Crime or Violence or a Felony,”¹⁸⁴ recognizing the unique attributes of the ECW in comparison to other weapons.

¹⁸³ These recommendations closely track Maryland’s restrictions on handgun ownership. See MD. CODE ANN., PUB. SAFETY § 5-117 *et seq.*

¹⁸⁴ MD. CODE ANN., CRIM LAW § 4-204.

Appendix A

Witness List for Task Force Hearings

- Coleman Bazelon, ACLU of Maryland
- Commissioner Frederick H. Bealefeld, Baltimore City Police Department
- Terry Bohrer, Mental Health Association of Maryland
- Del. Talmadge Branch, Maryland House of Delegates
- Police Officer Bryan Brummitt, Maryland Transportation Authority Police Department
- Reuben Collins, Charles County Commission
- Judy Cooper, Charles County Commission
- Roger Copeland, Frederick County NAACP
- June Dillard, Prince George's County NAACP
- Chief Bernadette DiPino, Ocean City Police Department
- Guy Djoken, Frederick County NAACP
- Chief Deputy Douglas Dodd, Worcester County Sheriff's Office
- 1st Sergeant Tim Eikenberg, Maryland Transportation Authority Police Department
- Sergeant Angelo Gias, Elkton Police Department
- Captain Alan Goldberg, Montgomery County Police Department
- Captain Kenneth Hasenei, Maryland State Police Agency
- Peter Holran, TASER International, Inc.
- Elbridge James, Montgomery County NAACP
- Sen. Delores Kelly, Maryland State Senate
- Barry Kissing, Frederick County NAACP
- Police Officer Joan Logan, Montgomery County Police Department
- Mike Mage, ACLU of Montgomery County
- Chief William McMahon, Howard County Department of Police
- Edith Patterson, Charles County Commission
- 1st Sergeant Jason Pulliam, Maryland Transportation Authority Police Department
- Mark Shmueli, Law Office of Mark Shmueli
- Richard Speake, Training Coordinator, Anne Arundel County Sheriff's Office

Appendix B

ECW Discharges in Maryland

Jurisdiction	Yrs. of Data	Total Discharges	Discharge/Y R	White					Black					Hispanic				
				Male	Female	Total	%	% of Pop.	Male	Female	Total	%	% of Pop.	Male	Female	Total	%	% of Pop.
Anne Arundel County Sheriff	1.00	1	1.0	0	0	0	0%	75%	1	0	1	100%	15%	0	0	0	0%	5%
Baltimore City Police Dept.	1.58	195	123.2	28	6	34	17%	32%	144	6	150	77%	64%	0	0	0	0%	2%
Baltimore County Police Dept.	2.75	219	79.6	94	7	101	46%	66%	90	5	95	43%	25%	7	0	7	3%	3%
City of Bowie Police Dept.	3.00	8	2.7	4	0	4	50%	63%	3	1	4	50%	31%	0	0	0	0%	3%
Caroline County Sheriff	2.17	12	5.5	8	1	9	75%	79%	2	1	3	25%	14%	0	0	0	0%	5%
Cecil County Sheriff	1.25	3	2.4	2	1	3	100%	89%	0	0	0	0%	6%	0	0	0	0%	2%
Charles County Sheriff	5.75	124	21.6	36	7	43	35%	52%	67	6	73	59%	39%	4	1	5	4%	4%
Dorchester County Sheriff	2.00	3	1.5	3	0	3	100%	69%	0	0	0	0%	28%	0	0	0	0%	2%
Frederick County Sheriff	6.75	111	16.4	68	6	74	67%	80%	23	4	27	24%	9%	5	0	5	5%	6%
Garrett County Sheriff	3.75	10	2.7	10	0	10	100%	98%	0	0	0	0%	1%	0	0	0	0%	1%
Gaithersburg City Police Dept.	5.00	36	7.2	n/a	n/a	11	31%	58%	n/a	n/a	11	31%	15%	n/a	n/a	13	36%	20%
Harford Co. Sheriff	5.00	161	32.2	n/a	n/a	n/a	n/a	81%	n/a	n/a	n/a	n/a	12%	n/a	n/a	n/a	n/a	3%
Howard County Police Dept.	2.33	37	15.9	n/a	n/a	17	46%	64%	n/a	n/a	18	49%	17%	n/a	n/a	2	5%	5%
Montgomery County Police Dept.	0.50	111	222.0	n/a	n/a	30	27%	54%	n/a	n/a	64	58%	17%	n/a	n/a	11	10%	15%
Montgomery County Sheriff	6.75	31	4.6	n/a	n/a	15	48%	54%	n/a	n/a	15	48%	17%	0	0	0	0%	15%
Prince George's County Police Dept.	1.08	78	72.0	n/a	n/a	4	5%	18%	n/a	n/a	66	85%	66%	n/a	n/a	7	9%	13%
Queen Anne's Co. Sherriff	4.75	45	9.5	n/a	n/a	n/a	n/a	88%	n/a	n/a	n/a	n/a	8%	n/a	n/a	n/a	n/a	2%
St. Mary's County Sheriff	3.83	117	30.5	n/a	n/a	59	50%	78%	n/a	n/a	53	45%	15%	n/a	n/a	0	0%	3%
Washington County Sheriff	3.75	63	16.8	n/a	n/a	50	79%	85%	n/a	n/a	13	21%	10%	0	0	0	0%	3%
Wicomico County Sheriff	1.00	1	1.0	0	0	0	0%	70%	1	0	1	100%	24%	0	0	0	0%	3%
Worcester County Sheriff	2.75	13	4.7	2	1	3	23%	81%	6	0	6	46%	14%	n/a	n/a	0	0%	2%

All demographic data derived from the latest U.S. Census data, available at <http://quickfacts.census.gov/qfd/states/24000.html>

Note: The Baltimore County Sheriff responded that it has not deployed any ECWs. The Calvert County Sheriff and Allegany County Sheriff did not respond to the Task Force's requests for data.

Appendix C

Summary of Survey of Maryland Law Enforcement Agencies' Policies on Electronic Control Weapons

This Appendix summarizes the different approaches taken by law enforcement agencies throughout Maryland to regulating the use of ECWs by their officers. Specifically, this summary focuses on seven key areas addressed in virtually all policies: (1) training of law enforcement officers in ECW usage; (2) restrictions on ECW usage for certain vulnerable classes of people; (3) restrictions on ECW usage in situations that could lead to secondary injuries; (4) the role of ECWs in an agency's use-of-force policy; (5) permissible methods of deploying ECWs; (6) medical treatment required following ECW use; and (7) procedures for reporting and monitoring ECW deployments.

The policies included in this analysis were collected via informal and formal requests under the Maryland Public Information Act, sent by the ACLU in conjunction with its role on the Task Force. Pursuant to these requests, the ACLU obtained ECW policies from twenty-four agencies, including county police departments, county sheriff's offices, and police departments of independent cities.¹ Eight other agencies informed the ACLU that they do not permit their officers to carry or use ECWs.² Two agencies declined to provide materials.³

The policies' rules and guidelines are summarized in a chart that follows this summary.

Training

Fourteen agencies⁴ provided information specifically detailing their training policies, and of those, nine appear to rely exclusively on training materials provided by TASER

¹ The following agencies provided ECW policies: Allegheny County Sheriff's Office, Anne Arundel County Sheriff's Office, Baltimore City Police, Baltimore County Police, Bowie Police, Calvert County Sheriff's Office, Caroline County Sheriff's Office, Cecil County Sheriff's Office, Charles County Sheriff's Office, Dorchester County Sheriff's Office, Frederick County Sheriff's Office, Gaithersburg Police, Garrett County Sheriff's Office, Harford County Sheriff's Office, Howard County Department of Police, Maryland State Police Tactical Assault Team, Montgomery County Police, Montgomery County Sheriff's Office, Prince George's County Police, Queen Anne's County Sheriff's Office, St. Mary's County Sheriff's Office, Washington County Sheriff's Office, Wicomico County Sheriff's Office, and the Worcester County Sheriff's Office.

² The following jurisdictions do not use ECWs: Annapolis Police, Anne Arundel Police, Baltimore City Schools Police, Baltimore County Sheriff's Office, Carroll County Sheriff's Office, Kent County Sheriff's Office, Talbot County Sheriff's Office, and the University of Maryland at College Park Police.

³ The Prince George's County Sheriff's Office and the Somerset County Sheriff's Office did not provide materials in response to our requests.

⁴ The agencies that provided or identified training materials were: Allegany County Sheriff's Office, Baltimore County Police, Calvert County Sheriff's Office, Charles County Sheriff's Office, Dorchester County Sheriff's Office, Frederick County Sheriff's Office, Gaithersburg Police, Harford County Sheriff's Office, Howard County Department of Police, Montgomery County Sheriff's Office, Queen Anne's County Sheriff's Office, St. Mary's County Sheriff's Office, Washington County Sheriff's Office, and Worcester County Sheriff's Office.

International.⁵ TASER International's curriculum consists of a PowerPoint presentation, videos, a written test, and sometimes live training. The training materials describe various "tactical considerations" that cover matters similar to use-of-force policies, but TASER International does not adopt a specific use-of-force policy, and instead instructs officers to follow their department's policies regarding appropriate use-of-force standards. TASER International's materials do not provide guidance on where ECWs fall in the use-of-force continuum and do not advise officers about when deploying an ECW would be excessive. The TASER International training materials also warn officers about secondary injuries that could result from ECW use and suggest that caution should be exercised when deploying an ECW against pregnant women and people who are particularly frail. Finally, TASER International employs ECW practice scenarios and written tests that are designed to promote technical proficiency with ECWs, but that do not focus on when and whether it is appropriate to use an ECW in the first place.

The remaining five jurisdictions that provided information about their training programs have created their own training or recertification programs. The Baltimore County Police Department has created a proprietary training program, while the Charles County and Howard County Sheriffs have each created training courses for recertifying ECW users.⁶ Both the Queen Anne's County Sheriff and the Gaithersburg City Police Department use training materials derived from the Maryland Police and Correctional Training Commission ("MPCTC"), with modifications of their own. The Gaithersburg City Police Department also incorporates a video and PowerPoint presentation used in the TASER International training program.

Limitations on Use Against Vulnerable Groups

Of the 24 law enforcement agencies that provided use-of-force policies, seventeen restrict the use of ECWs against classes of people who may be subject to an increased risk of injury. These agencies typically place heightened restrictions on ECW use against children, the elderly, the infirm, pregnant women, and individuals who the officer knows suffer from heart problems. Of these jurisdictions, only the Baltimore City Police Department, Cecil County Sheriff, and Queen Anne's County Sheriff appear to completely ban ECW use on certain vulnerable classes of individuals. The majority of other agencies require only that the officer have "additional justification" or give "careful consideration" to deploying an ECW against individuals in these groups, or that such

⁵ For the identity of the jurisdictions that rely on TASER International's training materials, please see the chart summarizing ECW policies and the end of this appendix. The attached chart can be used throughout this memorandum to identify the agencies that have adopted a specific approach discussed herein. Where the identity of the jurisdictions is not clear from the chart, such information will be included in a footnote.

⁶ Charles County and Howard Police both use TASER International material for initial training, but have created their own material for re-training their officers. Charles County created its own training presentation along with a multiple-choice recertification exam covering maintenance, proper use, use-of-force continuum guidelines, and other restrictions on use. Howard County provides a PowerPoint presentation of the use-of-force guidelines for ECWs and requires that each officer assigned an ECW must pass an exam demonstrating proficiency in loading, unloading, deploying, and discharging the prongs of the weapon on an annual basis.

use is warranted by “exigent circumstances.”

Children: Sixteen jurisdictions restrict use of ECWs against “children” or “young people.” Most policies with such restrictions mention “children” in general, without further definition, though a few departments have specified that the restrictions apply to young children. The Baltimore County Police Department, for example, specifies that children should be given “special consideration” according to their age, size, and weight, and the Cecil County Sheriff specifies that ECWs should not be used against “very young” children.

Pregnant Women: Seventeen agencies restrict use of ECWs against pregnant women, or “obviously” pregnant women.

Elderly: Twelve agencies restrict use of ECWs against elderly persons and individuals who appear frail or infirm. Some agencies simply note that using an ECW against elderly persons involves “increased risk,” while others require “exigent circumstances” to justify the use of an ECW. The Baltimore County Police Department, in addition to restricting ECWs use against the elderly and frail, restrict use of ECWs against persons who are physically handicapped. The Wicomico County Sheriff restricts use against persons known to have neuromuscular disorders or epilepsy.

Heart Problems: Eight agencies specifically restrict the use of ECWs against persons known to have heart problems. None of the surveyed agencies impose outright bans, though the Garret County Sheriff bans outright using a “stun cuff” against inmates known to have heart conditions. (A stun cuff is an ECW cuff designed to control prisoners.)

Limitations on ECW Use to Avoid Secondary Injuries

Most agencies restrict officers from deploying ECWs in certain situations where the use of ECWs is likely to cause secondary injuries. Thus, agencies often prohibit using ECWs around flammable materials, noting in particular that some police pepper sprays are flammable and could be ignited by an ECW, as could materials in methamphetamine labs. To avoid injuries caused by falling, many agencies restrict using ECWs against subjects in elevated positions and subjects who are running. Many agencies also restrict use of ECWs against subjects in water due to the risk of drowning. Some agencies further restrict use of ECWs against individuals driving motor vehicles or operating machinery. A few agencies impose additional restrictions. The Baltimore County Police Department, for instance, prohibits use of ECWs against persons holding firearms and against persons who are suicidal.

Many agencies impose at least some of these restrictions categorically, especially the restrictions on use around flammable materials.⁷ Other agencies note that

⁷ The following agencies categorically ban use of ECWs around flammable materials: Allegheny County Sheriff’s Office; Baltimore City Police; Calvert County Sheriff’s Office; Caroline County Sheriff’s Office; Charles County Sheriff’s Office; Gaithersburg Police; Howard County Department of Police; Montgomery County Police; Montgomery County Sheriff’s Office; Prince George’s County Police; Queen

circumstances increasing the likelihood of secondary injuries are extremely dangerous, and simply caution officers to exercise caution and use their judgment before deploying ECWs in these situations.

Use-of-Force Policies

The use-of-force policies of Maryland law enforcement agencies generally classify ECWs as “less lethal” devices, and locate them on the use-of-force continuum below deadly weapons. Beyond this similarity, use-of-force policies regarding when ECWs may be used differ substantially among the Maryland law enforcement agencies.

Twelve agencies permit an officer to use an ECW if the suspect poses a physical threat, **or** if the person is “actively resisting” the officer. The policies generally define “actively resisting” to include actions that do not give rise to an imminent threat. For example, a person who is “bracing” or “tensing” his or her arms to avoid being placed into handcuffs is considered to be “actively resisting.” The policies appear to distinguish “actively resisting” from “passive” resistance, in which a person is simply refusing to obey commands, and five agencies specifically forbid ECW use against passive resisters.

Another twelve agencies’ use-of-force policies contain vague standards that can be read to permit use in a wide variety of situations, even when the person is not offering “active resistance” of any kind. For instance, several policies permit officers to use ECWs to “control the situation” or to “bring an unlawful situation under control,” and to “safely effect an arrest.”⁸ The Gaithersburg City Police Department policy allows ECWs to be used on merely “non-complaint individuals.”

Some law enforcement agencies use very specific hierarchies of increasing force based on the level of resistance presented by the suspect and the threat to the well-being of persons involved in the incident. For example, the Allegany County Sheriff places ECWs on the continuum before the use of pepper spray or a baton, and the Garrett County Sheriff places the use of ECWs above verbal commands, but below “firm grip pain.”

A few other specific provisions are worth noting here:

Anne’s County Sheriff’s Office; St. Mary’s County Sheriff’s Office; Washington County Sheriff’s Office; and Wicomico County Sheriff’s Office.

⁸ The jurisdictions that have vague standards that allow for the use of ECWs include: Allegany County Sheriff’s Office (“circumstances are tense, uncertain, and rapidly evolving”); Calvert County Sheriff’s Office (“when the use of force is necessary to gain control of an individual for a lawful purpose”); Charles County Sheriff’s Office (“to incapacitate a resistive person”); Frederick County Sheriff’s Office (“when . . . attempts to subdue or control the subject by other conventional tactics have been, or will likely be, ineffective”); Gaithersburg Police Department (on “non-compliant individuals”); Garrett County Sheriff’s Office (“circumstances are tense, uncertain, and rapidly evolving”); Harford County Sheriff’s Office (“to bring an unlawful situation safely and effectively under control”); the Maryland State Police Tactical Assault Team (“to safely effect an arrest”); Montgomery County Police (“to safely effect an arrest”); Prince George’s County Sheriff’s Office (“effect an arrest”); Washington County Sheriff’s Office (“to safely effect an arrest”); and Worcester County Sheriff’s Office (“to safely effect an arrest” or “to control the situation”).

- Ten agencies strictly limit the use of ECWs on handcuffed persons to those actively presenting a threat of bodily harm, but not all agencies address the issue.
- Fifteen agencies require officers to call out a warning before firing the ECW, both to alert other officers (who might mistake the ECW for a gun) and to give the subject a chance to comply.
- The Baltimore County Police Department requires that the use of an ECW must be approved by a supervisor, except in exigent circumstances.
- The Baltimore County Police Department, Howard Police Department, and St. Mary's County Sheriff explicitly prohibit the use of ECWs for punitive purposes.

Permissible Methods of Use

Many jurisdictions impose restrictions or caution against certain methods of discharging ECWs. For instance, fifteen jurisdictions prohibit officers from aiming ECWs at sensitive areas such as the head, face, or groin, and eight jurisdictions specifically require officers to use the minimum number of bursts necessary to bring the person under control. Some jurisdictions, like the Bowie Police Department, require officers to affirmatively justify the need for additional bursts. The Baltimore County Police Department specifies that only three ECW bursts may be applied, absent "immediate exigent circumstances." Several jurisdictions also instructed officers to apply only one ECW at a time, unless there are exigent circumstances.⁹ A few jurisdictions, however, have no restrictions on the number or duration of ECW bursts.¹⁰

The Gaithersburg City Police Department and the Howard County Sheriff disfavor the use of an ECW's "stun drive" mode and require additional justifications for its use.

Medical Treatment Following Use

There is no consensus among the surveyed agencies as to the type of medical care required after an individual is shocked with an ECW. Eight agencies require Emergency Medical Services to be summoned to assess any suspect who is shocked by an ECW. Of those agencies, six further require that the person be taken to the hospital. The Gaithersburg City Police Department requires that EMS be summoned if the person is shocked either more than three times or with more than one ECW. Twelve jurisdictions simply require that police monitor the person and request EMS only if there are signs of trouble or the person requests medical attention. The Frederick County Sheriff and the St. Mary's County Sheriff have no provisions for medical treatment, and the Wicomico County Sheriff requires medical treatment only to remove ECW darts from a person's skin.

⁹ The Baltimore County Police, Bowie Police, Howard County Sheriff's Office, and Wicomico County Sheriff's Office prohibit using multiple ECWs against a person simultaneously.

¹⁰ Baltimore City Police, Charles County Sheriff's Office, Frederick County Sheriff's Office, and Worcester County Sheriff's Office have no restrictions on the method in which an ECW is used.

Post-Use Reporting

All agencies surveyed require officers to document each use of an ECW (both accidental and deliberate), typically in a use-of-force report. Seven agencies also require that a supervisor be contacted after the deployment of an ECW and that the supervisor respond to the scene. Other agencies require that photographs be taken, both of the impact area and of any secondary injuries. Thirteen jurisdictions also require that the data from ECWs be downloaded, and included in the use-of-force report.¹¹ Some jurisdictions also require supervisors to periodically track use of ECWs by reviewing downloaded data from ECW deployments. The Bowie Police Department has an additional reporting requirement designed to monitor general ECW use: the Department's regulations provide that the commander will create an ECW use database, then periodically download data from all ECWs, enter the use data into the database, and then compare the database to the use-of-force reports to ensure that each use of an ECW is reported.

¹¹ The Dorchester County Sheriff's Office requires a data download only "in the event of a questionable discharge," or one that leads to injuries.

Appendix

Overview of Maryland Law Enforcement Agencies' CED Policies

	Allegany Co. Sheriff	Anne Arundel Co. Sheriff	Baltimore City Police	Baltimore Co. Sheriff	Bowie Police	Calvert Co. Sheriff	Caroline Co. Sheriff	Cecil Co. Sheriff	Charles Co. Sheriff	Dorchester Co. Sheriff	Frederick Co. Sheriff	Gaithersburg Police	Garrett Co. Sheriff	Harford Co. Sheriff	Howard Co. Sheriff	Md. Police	Md. Police Tac. Assault	Montgomery Co. Police	P. Georges Co. Sheriff	Q. Anne's Co. Police	St. Mary's Co. Sheriff	Washington Co. Sheriff	Wicomico Co. Sheriff	Worcester Co. Sheriff
Training																								
Relies on Taser International materials	✓				✓				*	✓	✓		✓	*		✓			✓	✓	✓	✓	✓	✓
Created own materials			✓					✓			✓		✓						✓					
Fully explains medical risks																								
Officers practice using taser	✓				✓			✓	✓	✓			✓	✓				✓			✓	✓		✓
Officers practice use-of-force decisions			✓					✓			✓								✓					
Officers take written test	✓		✓		✓			✓	✓	✓	✓		✓	✓				✓		✓	✓	✓		✓
Use Restricted on Vulnerable Classes																								
Children	✓		✓	✓		✓	✓	✓			✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Pregnant women	✓	✓	✓	✓		✓	✓	✓			✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Elderly, frail, or infirm	✓		✓	✓		✓	✓	✓			✓			✓				✓	✓	✓				✓
Subjects with heart problems								✓			✓				✓	✓		✓		✓	✓	✓		✓
Use Restricted to Avoid Secondary Injuries																								
Near flammables	✓	✓	✓	✓	✓	✓	✓	✓	✓			✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Subject in elevated position	✓		✓	✓		✓	✓	✓	✓			✓			✓	✓		✓	✓	✓	✓	✓		✓
Subject fleeing			✓	✓				✓										✓						
Subject operating vehicle			✓	✓	✓			✓			✓				✓			✓						✓
Danger of drowning	✓			✓				✓			✓			✓				✓	✓					✓
Use-of-Force Continuum																								
Permitted only if subject actively resists or threatens safety	✓	✓	✓	✓		✓	✓		✓					✓				✓		✓	✓			✓
Expressly prohibited against passive subject			✓				✓	✓					✓					✓		✓				✓
Vague standard permitting use in wide variety of circumstances	✓				✓			✓			✓	✓	✓	✓	✓	✓		✓				✓		✓
Warning required before using		✓		✓	✓	✓		✓	✓			✓			✓	✓		✓	✓	✓	✓	✓	✓	✓
Restricted against subject in handcuffs			✓	✓	✓		✓	✓	✓			✓			✓			✓	✓					✓
Method of Use																								
Multiple shocks restricted		✓		✓	✓	✓					✓		✓	✓							✓			✓
Use on sensitive areas restricted	✓	✓	✓	✓	✓		✓	✓	✓	✓			✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓
Medical Care Required After CED Use																								
Must summon EMS			✓	✓	✓	✓			✓					✓	✓			✓						✓
Must take subject to hospital			✓	✓	✓									✓	✓			✓						✓
Summon EMS only on need or request	✓	✓					✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓		✓	✓	✓		✓
Reporting Required After CED Use																								
Use-of-force report required for all discharges	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Supervisor must report to scene	✓	✓	✓	✓								✓						✓				✓		✓
Photographs must be taken				✓	✓	✓		✓	✓			✓		✓	✓	✓		✓				✓		✓
Monitoring CED use with data downloads		✓	✓	✓	✓			✓	✓	✓		✓			✓			✓	✓	✓	✓			✓

Note: The following agencies do not permit their officers to use CEDs: Annapolis Police, Anne Arundel Police, Baltimore City Schools Police, Baltimore County Sheriff, Carroll County Sheriff, Kent County Sheriff, Talbot County Sheriff, and the University of Maryland at College Park Police.

*Charles County Sheriff and Howard Police use Taser International materials for their initial training but created their own re-certification materials.

Appendix D

Glossary of Terms

Accidental Discharge: The unintentional firing of an ECW in probe mode.

Aiming: Directing an ECW at a person or other intended target.

Arcing/Arching: Activating an ECW without a cartridge.

Automatic External Defibrillator (“AED”): An apparatus that monitors the heart of the patient and then automatically administers a controlled electric shock to the chest to restore normal heart rhythm.

Cartridge: The replaceable ECW cartridge that fires probes on connecting wires, sending a high voltage/low current signal into a subject upon impact.

Command and Control Approach: A method of arresting or securing a person that focuses on use of verbal commands and/or physical restraint to achieve compliance and physical control of a person.

Confetti Tags/Anti-Felon Identification Tags (“AFID”)/Serialized Identification Tags: Confetti-like tags expelled from a cartridge of an ECW when fired to shoot probes. Each tag contains a serial number unique to the specific cartridge used.

Continuum of Force/Response to Resistance/Use of Force Model: A training model/philosophy that supports the progressive and reasonable escalation and de-escalation of officer-applied force in proportional response to the actions, level of resistance offered by a subject and danger posed by the subject. The level of response is based upon the situation encountered at the scene and the actions of the subject in response to the officer’s commands. Such response may progress from the officer’s physical presence at the scene to the application of deadly force.

Darts/Probes/Barbs/Electrode: Projectiles that are fired from an ECW and penetrate the skin; wires are attached to the probes leading back to the ECW.

Dart/Probe Placement: Point of entry for a dart/probe on a person’s body.

Dart/Probe (Barb) Removal: The act of removing a dart/probe from a person’s body or clothing.

De-escalation Techniques (Verbal and Non-Verbal): Part of a broader set of trained techniques also known as “crisis intervention” techniques used to calm or lessen the intensity of a scenario or conflict. Effective de-escalation techniques have been developed and used by mental health professionals, law enforcement and others to focus on responding to and reducing the symptoms and sources of serious agitation or stress without use of force. These techniques can include containment, simple listening, active listening, acknowledgement, reassurance of safety, apologizing, agreeing and inviting criticism.

Deployment: Sending ECW devices into the field with law enforcement officers.

Deadly/Lethal Force: Any tactic or use of force that has an intended, natural, and probable consequence of serious physical injury or death.

Discharge: Depressing the trigger of an ECW causing an ECW to fire.

Display: Removing the weapon from the holster and pointing the weapon at a subject, arc the weapon or using it in the laser dot mode, prior to pulling the trigger.

Drive Stun Mode: The use of an ECW to deliver an electric charge by making direct contact with the body for the purpose of compliance by the delivery of non-incapacitating pain or to complete an incapacitation circuit. See also Pain Compliance Mode.

Drug Induced Psychosis: Psychosis is functionally a break with reality, wherein the patient exhibits hallucinations and/or delusions.

Duration: The aggregate period of time that ECW shocks are discharged.

Early Warning System: Data-based police management tool designed to identify officers whose behavior is problematic and to allow for early intervention to correct that performance.

ECW Cycle: An electrical discharge occurring when an ECW trigger is pressed and released. The standard 5-second cycle may be shortened by turning the ECW off before 5-seconds has passed, or lengthened by pressing and holding the ECW trigger, in which case the ECW will continue to deliver an electrical discharge until the trigger is released.

Electronic Control Weapon (“ECW”)/Electronic Control Device (“ECD”)/Conducted Energy Device (“CED”): A device primarily designed to disrupt a subject’s central nervous system by means of deploying electrical energy sufficient to cause uncontrolled muscle contractions and override an individual’s voluntary motor responses. The Task Force has elected to refer to these devices as Electronic Control Weapons.

Excited Delirium: Term used by some to describe a collection of symptoms that include extreme mental and physiological excitement, characterized by extreme agitation, hyperthermia, epiphora, hostility, exceptional strength, and endurance without fatigue.

Exigent Circumstances: Circumstances that would cause a reasonable person to believe that prompt and unusual action is necessary to prevent physical injury to self or others.

Firing: Discharging ECW darts or electronic charge at a person.

First Responder: A generic term referring to the first medically trained responder to arrive on scene (police, fire, EMS).

Fleeing: An active attempt by a person to avoid apprehension by a law enforcement officer by attempting to leave the scene.

Incapacitation: In the context of ECW use, the deprivation of the power or ability to control muscle movement or strength. The electrical current of an ECW overrides the brain’s communication with the body and prevents the voluntary control over the muscles.

Incapacitation mode: The use of an ECW to gain compliance by incapacitation of the subject's neuromuscular system.

Initial Certification: Successful completion of the first basic ECW training provided to officers prior to issuance of an ECW.

Intermediate-Force Weapon: A weapon usage category situated between a verbal command and lethal force on a traditional force continuum.

Laser Dot (Red Dot): Aiming an ECW and activating its laser dot.

Less Lethal: A concept of planning and force application that meets an operational or tactical objective, with less potential for causing death or serious injury than conventional, more lethal police tactics.

Less-Lethal Weapon: Any apprehension or restraint device that, when used as designed and intended, has less potential for causing death or serious injury than conventional police lethal weapons.

Medical Crisis: A medical condition at an unstable point in its natural course that requires urgent or emergent evaluation or care and may present with abnormal behavior.

Mental Health Crisis: An unpredictable psychological event not under the individual's control.

Oleoresin Capsicum ("OC"): Pepper spray, also known as OC spray (from "Oleoresin Capsicum"), OC gas, and capsicum spray, is a lachrymatory agent (a chemical compound that irritates the eyes to cause tears, pain, and even temporary blindness) that is used primarily in riot control, crowd control, and personal self-defense.

Pain compliance mode: The use of an ECW to gain compliance by the delivery of non-incapacitating pain. See also Drive Stun Mode.

Passive Resistance: Physical actions that do not prevent the officer's attempt to control, for example, a person who remains in a limp, prone position, passive demonstrators, etc.

Performance-based testing Scenario- or judgment-based components: Training and testing usually involving role-playing and recreation of real-life interactions and designed to elicit manual or behavioral responses.

Physical injury: For the purpose of this report physical injury has the same meaning as it does in Maryland's definition of second degree assault on a law enforcement officer. Specifically, "physical injury" means "any impairment of physical condition, excluding minor injuries.

Post-Discharge Investigation: An investigation of the circumstances surrounding the intentional or unintentional discharge of an ECW.

Potentially Lethal: A situation, condition or device that could conceivably result in, or contribute to death.

Probe Mode: The use of an ECW to deliver an electric charge by firing darts into the body for the purpose of incapacitating a subject.

Recertification process: The process of ensuring an individual remains a competent and appropriate candidate to be issued an ECW. This process would include updated training as well as the review and analysis of an officer's downloaded data and use-of-force reports to determine if the officer's past history of ECW use indicates that he or she is not using the device appropriately.

Secondary Injury: Physical trauma indirectly associated with ECW use (*e.g.*, injuries from falls).

Sensitive Areas: A person's head, neck, chest, and genital area.

Serious Injury: Bodily injury that, either at the time of the actual injury or at a later time, involves a substantial risk of death, a substantial risk of serious permanent disfigurement, a substantial risk of protracted loss or impairment of the function of any part or organ of the body, or breaks, fractures, or burns of the second or third degree.

Appendix E

List of Acronyms Used in the Report

ACLU: American Civil Liberties Union of Maryland

AED: Automatic external defibrillators

AFID: Anti-Felon Identification

ALS: Advanced life support

AMA: American Medical Association

CED: Conducted Energy Device

BATF: Bureau of Alcohol, Tobacco, and Firearms

ECW: Electronic Control Weapons

GOCCP: Governor's Office of Crime Control and Prevention

IACP: International Association of Chiefs of Police

ICE: Immigration and Customs Enforcement

MPCTC: Maryland Police and Correctional Training Commission

NAACP: National Association for the Advancement of Colored People of Maryland

OC: Oleoresin Capsicum

PERF: Police Executive Research Forum

Appendix F

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REPORT OF THE MARYLAND ATTORNEY GENERAL'S

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