

Effectiveness and Efficiency of the Use of the Patrol Vehicles of the Service de police de la Ville de Montréal in Emergency Settings

3.5.

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2022 Annual Report

Auditor General of
the Ville de Montréal

Effectiveness and Efficiency of the Use of the Patrol Vehicles of the Service de police de la Ville de Montréal in Emergency Settings

Background

The mission of the Service de police de la Ville de Montréal (SPVM) is to ensure the safety and integrity of individuals, the population and property. Patrol officers across the territory of the agglomeration of Montréal intervene when emergency calls are made to the 911 Emergency Centre. Depending on the severity of the situation, the SPVM has set targets for the average time it takes to respond to these calls, i.e., the total time between the moment a call is received at the 911 Emergency Centre and the moment a patrol vehicle arrives on the scene. To get to the scene as quickly as possible, the following conditions must be met:

1. The emergency call must be assigned to the patrol vehicle that is best positioned, i.e., the vehicle that is closest to the scene of the emergency;
2. The patrol vehicle must be in good working order, especially as regards the quality of its tires, since the intervention can unfold on any type of roadway;
3. The patrol officer must be comfortable operating an emergency vehicle in a variety of weather and urban conditions.

Purpose of the audit

To ensure that the Ville de Montréal (the City) makes effective and efficient use of the patrol vehicles of the Service de police de la Ville de Montréal when responding to calls and travelling on the road network.

Results

For obvious security reasons we cannot disclose the details of the results or our findings in this annual report. We made recommendations to the various business units concerned in relation to these findings and they have committed to developing and implementing action plans to correct the deficiencies found.





List of Acronyms

CAD

Computer-aided dispatch

City

Ville de Montréal

CNESST

Commission des normes, de l'équité,
de la santé et de la sécurité du travail

GPS

global positioning system

MWS

mobile workstation

NPS

neighbourhood police station

SMRA

Service du matériel roulant et des ateliers

SPVM

Service de police de la Ville de Montréal

STI

Service des technologies de l'information



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1. Background

The service levels of Québec’s police forces range from 1 to 6 and are established under the *Police Act*. A level 1 police force is expected to be able to control a peaceful crowd, whereas level 5 and 6 police forces are expected to be able to control crowds associated with a high risk of unrest, overflow or riot. Considering that the Service de police de la Ville de Montréal (SPVM) serves a population of approximately 2 million people and covers an area of 496 square kilometres, it is a level 5 police force. It is the only level 5 police force (only the Sûreté du Québec is at the higher level of 6).

In 2021, the SPVM had 4,523 police officers¹ and more than 1,294 civilian employees,² making it the second-largest municipal police force in Canada and the eighth largest in North America. For comparison purposes, the Toronto Police Service has approximately 7,600 employees (police officers and civilians combined).

The mission³ of the SPVM is to protect the lives and property of citizens, maintain peace and public safety, prevent and combat crime, and enforce current laws and regulations. The police officers of the Ville de Montréal (the City) operate on a daily basis against the backdrop of a diverse socio-demographic and economic landscape.

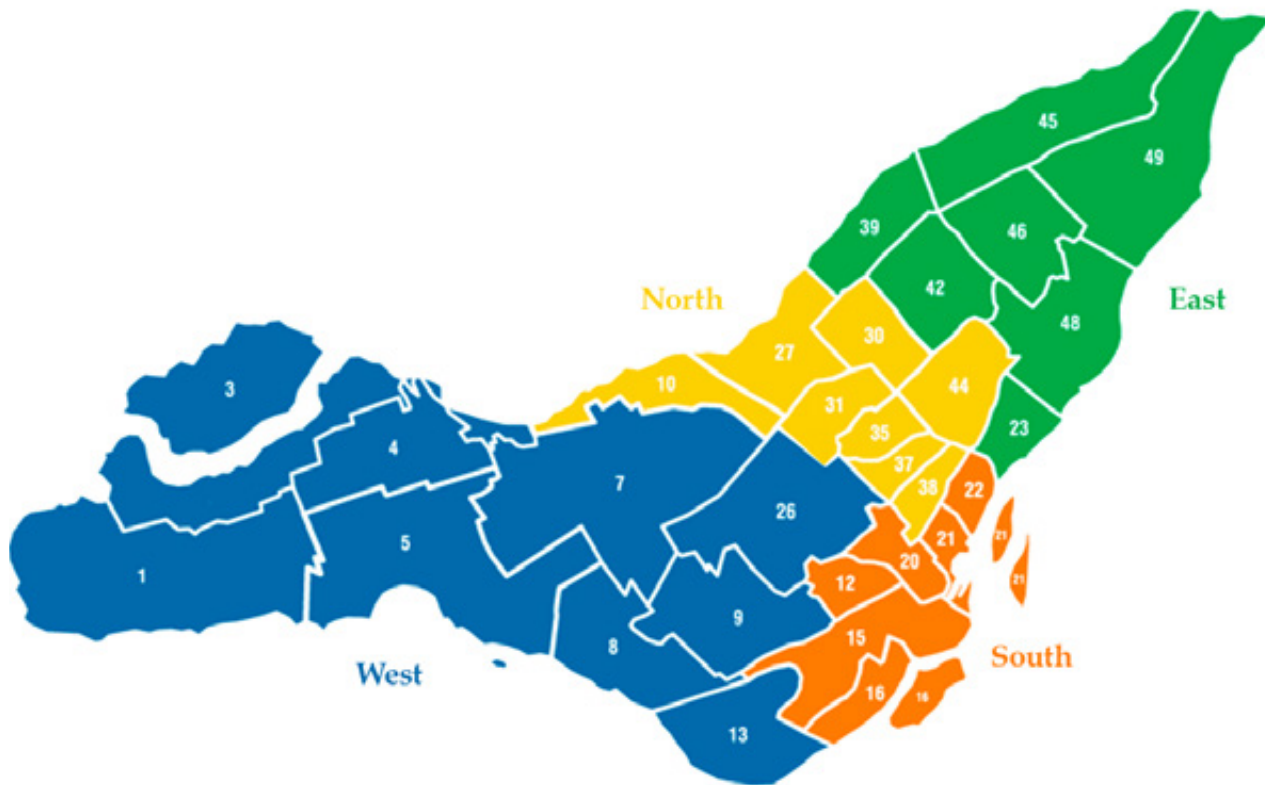
The SPVM serves the territory that covers the entire island of Montréal. This territory is subdivided into 4 distinct geographic regions (West, South, North and East) over which the 29 neighbourhood police stations (NPSs) are distributed to serve citizens (see Figure 1). Two units also provide direct service to the public: the airport unit and the metro unit.

¹ The term “police officer” is used in this report in reference to all employees of the SPVM other than civilians.

² In 2021, the SPVM had 496 unfilled positions (377 police officer positions and 119 civilian positions); 2021 Activity Report, SPVM, p. 5.

³ 2021 Activity Report, SPVM, p. 4.

FIGURE 1 | **PORTRAIT OF THE FOUR GEOGRAPHIC REGIONS OF THE ISLAND OF MONTRÉAL COVERED BY THE SERVICE DE POLICE DE LA VILLE DE MONTRÉAL**



Source: <https://spvm.qc.ca/en/Fiches/Details/Crime-profiles>.

Adapted by the Office of the Auditor General to reflect the merger of NPS 33 into NPS 31.

In 1985, the Communauté urbaine de Montréal (today the Communauté métropolitaine de Montréal) inaugurated the 911 Emergency Centre, which receives all emergency calls on the territory of the Communauté urbaine de Montréal. In 2008, the 911 Emergency Centre and the SPVM's call handling division merged their operations. Since then, the operators who answer 911 calls have been directly handling those destined for the SPVM.

The mission of the 911 Emergency Centre is "[t]o receive and process all emergency calls from the public and from emergency responders, in order to dispatch the proper response with the goal of safeguarding individuals, the public and property." The actions taken by the 911 Emergency Centre contribute fulfilling the SPVM's mission.

Prioritization of the Calls Made to the 911 Emergency Centre

Incoming calls are assessed and priority codes are established on a scale of 1 to 7, as shown in Table 1. As a general rule, the different NPSs respond to the calls of their own jurisdictions, without, however, being limited to these jurisdictions.

TABLE 1 | **PRIORITY OF THE CALLS MADE TO THE 911 EMERGENCY CENTRE
OF THE SERVICE DE POLICE DE LA VILLE DE MONTRÉAL**

	PRIORITY	DEFINITION	EXAMPLES
Urgent calls	1	Immediate intervention	<ul style="list-style-type: none"> • Crime in progress against a person that is life-threatening or where a person has been threatened or harmed. • Domestic violence. • Any life-threatening incident involving a body of water.
	2	Prompt intervention	<ul style="list-style-type: none"> • Crime against a person that has just occurred where there is no threat to a person's life or physical safety, but where it may be necessary to secure the victim. • Disappearance of an individual whose physical safety is at risk. • Ongoing or apprehended conflict or event involving a factor of violence or risk to physical safety. • Crime against property in progress. • Alert for the immediate arrest of a wanted suspect.
	3	Rapid intervention	<ul style="list-style-type: none"> • Crime against a person that has occurred and no longer poses a threat to life or physical safety. • Ongoing conflict with no violence factor. • Event requiring a rapid police presence for verification or reporting purposes.
Non-urgent calls	4	Non-urgent intervention	<ul style="list-style-type: none"> • Break and enter call where the premises are secured. • Graffiti-related event. • Information call regarding a sex crime or an abandoned or abused child.
	5	Police presence not required / Reminder to the citizen	<ul style="list-style-type: none"> • Any call where the citizen is unable to get around because of a lack of mobility due to age, disability or humanitarian reasons. • Any call for which citizens are invited to come to a neighbourhood police station to have their call processed.
	6	Delayed treatment	<ul style="list-style-type: none"> • Information requiring analysis by the operations manager before call is processed internally or externally.
	7	Complaints, call from Transplant Québec	<ul style="list-style-type: none"> • Complaint about the service of an employee of the Service de police de la Ville de Montréal. • Request for the transport of organs or a medical team at the request of Transplant Québec.

Source: SPVM.

According to the SPVM's 2021 Annual Report,⁴ the average response time for priority 1 calls increased by 10.2%, from 5 minutes 29 seconds in 2020 to 6 minutes 3 seconds in 2021.

In 2021, the employees of the 911 Emergency Centre responded to 1,445,082 calls requiring the presence of an emergency service (e.g., the police department, the fire department, the ambulance service). Of these, just over 425,000 calls (30%) required the intervention of the SPVM⁵ and were dispatched to police officers. Of the calls handled, more than 81% were considered urgent calls, i.e., priority 1, 2 or 3 calls. This statistic remains relatively stable from year to year. Table 2 shows the annual volume of calls received for each geographic region from 2019 to 2021. This data is taken from the SPVM's annual reports.

TABLE 2 | ANNUAL VOLUME OF CALLS BY PRIORITY AND REGION FOR 2019–2021 [a]

PRIORITY		WEST REGION	SOUTH REGION	NORTH REGION	EAST REGION	ANNUAL AVERAGE	%
Urgent calls	1	2,344	1,871	2,134	2,128	8,477	2.5%
	2	45,260	41,915	45,215	41,816	174,206	50.3%
	3	43,367	36,937	46,938	36,263	163,505	47.2%
	SUBTOTAL	90,971	80,723	94,287	80,207	346,188	100%
	PERCENTAGE	86%	82%	76%	84%	82%	
Non-urgent calls – Priorities 4 to 7	SUBTOTAL	14,616	17,243	29,186	14,798	75,844	
	PERCENTAGE	14%	18%	24%	16%	18%	
TOTAL		105,587	97,966	123,473	95,005	422,032	

[a] The 2022 data had not yet been released by the SPVM at the time this audit report was produced.

Source: SPVM.

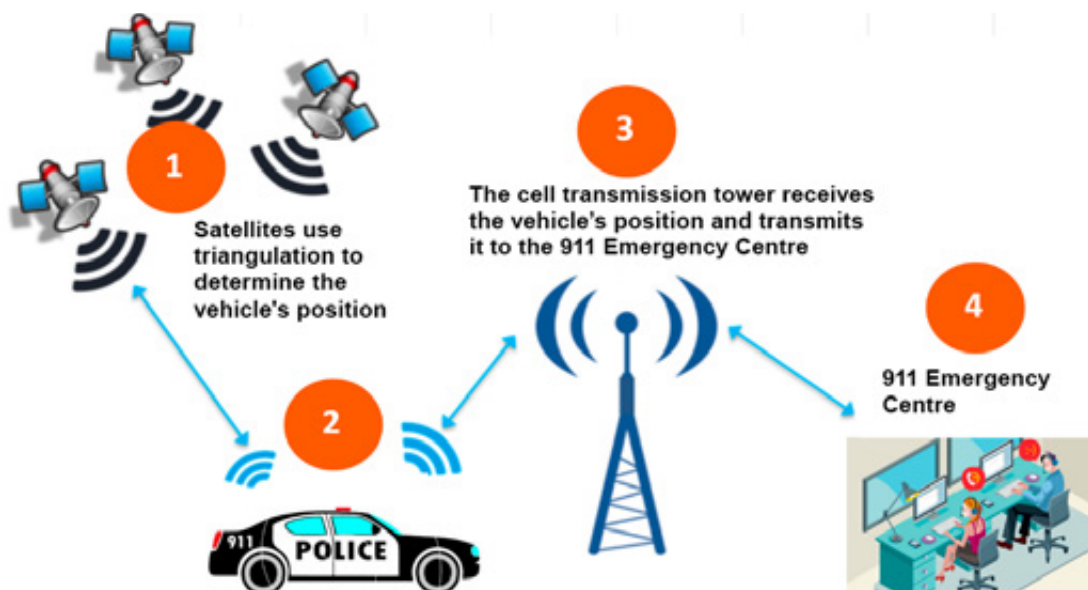
⁴ This is the most recent annual report published by the SPVM at the time of producing this report.

⁵ This statistic remains relatively stable from one year to the next according to the SPVM's "2021 Activity Report" (p. 11).

Dispatching of Calls to Patrol Vehicles

Geolocation is a process used to determine the geographical position of an object, a vehicle or a person, fixed or mobile, on the Earth's surface. A GPS (global positioning system) satellite positioning system⁶ makes it possible to geographically locate a vehicle and communicate its position by cellular waves if necessary. Figure 2 illustrates how a GPS satellite positioning system operates. Knowing the location of patrol vehicles allows a police force to dispatch the closest available patrol vehicle to the scene of a call.

FIGURE 2 OPERATION OF A SATELLITE GLOBAL POSITIONING SYSTEM (GPS)



Source: Figure produced by the Office of the Auditor General.

In 2004, the Commission des normes, de l'équité, de la santé et de la sécurité du travail (CNESST) made a recommendation regarding the need to implement geolocation in SPVM vehicles, following the death of a police officer in 2002. In 2007, during a follow-up of the action plan, the CNESST emphasized that [translation] "... the implementation of a real-time geolocation system is a priority for the SPVM."

Geolocation systems began to be installed in vehicles in 2009. At the request of the SPVM and to meet health and safety needs, the system deployed by the Service des technologies de l'information (STI) at that time was aimed at locating police officers who had triggered their emergency button. The 911 Emergency Centre could not use this software for actual proximity dispatches. In 2013, following the death of a citizen, the public inquiry report filed by the coroner noted that the Court of Québec recommended that the SPVM [translation] "... examine the possibility of equipping its vehicles with satellite-based global positioning systems (GPS)."

⁶ Different types of geolocation systems exist that also provide positioning data.

The geolocation technology selected by the SPVM is based on the application of computer-aided dispatch (CAD). The patrol vehicles are equipped with mobile workstations (MWSs – computers), which are similar to laptop computers with geolocation capability. Prior to the start of their shift, patrol officers plug their MWS into the patrol vehicle, and they remove it at the end of their shift and return it to the NPS.

2. Purpose and Scope of the Audit and Evaluation Criteria

2.1. Purpose of the Audit

Pursuant to the provisions of the *Cities and Towns Act*, we performed a value-for-money audit on the effectiveness and efficiency of the use of SPVM patrol vehicles in emergency situations. We carried out this mission in accordance with the *Canadian Standard on Assurance Engagements* (CSAE) 3001 of the CPA Canada Handbook – Assurance.

The purpose of this audit was to ensure that the Ville de Montréal (the City) makes effective and efficient use of SPVM patrol vehicles in response to calls and while travelling on the road network.

2.2. Evaluation Criteria

Our assessment is based on criteria we deemed valid under the circumstances, namely the following:

- ◆ The SPVM's patrol vehicles travel effectively and efficiently on the territory;
- ◆ Police officers have the skills required to operate patrol vehicles in such a way as to travel and interact in a safe, lawful and efficient manner while operating a vehicle;
- ◆ The patrol vehicles are parked in locations that promote their safe access and efficient use.

The responsibility of the Auditor General of the City is to provide a conclusion regarding the purpose of the audit. To that end, we gathered sufficient and appropriate evidence on which to base our conclusion and obtain a reasonable level of assurance.

The City's Auditor General applies the *Canadian Standard on Quality Management 1, Quality Management for Firms that Perform Audits or Review of Financial Statements, or Other Assurance or Related Services Engagements*. This standard requires the City's Auditor General to design, implement and operate a quality management system that includes policies and procedures to ensure compliance with ethical rules, professional standards and applicable legal and regulatory requirements. In the performance of the work, the City's Auditor General also complies with the rules regarding independence as well as with the other ethical rules of Québec's Code of ethics of chartered professional accountants, which are based on the principles of integrity, professional competence and due diligence, confidentiality and professional conduct.

Our audit work covered the period from January 1, 2019, to December 31, 2022. However, for certain aspects, data from before this period was also taken into consideration. Our work was mainly carried out between August 2022 and January 2023. We also took into account information that was sent to us up to March 2023.

At the end of our work, a draft audit report was presented for discussion to the relevant managers at the SPVM, the Service du matériel roulant et des ateliers (SMRA) and the STI. The final report was then sent to the management of each of these departments for the purpose of obtaining, where applicable, an action plan and a timetable for the implementation

of the recommendations laid out in this report. A copy of the final report was also sent, for information purposes, to the Direction générale, the Direction générale adjointe à la Sécurité urbaine et la conformité and the Direction générale adjointe du Service aux citoyens.

2.3. Scope of the Audit

Most of the work was carried out with the following business units:

- ◆ Service de police de la Ville de Montréal;
 - Direction des services corporatifs;
 - › Service du soutien aux opérations policières (911 Emergency Centre),
 - › Division de la prévention et de la sécurité urbaine (survey on parking safety),
 - › Service des ressources matérielles et technologiques (operation of technology such as the automatic licence plate reader);
 - Direction de la gendarmerie;
 - › Services de la gendarmerie Sud-Ouest et Service de la gendarmerie Nord-Est (to which the different NPSs report),
 - Direction de l’intégrité et des normes professionnelles;
 - › Division de la formation,
 - › Division de l’intégrité et des services externes (background checks),
 - Direction des communications, des pratiques d’affaires et des relations avec les partenaires;
 - › Division intelligence d’affaires (data mining),
- ◆ Service du matériel roulant et des ateliers (SMRA);
 - Direction des ateliers mécaniques et de proximité,
 - › Division de la sécurité publique,
- ◆ Service des technologies de l’information (STI);
 - Direction de la sécurité publique et justice;
 - › Division de la sécurité publique.

Exclusions

We limited our mission to the use of patrol vehicles, thus excluding the use of other types of vehicles belonging to the SPVM. The use of patrol vehicles takes into account travel times to respond to calls, driver training and the security of parking areas at NPSs. However, we excluded from this audit vehicle layout, fuel consumption and idling, equipment related to the use of vehicles such as license plate readers or radar systems, vehicle maintenance, vehicle purchases and the definition of needs in terms of vehicle types and numbers.

**3.5. Effectiveness and Efficiency of the Use of the Patrol Vehicles
of the Service de police de la Ville de Montréal in Emergency Settings**

For obvious security reasons we cannot disclose the details of the results or our findings in this annual report. We made recommendations to the various business units concerned in relation to these findings and they have committed to developing and implementing action plans to correct the deficiencies found.

