The Police Services Board met on Monday, September 16, 2013 and respectfully submits the above recommendation which, the Police Board approved.
BACKGROUND:
(see attached report PSB 13-090)

ANALYSIS OF ALTERNATIVES:
(see attached report PSB 13-090)

FINANCIAL/STAFFING/LEGAL IMPLICATIONS:
(see attached report PSB 13-090)

POLICIES AFFECTING PROPOSAL:
(see attached report PSB 13-090)

CONSULTATION WITH RELEVANT DEPARTMENTS/AGENCIES:
(see attached report PSB 13-090)

CITY STRATEGIC COMMITMENT:
(see attached report PSB 13-090)

Attachment:  PSB 13-090 – Hamilton Police CEW Expansion

cc Chief Glenn DeCaire, Hamilton Police Service
     Deputy Chief Ken Leendertse, Field Support
HAMILTON POLICE SERVICES BOARD

- RECOMMENDATION -

DATE: 2013 September 16

REPORT TO: Chair and Members
Hamilton Police Services Board

FROM: Glenn De Caire
Chief of Police

SUBJECT: Hamilton Police CEW Expansion
(PSB 13-090)

RECOMMENDATIONS:

a) That the Police Services Board canvass the community, through City Council and receive the position of Council with respect to the issuance of CEWs to all front-line officers.

b) That the Police Services Board approach the City of Hamilton for funding to cover the costs of training, equipment and implementation of the CEW expansion to all front-line officers.

Glenn De Caire
Chief of Police

FINANCIAL / STAFFING / LEGAL IMPLICATIONS:

FINANCIAL – Equipment costs for the implementation of CEWs for all front-line officers is $324,611.41. This cost includes: CEWs, holsters, cartridges and targets. To implement the program, two (2) full-time instructors are required. The cost for two (2) new full-time staff is $226,449.60 including benefits. These instructors also require courses and certification at a cost of $11,800.00.
The training hours required service-wide will be equivalent to removing four (4) officers off of the street for an entire year. Replacing these four (4) officers to maintain present street strength will cost $429,601.02 including benefits. Therefore the total costs for initial implementation is $992,462.63.

**STAFFING**

The additional staff required are two (2) Constables trained in Use of Force, and CEW instruction. Also four (4) new Constables would be required to be hired to fill the void left by officers attending a total of 7,892 hours of training. These officers would replace the officers attending training.

**LEGAL**

n/a

**BACKGROUND:**

On August 27, 2013, the Minister of Community Safety and Correctional Services announced the authorization process for the use of Conducted Energy Weapons (CEWs). This report will provide some background on the current CEW deployment and make recommendations for expansion.

The CEW (often referred to by the brand name Taser) is a valuable intermediate Use of Force option that can be used in certain situations, taking into account the totality of the circumstances and the imminent need for control of a subject. The use of a CEW is regulated in Ontario by the Ministry of Community Safety and Correctional Services (MCSOC) under the Police Services Act (PSA), including which model can be used and which officers are qualified and permitted to carry a CEW. The CEW is one Use of Force option available to police officers. Officers are trained to use force appropriate to the level of risk presented by the subject to bystanders, officers, and him/herself.

**CEWs**

The Human Central Nervous System is comprised of both the Sensory Nervous System (carries information to the brain) and the Muscular Nervous System (carries command signals from the brain to the muscles). Currently, police use either the M26 or X26 Taser, manufactured by Taser International, and both CEWs fire two (2) probes via electrically charged wires to a maximum distance of 21 feet into a person’s body. These CEWs do not rely on localized pain to achieve compliance. The CEWs electrical wave simulates the waves of the Central Nervous System, in essence, the CEW “jams” or over-rides both the Sensory and Muscular Nervous Systems causing “Neuro-Muscular Incapacitation (NMI).” In layman’s terms, the CEWs two (2) probes complete an electrical circuit within a person’s body, which disrupts the brain’s signals, causing the muscles to involuntarily contract, thereby causing temporary incapacitation.
In order to achieve Neuro-Muscular Incapacitation, both probes must make contact with the intended target. The probes are deployed from a cartridge that is mounted to the front end of the Taser (see picture Taser X26).

When a CEW operator discharges probes from a cartridge, this is referred to as “Cartridge Deployed Mode”. The CEW can also be used in the “Push Stun Mode”, similar to using the Taser as a Stun Gun. In the Push Stun Mode, the operator removes the cartridge and directly applies the contact points of the Taser to an individual. This application does not cause Neuro-Muscular Incapacitation, but localized, area specific pain compliance. In both modes the CEW administers a five (5) second burst of electrical current on every pull of the Taser trigger. This period can be extended if the operator maintains pressure on the trigger.

The main differences between the M26 and X26 Tasers are as follows: The X26 is approximately 60% lighter and smaller than the M26. The X26 uses “Pulse Shaped” technology, which is approximately 5% more powerful than the “Blunt Shaped” technology utilized by the M26. Both Tasers have an on-board computer chip that
records the date and time whenever the trigger is pulled. The X26 also records how long the trigger was depressed.

Currently the Hamilton Police Service has 66 CEWs; 25 of which are M26 model CEWs and 41 X26 model CEWs. Currently the M26 models are being phased out of circulation.

**Hamilton Police Service CEW Deployment**

In 2000 and 2001, the Ontario Ministry of Community Safety and Correctional Services approved CEW testing pilot projects by the Toronto Police Service and the Ottawa Police Service. The CEW had already been approved for use in the Provinces of British Columbia and Alberta and by the Royal Canadian Mounted Police.

After extensive field testing by Toronto and Ottawa, the Ministry approved the CEW for use by trained members of all Tactical Units and Hostage Rescue Teams. The Hamilton Emergency Response Unit (ERU) began using the CEW on July 29, 2003. At that time, only the Taser model M26 was approved for use.

On February 17, 2004, the Ministry expanded the approved use of the CEW to include Containment Teams and Front-Line Supervisors and their Designates. The approval also included the technical specifications for approved CEWs and the training standards for CEW users.

Hamilton Police Service Supervisors were given the appropriate training, as per approved Ministry and Taser International training standards and the M26 Taser was deployed in October, 2004.

On January 13, 2005, the Taser X26 was approved for police use. The Hamilton Police Service purchased several X26s so that authorized members would be trained in both the M26 and X26. This was done to save on training costs should the Service switch to using the X26 Taser.

On February 7, 2005, the Ministry issued an All Chiefs Memorandum regarding clarification on the definition of “front-line supervisors or designates acting on their behalf.” In the Memorandum, the Ministry gave the authority to each individual police service to define for themselves what constitutes a front-line supervisor in both a uniform and non-uniform capacity. This allowed for the CEW to be used by members other than uniformed patrol supervisors or their designates. Current CEW training in Hamilton now includes front-line supervisors and designates, ERU, Crime Beat Managers, Crowd Management Unit Supervisors and designated Investigative Services Division members.
CEW Reporting

In 2005, a Hamilton Police Service TASER Report was implemented to track CEW use and deployment mode(s) that were not being captured by a Use of Force Report. Officers are only required to submit a Use of Force Report with respect to CEW use when a cartridge is fired at a subject or when directly applied in the contact mode.

The TASER report captures the following deployment modes: a) CEW used in the “cartridge deployed” mode where a cartridge is fired at a subject; b) CEW used in the “contact” mode where the CEW is applied directly to a subject otherwise referred to as “touch tase, drive stun or push stun”, and c) Force Presence/Display mode; in any instance in which the CEW is removed/drawn from its holster in front of a member of the public; or where the CEWs laser sight is applied to a subject; or when the CEW is “spark tested” in front of a subject in the effort to gain subject cooperation without having to actually apply the CEW. The report was further re-designed in 2007 and is now Parts C and D of the H.P.S. Use of Force Report.

As per the Ontario Use of Force Model, the CEW is an “intermediate weapon”, which police can consider to use when a subject exhibits “actively resistant” behaviour. However, in June 2009, the Hamilton Police Service changed its CEW policy to: a subject must exhibit at minimum “assaultive and/or serious bodily harm or death behaviours to themselves or another person” before CEW use can be considered. The policy prohibits the use of CEWs in the custody cell areas to extract prisoners. This was, and continues to be, a reflection of current national and provincial best practices.

The HPS conducts yearly audits on the use of CEWs. The CEW was used in 49 incidents in 2012; an increase of 122.7% over the 22 incidents in 2011. However, in 35 or 71.4% of the 2012 incidents, the CEW was deployed in the “display mode” only.

The CEW was deployed to apprehend/control Emotionally Disturbed/Mentally Ill Persons (17 incidents), High Risk Arrests where an individual was armed or thought to be armed with a weapon (6 incidents), Disturbances, usually involving Liquor Licence Act violations (6 incidents), Other Incidents, which are general arrests involving assaultive suspects (9 incidents) and Dynamic Entry (12 incidents). Current CEW qualification training includes a scenario dealing with an Emotionally Disturbed Person armed with a knife.

In 18 of the 2012 CEW incidents, the subjects were carrying or displaying a weapon. Thirteen (13) involved an edged weapon of some type.
CEW Expansion

With the announcement by the Ministry of Community Safety and Correctional Services expanding current Conducted Energy Weapon (CEW) deployment to front-line officers, the new user training requirement will increase from eight (8) hours of training to 12 hours of required training.

Service-wide a number of officers are already CEW qualified and the Training Branch has already taken proactive steps to ensure that those officers currently qualified are brought in for recertification. These officers will receive four (4) hours of training for recertification. This reduces the number of officers who will be required to take the new user course. Currently, there are 236 qualified CEW operators within the Hamilton Police Service. The Training Branch is currently in the process of re-certifying all of these officers.

The Training Branch has additionally developed a plan to condense annual Block Training to three (3) days and implement CEW Training as the fourth day. This takes advantage of existing scheduling and staffing requirements, however it will require some additional staffing at Use of Force. For those officers not qualified, who will need to take the new user training, below is a proposed schedule:
September 2013 – December 2013: the Training Branch will run Block Training as 3x10 hour training days for all officers – this cycle is designed for those officers currently CEW qualified who do not require new user training.

January 2014 – June 2014: run Block Training as 3x10 hour training days, plus 1x12 hour training day for new user CEW. Class size will be limited to 24 officers.

This training delivery method would ensure that the majority of Hamilton Police Officers are fully trained CEW operators by the end of June 2014. Following this period there will be an ongoing need to provide new user CEW training and re-certifications throughout the year for officers and new recruits.

**CEW Costs:**

The CEW expansion will consist of both equipment and personnel costs as follows:

**CEW Equipment Costs:**

- X26 TASERS (150) (Incl. warranties and Power Magazines) $216,842.50
- Holsters $10,015.77
- Cartridges (Re-certification) $21,827.64
- Cartridges (New users) $74,980.50
- Conductive Targets $945.00

**CEW Equipment Cost Total** $324,611.41

**Break Down of Expenditures:**

**CEWs**

150 new CEWs (X26 TASERS) to be allocated as follows:

- Division One 56
- Division Two 42
- Division Three 42
- Use of Force 10

**Total** 150
The CEWs issued to the Divisions will be a shared resource within the Division, eliminating the need for Specialty Units to have their own CEW; however this need would be in addition to the current CEWs in place, which will allow for spares and equipment repair.

**Personnel Costs:**

- Two (2) Instructors: $226,449.60
- TASER Master Instructor Courses: $7,000.00
- Use of Force Instructor Courses: $4,800.00
- CEW Operator Students [Equivalent to four (4) officers]: $429,601.02

**Personnel Cost Total:** $667,850.62

**Breakdown of Personnel Costs**

Currently there are four (4) permanent staff at Use of Force, one (1) Sergeant and three (3) Constables. In order to run CEW training on a continual basis, additional staff is required. CEW Re-certification is currently limited and only runs for a one-month period, this expansion will mean that new user certification and recertification for officers will need to be run continually throughout the year. Currently there is no set mechanism for Use of Force staff to take courses or have time off during the training cycle. When this or illness occurs, the Training Branch must request assistance from the Patrol Divisions for a back-up trained Use of Force Officer to assist. In addition, a full CEW deployment will mean additional administrative duties for the Sergeant.

In order to deliver the new user CEW training, as well as continue to deliver Use of Force training, the Training Branch will require two (2) additional staff. The CEW training cannot be accomplished along with Use of Force training, without additional staff.

The average annual Sworn salary including benefits is $113,224.80 per year.

**Two (2) Instructors at Salary x $113,224.80 = $226,449.60**

The Hamilton Police Service currently has six (6) provincially qualified X26 Instructors with one (1) of them being a Provincial Master Instructor (allowed to train and certify instructors). Their current positions within the organization are: Use of Force – four (4) CEW Instructors; Training Branch – one (1) CEW Instructor and ERU – one (1) CEW Instructor. They must re-certify every two (2) years and their current certification expires in 2014.
However, the Provincial CEW training mandate only covers the X26; therefore if the Service went to the X26P or X2 models the instructors would have to have the applicable training. Approximate cost for the course per instructor including expenses is $3,500.00. We would require two (2) instructors trained as TASER Master Instructors.  
Two (2) TASER Master Instructor Course x $3,500.00 = $7,000.00

In addition to being a qualified CEW Instructor, the Province has mandated that all CEW trainers must be Qualified Use of Force Trainers. The cost to send an officer to the Ontario Police College is $2,400.00. At minimum two (2) officers would have to attend and take the course.  
Two (2) Trainers Use of Force Instructor Course x $2,400.00 = $4,800.00

**CEW Operator new user training (Lost productivity costs):**

579 students x 12 hour initial training = 6,948 hours  
The average officer working 40 hours a week for 48 weeks of the year (factoring court, sick, holidays, training, lieu time) would work 1,800 hours in a one-year period.  
6,948 Training hours / 1,800 hours in a year = Loss of time equal to 3.86 officers in a one-year period. This equates to the Service losing 3.86 officers who are not available to take calls over the period of one (1) year.

**CEW Operator Re-Certification Training (Lost productivity costs):**

236 students x 4 hour recertification training = 944 hours  
The average officer working 40 hours a week for 48 weeks of the year (factoring court, sick, holidays, training, lieu time) would work 1,800 hours in a one-year period.  
944 Training hours / 1,800 hours in a year = Loss of time equal to .52 officers in a one-year period

Therefore the total productivity time lost to CEW Operator training in the first year will be the equivalent to approximately **four (4) officers**. The total cost of having the officers attend the training in terms of wages is $429,601.02. [Four (4) officers x $113,224.80 for salary and benefits]

**Total Personnel Costs** $667,850.62
Summary of All Costs:

CEW Equipment Costs:

X26 TASERS (150) $216,842.50
Holsters $10,015.77
Cartridges (Re-certification) $21,827.64
Cartridges (New Users) $74,980.50
Conductive Targets $945.00

CEW Equipment Cost Total $324,611.41

Personnel Costs:

Two (2) Instructors $226,449.60
TASER Master Instructor Courses $7,000.00
Use of Force Instructor Courses $4,800.00
CEW Operator Students [Equivalent to four (4) officers] $429,601.02

Personnel Cost Total $667,850.62

Factoring the Use of Force Instructional Staff and the Officers time to attend training, the immediate impact to the Hamilton Police Service will be the loss of six (6) officers.

Total New Equipment cost Total $324,611.41
Personnel Cost Total $667,850.62

Total Costs $992,462.03

Ongoing CEW Costs after Year One

The previous section deals with initial training and deployment costs that need to be taken into account immediately. Moving forward into the future there will be ongoing costs to maintain the program. This section will project costs moving forward once initial training is completed. These will become fixed annual costs that should be taken into account in the overall scope of CEW expansion.

Ongoing CEW Equipment Costs $144,037.93
Ongoing CEW Personnel Costs $491,395.63

Total Ongoing Equipment and Personnel Costs Annually $635,433.56
Breakdown of Ongoing CEW Costs:

CEWs and Holsters:

CEWs and Holsters will need a replacement factor built in for the long term. A 20% replacement calculation would allow for equipment malfunction, damage and replacement as new technology becomes available.

<table>
<thead>
<tr>
<th>Description</th>
<th>Cost 1</th>
<th>Cost 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>CEW (TASER) Cost</td>
<td>$216,842.50 x 20%</td>
<td>$43,368.50</td>
</tr>
<tr>
<td>Holster Cost</td>
<td>$10,015.77 x 20%</td>
<td>$2,003.15</td>
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<tr>
<td><strong>Total CEWs and Holsters</strong></td>
<td><strong>$45,371.65</strong></td>
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CEW Cartridges:

After the initial training period for new users, there will be an ongoing annual Recertification for all officers based on three (3) cartridges.

<table>
<thead>
<tr>
<th>Description</th>
<th>Cost 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cartridges</td>
<td>$92.49 per student (815 officers)</td>
</tr>
<tr>
<td><strong>Sub-total</strong></td>
<td><strong>$92.49 x 815</strong></td>
</tr>
<tr>
<td><strong>Total Cartridge Training</strong></td>
<td><strong>$75,379.35</strong></td>
</tr>
</tbody>
</table>

Additionally, there will still be a need to run new user sessions every year to account for new hires (recruits), as well as officers returning from long-term absences. In calculating this, using a 10% factor which would be 81.5 officers (which would account for 40 new hires and 40 long-term absences), basic certification for new users based on four (4) cartridges.

<table>
<thead>
<tr>
<th>Description</th>
<th>Cost 1</th>
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</thead>
<tbody>
<tr>
<td>Cartridges</td>
<td>$92.49 per student (81.15 officers)</td>
</tr>
<tr>
<td><strong>Sub-total</strong></td>
<td><strong>$92.49 x 81.5</strong></td>
</tr>
<tr>
<td><strong>Cartridges for Deployment</strong></td>
<td><strong>$37.01 x 400</strong></td>
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<tr>
<td><strong>Total Cost of Cartridge Training &amp; Deployment</strong></td>
<td><strong>$97,721.28</strong></td>
</tr>
</tbody>
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Training Targets:

Conductive TASER Targets

<table>
<thead>
<tr>
<th>Description</th>
<th>Cost 1</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Cost of Targets</strong></td>
<td><strong>$18.90 x 50</strong></td>
</tr>
</tbody>
</table>

**Total ongoing CEW Costs: (CEW/ Holsters, Cartridges, Targets) $144,037.93**
Ongoing CEW Personnel Costs

In order to deliver the new user CEW training, as well as continue to deliver Use of Force training, the Training Branch will require additional staffing. The CEW training cannot be accomplished along with Use of Force training without additional staff.

The average annual Sworn salary including benefits is $113,224.80 per year.

Two (2) Instructors at Salary x $113,224.80 = $226,449.60

CEW Operator New User Training (Lost productivity costs):
81.5 students x 12 hour initial training = 978 hours
The average officer working 40 hours a week for 48 weeks of the year (factoring court, sick, holidays, training, lieu time) would work 1,800 hours in a one-year period.
978 Training hours / 1,800 hours in a year = Loss of time equal to .54 Officers in a one-year period.

CEW Operator Re-certification Training (Lost productivity costs):
815 students x 4 hour recertification training = 3,260 hours
The average officer working 40 hours a week for 48 weeks of the year (factoring court, sick, holidays, training, lieu time) would work 1,800 hours in a one-year period.
3,260 Training hours / 1,800 hours in a year = Loss of time equal to 1.8 Officers in a one-year period.

Factoring the Use of Force Instructional Staff and the Officers' time to attend training, the permanent impact to the Hamilton Police Service will be the loss of 4.34 officers.

Ongoing CEW Equipment Costs

Ongoing CEW Personnel Costs ($113,224.80 x 4.34) $491,395.63

Total Ongoing Equipment and Personnel Costs $635,433.56

Conclusion

This model of deploying the CEW across the Hamilton Police Service takes into account the changing nature of the device. Rather than purchase a CEW for personal issue, it is more prudent to purchase fewer devices to be in a pool and signed out for their tour of duty. This helps minimize costs and helps ensure that as technology changes, the devices are more easily upgraded. To be realistic, costs need to be factored in for equipment and personnel startup, as well as ongoing costs that the Hamilton Police Service will have to plan for in the future.
The Ministry of Community Safety and Correctional Services has taken an important step in authorizing an expanded deployment of CEWs in Ontario. Unfortunately, this expansion announcement does not provide any funding to municipalities to help deal with the associated costs. The first year costs for training, equipment and implementation is $992,462.63. After the first year, the annual fixed costs will be $635,433.56 based on today's costs without inflation.

The use of CEWs is an effective less lethal force option available to police officers. It is considered a vital tool in law enforcement and used properly, it can save lives. Since being authorized for carry, in Hamilton, a CEW has been used 377 times and of those incidents, 111 occurrences involved the CEW being used in display mode only. This means there have been numerous incidents already in Hamilton where the mere presence of a CEW has served to defuse and de-escalate the incident. As well, in 18 of the 2012 CEW incidents the subjects were carrying or displaying a weapon that did not escalate and require a greater level of force. Thirteen involved an edged weapon of some type. Often when dealing with edged weapons officers only other option is their firearm beyond containment, officer presence and tactical communication. This is not to say that in every incident involving an edged weapon a CEW will prevent the use of a firearm, however having a CEW available to every officer ensures that if the opportunity to resolve an incident using a CEW exists, officers will be able to exercise that option.

While costly, this expansion of CEWs to all front-line officers is an important step forward in enhancing community safety for the entire City of Hamilton. This initial cost must be balanced against the reality of the financial, personnel and public cost of injury or death in an incident where a CEW could have been utilized.

GD/D. Clark

cc Ken Leendertse, Deputy Chief, Field Support