



## **SASKATOON POLICE SERVICE**

**TO:** Jo Custead, Chairperson  
Board of Police Commissioners

**FROM:** Troy Cooper  
Office of the Chief

**DATE:** 2021 August 10

**SUBJECT:** Taser 7 Capital Budget Approval

**FILE #:** 5,002

---

### **ISSUE:**

The Saskatoon Police Service (SPS) will be recommending as part of the 2022/2023 Capital Budget that the Service move ahead with the transition to the Taser 7 Conducted Energy Weapon (CEW).

The estimated cost of this refresh is \$1,065,000 and is proposed that the cost be spread out over a 5-year period. Axon, the manufacturer of the CEW, is offering a "buy-back program" on the currently owned Tasers, if SPS can commit to the purchase by September 30, 2021. This would save \$50,500 on the overall cost.

### **RECOMMENDATION:**

That the Board of Police Commissioners recommend to City Council that the following 2021 Post-Budget Adjustment be approved in order to save \$50,500 on CEW purchases:

1. That a Taser 7 Capital Project be established totaling \$1,014,500 to be funded over the next five years' capital budget;
2. That the funding source for the 2021 contribution be the unused \$128,500 CEW operating maintenance budget; and
3. That the \$128,500 CEW operating maintenance budget be reallocated as a transfer to capital replacement reserve.

## **STRATEGIC PRIORITY:**

This report supports the strategic theme of innovation by ensuring the SPS is sustainable by developing leading practice and maintaining an innovative service.

## **BACKGROUND:**

The SPS current inventory of CEWs consists of two models: The X-26 and the X-26P. As of December 2019 AXON (formerly TASER International) discontinued the X-26 and they no longer support repairs or battery replacement of this older version. There has not been an end of life date identified for the X-26P yet, however AXON states that when the decision is made to stop manufacturing the X-26P, it will be 6-12 months before the date. AXON's newest CEW, the Taser 7, is the primary replacement for CEWs once the X-26P is discontinued.

## **DISCUSSION:**

In 2016, Axon informed law enforcement agencies that they would be phasing out the X-26 and replacing it with the new X-26P. The X-26P functions the same as the X-26 and utilizes the same cartridges so there were no changes needed to the already approved CEW training in Saskatchewan. In 2017, the Saskatchewan Police Commission approved the use of the X-26P.

As can be expected, with any device or technology over time, several issues were identified with the both the X-26 and X-26P models such as:

- misses due to the single laser sighting;
- penetration through clothing; probes would bounce off the subject; and
- Ineffectiveness of the X-26 models at ranges less than 8 – 10 feet, where studies have shown that 85% of deployments occur.

The Taser 7 presents technological advancements that address these issues and improve administrative workflow with data management of the CEWs. Examples of the variety of improvements with the new Taser 7 can be seen below:

### **Deployment Design Improvements:**

- The probes of the CEW must spread before hitting a subject. The further they spread, the greater the Neuro Muscular Incapacitation (NMI). The smaller the spread, the less muscles are affected. With the X-26 models, officers needed to be 8-10 feet from the subject to get the ideal spread of the probes for optimal neuromuscular incapacitation.
  - The Taser 7 has two cartridges – one designed for deployment at close range distances and one for long-range distances. This increases accuracy by achieving the necessary probe spread for optimal NMI.
  - The Taser 7 has four capacitors – two for each cartridge bay. Upon deployment, the probes measure the connection across each pair of darts and adjusts the energy delivery to optimize the results. This maximizes the effectiveness of the probe and



## **“PUBLIC AGENDA”**

helps to compensate when probes are too close or clothing prevents penetration of the skin.

- The Taser 7 “rapid arc” technology delivers a similar electrical charge but at a faster rate, causing more rapid incapacitation.
- Built in De-escalation tools – there is separate warning Arc warning button with increased sound to help gain compliance without an actual discharge from the CEW.
- The Taser 7 is yellow in color, which makes it highly visible to suspects, which can have a de-escalating effect on a situation. This highly visible color also makes the Taser 7 readily identifiable to other officers.
- The Taser 7 has two lasers, on the top and bottom, to increase deployment accuracy.
- The probes move 28% faster and hit with twice the kinetic energy enabling them to go through clothing better. A larger tip on the probe prevents over penetration.
- On the X-26 models, the wires that connect the probes to the CEW are stored in an accordion fashion within the cartridge. When deployed this causes the probes to “porpoise” as they move. On the Taser 7, the wires unspool within the probe causing a straighter trajectory of the probe. The straight line of the wire reflects the distance from which it was discharged – a benefit for reporting purposes.

### **Handling Design Improvements:**

- Simplified loading and reloading.
- Every cartridge has a chip that records date, time and serial number. When inserted, the CEW reads and records that information on the cartridge. The Taser 7 holds 10 G of data (X-26’s has 1G of data). If a spent cartridge is inserted into a Taser 7, the CEW will read and be able to download the firing data.
- A significant change is the Taser 7 dock-and-walk-functionality. When not in service, the CEWs are connected to a charging dock connected to [Evidence.com](https://evidence.com), the cloud-based system that stores all data. During charging all CEW log data is automatically downloaded, firmware updates take place, and the battery capacity is assessed. Any battery that tests below 80% registers on the display.
  - Cloud-based storage has various elements to protect information including strict authentication measures for users and encryption of data in transit and during docking.
- New technology allows digital tracking of what officer has what CEW, with what cartridges on what date.
- These management advancements are estimated to save about four administrative hours per year per CEW.

### **Training Improvements:**

- New training probes have Velcro tips, which prevents role players from having sharp probe deployed against them as we do with current training probes. This will be

## “PUBLIC AGENDA”

beneficial to scenarios in regards to use of force training as it will allow for more dynamic and safer training.

### Financial Implications

The SPS currently spends a total of \$128,500 annually on the replacement and maintenance of the existing X-26 and X-26P devices. These operating costs would not be required for the next 5 years as the units would be covered under warranty and related maintenance or consumables would also be covered.

This means that the total purchase price of \$1,065,000 would be significantly covered off by existing operating budget savings (\$642,500) that would no longer be required until the units are off warranty. The net new cost to the service funded from Capital Reserve contributions would be \$372,000 over the next 5 years.

In addition, if ordered by the end of September, 2021, AXON would also offer a buy-back program for existing CEWs of \$50,500. A full breakdown of the financial plan can be seen below:

	2021	2022	2023	2024	2025	TOTAL
Taser 7 Cost	\$179,000	\$221,500	\$221,500	\$221,500	\$221,500	\$1,065,000
Trade-In Savings	(\$50,500)	-	-	-	-	(\$50,500)
<b>Total Cost</b>	<b>\$128,500</b>	<b>\$221,500</b>	<b>\$221,500</b>	<b>\$221,500</b>	<b>\$221,500</b>	<b>\$1,014,500</b>
Operating	\$128,500	\$128,500	\$128,500	\$128,500	\$128,500	\$642,500
Budget Savings						
Capital Reserve	-	\$93,000	\$93,000	\$93,000	\$93,000	\$372,000
Contribution						
<b>Total Funding</b>	<b>\$128,500</b>	<b>\$221,500</b>	<b>\$221,500</b>	<b>\$221,500</b>	<b>\$221,500</b>	<b>\$1,014,500</b>

## **“PUBLIC AGENDA”**

### **CONCLUSION:**

Approval of the included recommendations will allow the SPS to proceed with the replacement of the current CEW's and realize \$50,500 in additional savings as opposed to waiting until 2022 to proceed with the replacement.

**Written by:** **Clae Hack**  
**Executive Director, Corporate and Strategic Performance**

**Approved by:** **Randy Huisman**  
**Deputy Chief, Operations**

**Submitted by:**   
**Randy Huisman**  
**Acting Chief of Police**

**Dated:** August 10, 2021