

## **Auditor General's 2022 Status Report on Outstanding Recommendations**

**Date:** January 27, 2023

**To:** Audit Committee

**From:** Auditor General

**Wards:** All

### **REASON FOR CONFIDENTIAL INFORMATION**

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The attachment to this report involves the security of property belonging to the City of Toronto.

### **SUMMARY**

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This report provides the results of our follow-up of selected recommendations conducted in the second half of 2022, and a high-level summary of outstanding recommendations for all City divisions and its agencies and corporations, as of December 30, 2022. Since inception (January 1999) to December 2022, the Auditor General has verified 80% of recommendations as fully implemented or no longer relevant.

As reported in the 2022 Auditor General's work plan update<sup>1</sup>, the Auditor General's Office was impacted by unanticipated staff leaves, turnover, and vacancies which led to staffing and capacity constraints. This resulted in requiring our office to prioritize projects and work according to available resources, including deferring some work on the follow-up of implementation of audit recommendations. As a result, the Auditor General performed follow-up work of a select number of reports with high priority recommendations in 2022.

As of September 30, 2022, there were 704 outstanding recommendations. Management indicated that 331 of 704 recommendations were fully implemented, 5 were no longer applicable and 368 recommendations were still in progress. Figure 1 provides the length of time the 368 recommendations have been outstanding.

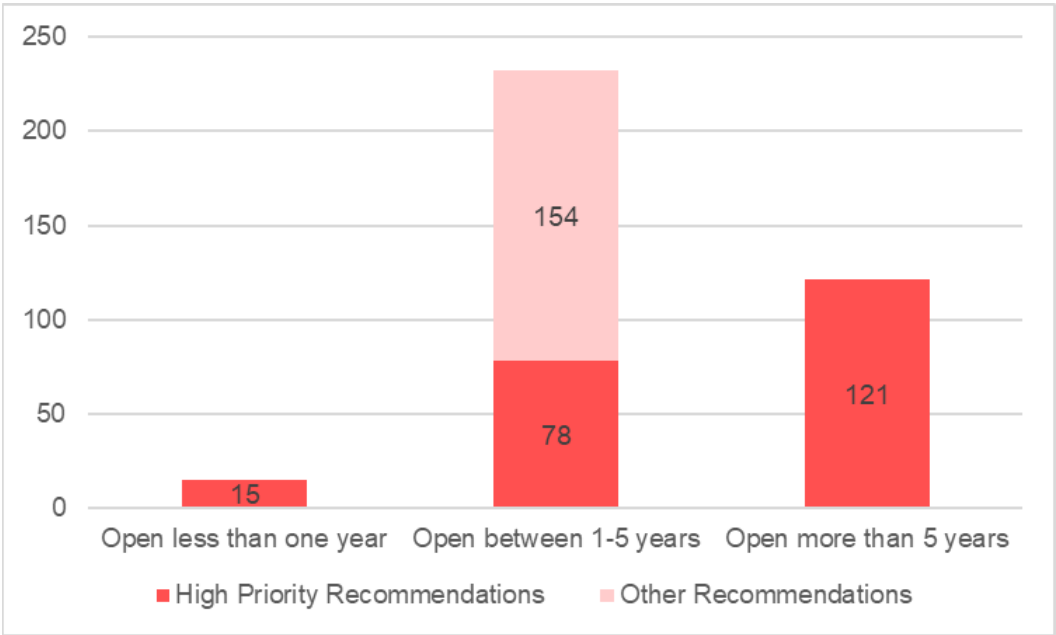
There will be significant work for our office to verify the outstanding recommendations reported by management as fully implemented or no longer applicable. Our office will continue to perform the follow-up work based on available resources and focus on

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<sup>1</sup> [Auditor General's 2022 Work Plan Update and Request for Administrative Amendment to City Reserve Fund Accounts \(toronto.ca\)](#)

verifying high priority recommendations first, including those recommendations that have been outstanding greater than five years and/or those with potential cost savings.

**Figure 1: Outstanding NFI Audit Recommendations by Age, as of September 30, 2022**



**Note: Recommendations that remain open for more than 5 years are ranked as high priority for management to expedite implementation.**

In this follow-up cycle, we have reviewed the status of 68 out of 331 recommendations reported by management as fully implemented from the following five divisions. The review focused mostly on information technology including cybersecurity related recommendations, with the exception of Fleet Services where recommendations were related to improving operational controls:

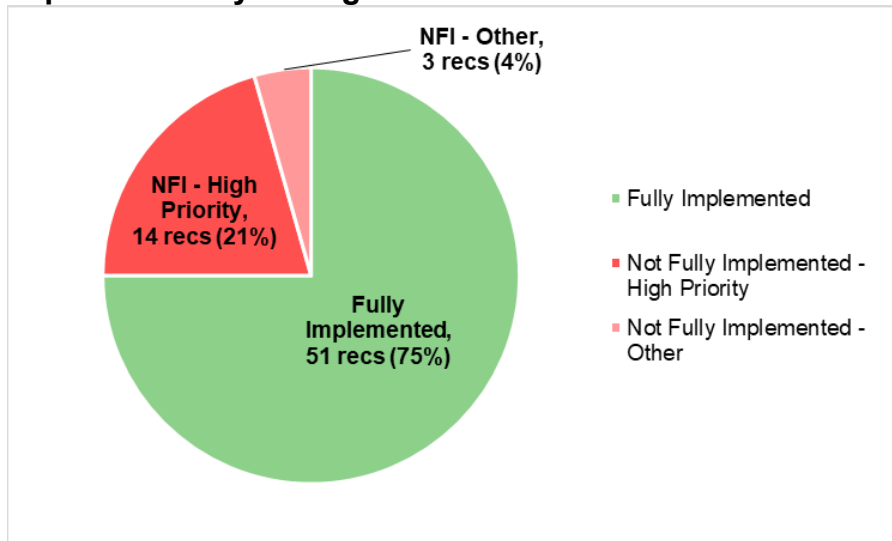
- Technology Services Division
- Office of the Chief Information Security Officer
- Fires Services
- Toronto Water
- Fleet Services.

Of the 68 recommendations we selected for review, we determined 51 as fully implemented (FI) and 17 recommendations as not fully implemented (NFI). The NFI recommendations include 14 recommendations that are considered high priority where we believe management should expedite their implementation.

A recommendation is determined as NFI because the actions taken by management or the extent of improvements did not fully address the issue or management was not able to provide sufficient and appropriate evidence during the follow-up review.

The results of our follow-up review are summarized in Figure 2 below:

**Figure 2: Auditor General’s Validation of Recommendations Reported as Fully Implemented by Management**



The City is expected to realize \$5.1 million in savings over five years as a result of management actions taken to implement the Auditor General’s report recommendations. These savings relate to a reduction in the mailing costs of employee pay statements and improvements in fleet management practices such as warranty administration that reduced vehicle repair and maintenance costs.

## **RECOMMENDATIONS**

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The Auditor General recommends that:

1. City Council direct that the confidential information contained in Confidential Attachment 1 remain confidential in its entirety, as it involves the security of property belonging to the City.

## **FINANCIAL IMPACT**

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The recommendation contained in this report does not have any financial impact. However, management may require resources to implement the Auditor General's recommendations from audits and reviews referred to in this report.

In some cases, the cost of additional resources if required can be offset by savings from reduced or avoided operating or capital costs. For example, the investments needed to improve cybersecurity controls could prevent the potential consequences from a breach, such as data recovery/cleanup, operational disruption, financial loss, reputation damage, fines and potential litigation costs.

The Auditor General reports on the significant financial and non-financial impacts the City realizes by implementing the Auditor General's recommendations through her Annual Report. The 2022 annual report entitled: "Demonstrating the Value of the Auditor General's Office" is being tabled at the February 13, 2023 Audit Committee meeting. The annual report states that every dollar invested in the Auditor General's Office, there is a return of \$12.52. The report is available at:

<https://ww.torontoauditor.ca/report/auditor-generals-2022-annual-report-demonstrating-the-value-of-the-auditor-generals-office>

## **DECISION HISTORY**

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The follow-up of outstanding recommendations is required by Government Auditing Standards. The process is important as it helps to ensure that management has taken appropriate actions to implement the recommendations from previous Auditor General reports. The follow-up review is part of the Auditor General's annual work plans. The 2022 Audit Work Plan is available at:

<https://www.toronto.ca/legdocs/mmis/2021/au/bgrd/backgroundfile-172597.pdf>

The last two follow-up status reports considered by the Audit Committee are available at:

- (i) Auditor General's 2021 Consolidated Status Report on Outstanding Recommendations, November 2021

<http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2021.AU10.1>

- (ii) Auditor General's Status Report on Outstanding Recommendations, June 2021

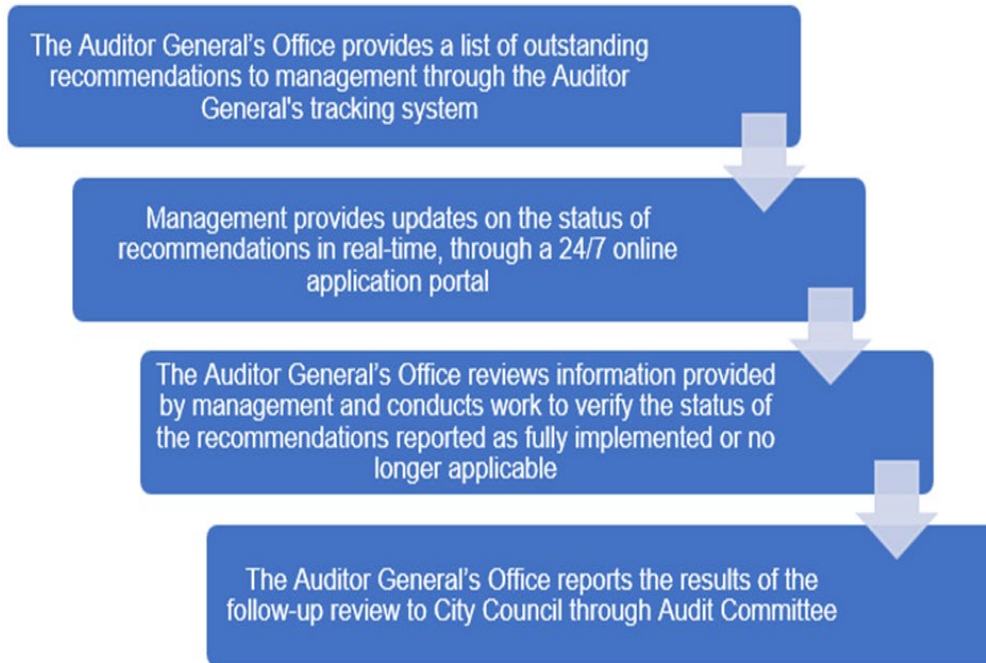
<http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2021.AU9.6>

### **Overview of the Auditor General's follow-up process**

In 2020, the Auditor General's Office implemented a new audit management technology solution. The system allows management to provide comments, upload supporting documents and update the implementation status of open audit recommendations at anytime. This allows our team to manage the ongoing follow-up of recommendations and track their implementation status.

Our follow-up process as summarized in Figure 3, requires management to review the outstanding recommendations and provide information on their implementation status. Where management is continuing to take actions to address recommendations and has reported the recommendation as not yet fully implemented, we do not conduct further work.

**Figure 3: Key Steps in the Recommendation Follow-up Process**



For recommendations that management has reported as fully implemented or no longer applicable, management is required to provide an explanation as well as sufficient and appropriate supporting documentation. The Auditor General's Office conducts work to verify the status of these recommendations.

The Auditor General's follow-up of outstanding recommendations does not constitute a performance audit conducted in accordance with Generally Accepted Government Auditing Standards (GAGAS). However, we believe that we have performed sufficient work to validate management's assertions on the implementation of recommendations.

We classify recommendations as high priority where there is a significant potential for savings, or health and safety risks, or the recommendation has been outstanding for over five years. Management should expedite the implementation of these recommendations. Looking ahead, we will continue to focus on reports with high priority recommendations.

## **COMMENTS**

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### **Year at a Glance: Recommendations Verified in 2022**

For this follow-up cycle, we verified management's actions on recommendations implemented from reports relating to information technology including cybersecurity, being a high-risk area, and reports on improving the City's fleet management. Our current follow-up review included 68 recommendations that management reported as fully implemented. The results are summarized in Table 1 below:

**Table 1: Results of the Auditor General’s Review of the Selected Recommendations, December 30, 2022**

City Division	Fully Implemented	Not Fully Implemented*	Grand Total
Technology Services Division	23	11	34
Office of the CISO	3	--	3
Toronto Fire Services	4	--	4
Toronto Water	2	1	3
Fleet Services	19	5	24
<b>Grand Total</b>	<b>51</b>	<b>17</b>	<b>68</b>

\*14 of the 17 NFI recommendations are high priority and their implementation should be expedited. The high priority recommendations are highlighted in Confidential Attachment 1 and Attachment 2.

Of the 68 recommendations reviewed, 51 were determined to be fully implemented, and 17 were determined as not yet fully implemented. These recommendations together with management’s comments can be found in Confidential Attachment 1 and Attachments 1 and 2.

Table 2 summarizes the implementation status of recommendations issued by the Auditor General’s Office to City divisions and agencies and corporations since inception (January 1999) to December 30, 2022. Since inception, the Auditor General’s Office has verified 80 per cent of recommendations as fully implemented or no longer relevant.

**Table 2: Recommendation Implementation Status from Inception to December 30, 2022**

City Service Groups, Agencies and Corporations	FI	N/A	NFI	FI Reported by Management (not verified by AG)	N/A Reported by Management* (not verified by AG)	Total
<b>Community and Social Services</b>	350	36	88	72	0	<b>546</b>
<b>Infrastructure and Development Services</b>	410	16	57	47	0	<b>530</b>
<b>Corporate Services</b>	448	35	126	38	3	<b>650</b>
<b>Finance and Treasury Services</b>	397	38	48	56	0	<b>539</b>
<b>City Manager</b>	235	35	3	8	0	<b>281</b>
<b>Agencies and Corporations**</b>	632	157	78	68	2	<b>937</b>

City Service Groups, Agencies and Corporations	FI	N/A	NFI	FI Reported by Management (not verified by AG)	N/A Reported by Management* (not verified by AG)	Total
<b>Total Recommendations</b>	<b>2472</b> (71%)	<b>317</b> (9%)	<b>400</b> (12%)	<b>294</b> (8%)		<b>3483</b>

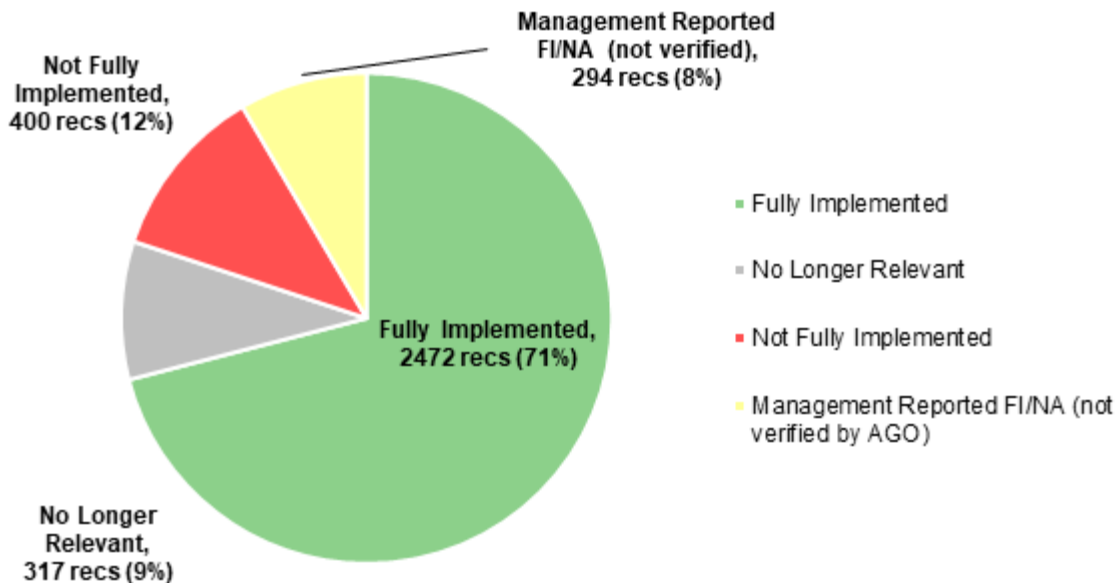
80%

\* N/A = no longer applicable/relevant. Recommendations no longer relevant relate to areas or programs where a reorganization or changes in business practices and service levels have rendered them no longer applicable

\*\* Includes one recommendation belonging to an agency verified as fully implemented. The results of our review will be submitted to the respective Board in a future follow-up report.

Figure 4 illustrates the implementation status of the Auditor General’s recommendations since inception, January 1999 to December 2022.

**Figure 4: Recommendations Implementation Status: Inception to December 2022**



While management continues to make progress in implementing recommendations, the Auditor General has not yet verified all recommendations reported by management as fully implemented. Our office will need to continue to do work based on available resources and prioritize the follow-up areas of highest priority first, including those recommendations that have been outstanding more than five years and/or those with potential cost savings.

**High Priority Recommendations that Management Needs to Implement**

Of the 694 outstanding recommendations as of December 30, 2022 requiring the Auditor General’s review, 376 recommendations are high priority. Management has reported 148 of these high priority recommendations as fully implemented, 3 as not applicable and 225 as not fully implemented.

The status of all high priority recommendations by service area are summarized in Table 3 below. Given our office’s limited resources, we expect to focus on a select number of reports with high-priority recommendations. In the upcoming follow-up cycles, the Auditor General plans to follow-up on outstanding recommendations reported as fully implemented from Corporate Real Estate Management, Transportation Services, Purchasing and Materials Management, Parks, Forestry and Recreation, and Toronto Transit Commission.

**Table 3: Status of Open High Priority Recommendations as Reported by Management (not verified by AGO) as of December 30, 2022**

City Service Groups, Agencies and Corporations	Management reported as FI or N/A (not verified by AG)		Not Fully Implemented*	Total High Priority Recommendations
	FI	N/A		
City Manager	7	0	3	10
Community and Social Services	24	0	41	65
Corporate Services	28	3	91	122
Infrastructure and Development Services	11	0	18	29
Finance and Treasury Services	42	0	39	81
Agencies and Corporations	36	0	33	69
<b>Total</b>	148	3	225	376

\* An aging of high priority recommendations reported by management as not fully implemented can be found in Attachment 4.

## Noteworthy 2022 follow-up review results

### 1. IT Infrastructure and IT Asset Management Review

- Phase 1: Establishing an Information Technology Roadmap to Guide the Way Forward for Infrastructure and Asset Management, January 2018
- Phase 2: Establishing Processes for Improved Due Diligence, Monitoring and Reporting for Effective IT Projects and Asset Management, June 2018

In 2017-2018, the Auditor General conducted audits of the City’s information technology (IT) infrastructure and asset management processes and issued two reports.

The Phase 1 report included 15 recommendations focusing on the overall governance and management of IT infrastructure and IT assets. The report is available at:

<https://www.toronto.ca/legdocs/mmis/2018/au/bgrd/backgroundfile-112385.pdf>

We verified that management implemented nine recommendations during this follow-up cycle. The division has developed a strategic technology roadmap and also created a



framework to increase the adoption of cloud computing services. It is expected that these actions collectively will help modernize and transform the City's IT environment.

The Phase 2 report included eight recommendations. The audit focused on a detailed review of specific projects, systems and acquisitions. The report is available at:

<https://www.toronto.ca/legdocs/mmis/2018/au/bgrd/backgroundfile-118363.pdf>

We verified that management implemented six recommendations during this follow-up review.

**Recommendation 4** (Phase 2) required management to expedite the City-wide implementation of Employee Self-service (ESS). The ESS application allows City staff to access their pay statements and time balances online. Once an employee enrolls in ESS, paper pay statements are no longer issued. This results in lower printing, mailing and distribution costs for the City. Employees with access to ESS have the option to print their electronic pay statements.

In our 2018 audit we noted that as of December 2012, the City had a total of 18,924 licenses for the ESS application. The adoption of these licences was at a very slow pace and only 28 per cent of licences purchased were in use as of January 2018.

However, since the completion of the audit in 2018, management took actions to significantly increase the user adoption rate. As of September 30, 2022, we found that 18,874 licences are being used. Increased adoption of ESS application means a reduction in mailing cost of paper pay statements, as they are no longer distributed to staff who have signed up for this application.

In 2022 the City realized \$410,000 in savings and will further realize savings of approximately \$750,000 over the next four years. Additional cost avoidance is expected due to a reduction in related materials cost (e.g., paper, envelopes), and staffing to manage the process.

**Recommendation 5** (Phase 2) required management to evaluate the City's existing physical servers to identify opportunities for adoption of cloud services and/or virtualization. During this follow-up review, management advised that since 2018 the number of physical servers in the City decreased from 999 to 747, a reduction of 25 per cent.

During the audit in 2018, management advised that savings of \$7,500 to \$20,000 were possible by converting one physical server to a virtual server. Management reported that the number of physical servers has been reduced by 252, however the amount of realized savings cannot be determined at this time.

The City has continuously acquired new servers and has a process to account for the assets. While the total number of servers is known, the details of specific physical servers replaced by virtual servers is not tracked. The Auditor General will work with management in the next follow-up cycle to quantify these savings where sufficient data is available, and will report to Council.

## 2. Follow-up of Cybersecurity Reports:

- Cyber Safety: A Robust Cybersecurity Program Needed to Mitigate Current and Emerging Threats, October 2019
- Auditor General's Cybersecurity Review: Toronto Fire Services Critical Systems Review, October 2021

Cyberattacks are widely considered to be one of the most critical operational risks facing organizations. According to the Canadian Centre for Cyber Security's Cyber threat bulletin: "The ransomware threat in 2021", ransomware payouts had reached some of the highest levels. The bulletin cited that *"In Canada, the estimated average cost of a data breach, a compromise that includes but is not limited to ransomware, is \$6.35 million dollars"*<sup>2</sup>. The Auditor General has taken a proactive approach in planning IT/cybersecurity audits and has included them in her annual work plans.

Since 2015, the Auditor General has conducted a number of audits to assess cybersecurity controls of the City's IT infrastructure, systems, and applications. In 2019, the Auditor General performed an audit to assess the City's ability to manage external and internal cybersecurity threats, and to follow-up on previously identified risks. Further in 2021, the Auditor General recognizing the importance of the City's critical infrastructure, reviewed a critical system in Toronto Fire Services.

The public reports are available at:

- <https://www.toronto.ca/legdocs/mmis/2019/au/bgrd/backgroundfile-138905.pdf>
- <https://www.toronto.ca/legdocs/mmis/2021/au/bgrd/backgroundfile-172402.pdf>

The Auditor General made a total of 20 confidential recommendations in these two reports to improve cybersecurity at the City. Details on the implementation status of specific recommendations are included in Confidential Attachment 1.

City Council continues to invest in improving cybersecurity, which includes procuring and upgrading tools, resources, licences, and services which support IT security functions. Management reported that it continues to take actions to implement our cybersecurity audit recommendations and these are reflected in ongoing updates to the Auditor General's follow-up system.

As cybersecurity threats expand and evolve, it is important that the Auditor General continue her work on cybersecurity and make recommendations to improve overall security including security of the City's critical infrastructure.

## 3. Fleet Services Operational Review

- Phase 1 – Lengthy Downtime Requires Immediate Attention, April 2019
- Phase 2 – Stronger Asset Management Needed, October 2019

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<sup>2</sup> [Cyber threat bulletin: The ransomware threat in 2021 - Canadian Centre for Cyber Security](#)

Fleet Services Division is responsible for the purchase, rental, maintenance, and disposal of the City's fleet. Our Phase 1 report was issued in 2018 with 14 recommendations focused on improving fleet availability by reducing downtime and enabling staff to more reliably deliver services to the public. The report is available at:

<https://www.toronto.ca/legdocs/mmis/2019/au/bgrd/backgroundfile-132433.pdf>

During our 2021 follow-up we verified that two recommendations were fully implemented by management. In the current cycle, we verified that six additional recommendations have been fully implemented. Actions taken to implement these recommendations have enabled the division to improve its management of parts supply, accounts payable process, and retain qualified vendors to better meet its vehicle maintenance needs. For the years 2019 to 2021, management realized an additional saving of \$55,000 as the City was able to take advantage of the vendor's early payment discounts.

Our Phase 2 report was issued in 2019 with 20 recommendations to improve asset management through stronger long term planning, lifecycle management, and warranty administration. The report is available at:

<https://www.toronto.ca/legdocs/mmis/2019/au/bgrd/backgroundfile-138847.pdf>

During our 2021 follow-up, we verified that three recommendations were fully implemented by management. In the current cycle we verified that 13 additional recommendations have been fully implemented. Management has automated the warranty management process and improved the quality of warranty data. This resulted in increased new vehicle warranty claims and a cost avoidance for vehicle maintenance that the City otherwise would have incurred in repairs due to lack of warranty information and tracking. The estimated saving is \$1.2 million over five years.

**Recommendation 19** required management to take steps to effectively identify and minimize damage to fleet assets from operator errors. Since the audit in 2019, management has strengthened its operator training, reporting, and feedback to user groups. As a result, in March 2022, Fleet Services reported to the General Government and Licensing Committee that the cost of associated damages was 24 per cent lower in 2020 and 37 per cent lower in 2021 when compared to 2019<sup>3</sup>. This amount is approximately \$2.7 million in cost avoidance over five years (2020 to 2024).

As a result of management actions taken to implement the various recommendations above, the City is expected to achieve total savings of \$3.95 million over five years.

In its 2023 operating budget notes<sup>4</sup>, Fleet Services has also identified a further \$519,000 in efficiencies due to the removal of underutilized vehicles. The work relating to this recommendation is still in progress. We will verify the actions taken to implement the recommendation and the saving amount in future follow-up cycles.

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<sup>3</sup> <http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2022.GL29.19>

<sup>4</sup> <https://www.toronto.ca/legdocs/mmis/2023/bu/bgrd/backgroundfile-230705.pdf>

## Conclusion

We will continue to verify recommendations reported by management as fully implemented, focusing on selected reports with high-priority recommendations with our available resources, and will report our results in future follow-up reports.

While management continues to make progress in implementing recommendations, the Auditor General has not yet verified all recommendations reported by management as fully implemented. However, this does not slow or impact management's ability to continue to make further progress on addressing outstanding recommendations and to take appropriate action to address risks and achieve intended savings and efficiencies.

We would like to express our appreciation for the co-operation and assistance we received from management and staff at Technology Services, Office of the Chief Information Security Officer, Fleet Services, Toronto Fire Services and Toronto Water divisions.

## CONTACT

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## SIGNATURE

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Tara Anderson  
Auditor General

## **ATTACHMENTS**

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Confidential Attachment 1: City Divisions Confidential Recommendations – Fully Implemented and Not Fully Implemented (Consolidated)

Attachment 1: City Divisions Public Recommendations Fully Implemented

Attachment 2: City Divisions Public Recommendations Not Fully Implemented

Attachment 3: Recommendations Implementation Status From Inception, January 1999 to December 30, 2022

Attachment 4: Aging of High Priority Recommendations Reported by Management as Not Fully Implemented, December 30, 2022