

Surveillance Camera Effectiveness at Reducing Illegal Activity at Recycling Depots

Introduction

Using surveillance cameras to reduce criminal activity, illegal dumping, and reduce recycling contamination is a tactic used for waste management facilities. At the Governance and Priorities Committee meeting on September 21, 2020, City Council made a request to further investigate the use of security cameras at the recycling depots.

The City operates three single-stream recycling depots that are unstaffed and available to the public 24/7. The materials from these sites are collected four times weekly and taken to Cosmopolitan Industries for processing. The sites are cleaned of illegally dumped materials six times weekly by City staff. The proposed goal of using surveillance cameras would be to identify and prosecute those who commit illegal dumping, deterring the number of illegal dumping incidents at target locations, and promote and maintain the health, safety, and well-being of residents while using these sites.

Surveillance Camera Studies

Law enforcement and municipalities are continually seeking new technologies that hold promise for enhancing safety efforts at recycling depots and reduce criminal behaviours. Among the latest generation of such public safety tools, is the use of public surveillance cameras.

Evaluating the Use of Public Surveillance Cameras for Crime Control and Prevention

In 2011, a joint research study from the Office of Community Oriented Policing Service (COPS) and U.S. Department of Justice evaluated the use of surveillance cameras in public areas and the effectiveness for controlling and preventing criminal behaviours. This report suggests that surveillance cameras for crime prevention work to refrain potential offenders from participating in criminal activity. There are multiple camera types, including live footage and recorded, but this study only investigated operational units not artificial. In general, cameras increase perception of safety among residents, which encourages them to use public spaces. Video footage documenting criminal activity and clearly identifying perpetrators aids in the investigations and prosecutions. Additionally, if perpetrators are convicted their rate of re-committal of the same offence decreases.

It was determined that the contributions to policing and public safety that surveillance cameras yield, may explain why their use has expanded to multiple other disciplines including monitoring public sites. Installation occurs despite the fact that there have been scarce documentation proving the cost-benefit.¹

¹ Information Brief: Evaluating the Use of Public Surveillance Cameras for Crime Control and Prevention. 2011. Accessed from: <https://cops.usdoj.gov/RIC/Publications/cops-w0614-pub.pdf>

Guidelines for the Use of Surveillance of Public Places by Police and Law Enforcement Authorities

According to the Office of the Privacy Commissioner of Canada, video surveillance of public places subjects everyone to scrutiny, regardless of whether or not the individual has committed an illegal action. Observing and monitoring the movements of a large number of people may be beneficial, but the vast majority of those captured on camera are law-abiding citizens, where there are no reasonable grounds to be capturing and recording their activities. Privacy concerns have become increasingly difficult with technology advances in facial recognition systems and pattern recognition software. Secondly, the likelihood of images being retained for further data mining increases simply because the workload is now manageable. If connected to external networks, there is always a risk of data loss and hacking.

Proliferation of video-surveillance raises a concern that inferences will be drawn about people, that the data will be used for trivial or discriminatory purposes. People are well aware of the presence of cameras, in fact there is a brisk trade in fake cameras because they are promoted as being as effective as real ones in deterring bad behaviour. For these reasons, there is good reason to believe that video surveillance of public places by the police or other law enforcement authorities has a chilling effect on behaviour—and by extension on rights and freedoms.²

Jurisdiction Scan and Case Studies

The City operates three single-stream recycling depots that are unstaffed and available to the public 24/7. The materials from these sites are collected four times weekly and taken to Cosmopolitan Industries for processing. The sites are cleaned of illegally dumped materials six times weekly by City staff. The goal of using surveillance cameras is to identify and prosecute those who commit illegal dumping, deterring the number of illegal dumping incidents at target locations, and promote and maintain the health, safety, and well-being of residents while using these sites. The goal of monitoring programs and limiting facility access is to reduce facility access to deter illegal dumping and criminal activities during the most common hours occurred; early-morning and late-evening.

In November of 2020, internal research was completed to compare our recycling depots with other Canadian municipalities. It was determined that five of 28 municipalities have non-staffed, 24/7 operational depots similar to the City of Saskatoon's public recycling depots, as seen in Figure 1 and 2. The most common type of depot used to accept excess recycling from residents are staffed, restricted-hour transfer stations and eco-centres used in 25 of 28 municipalities.

² Information Brief: Office of the Privacy Commissioner of Canada. 2006. Guidelines for the use of video surveillance of public places by police and law enforcement. Accessed at: https://priv.gc.ca/en/privacy-topics/surveillance/police-and-public-safety/vs_060301

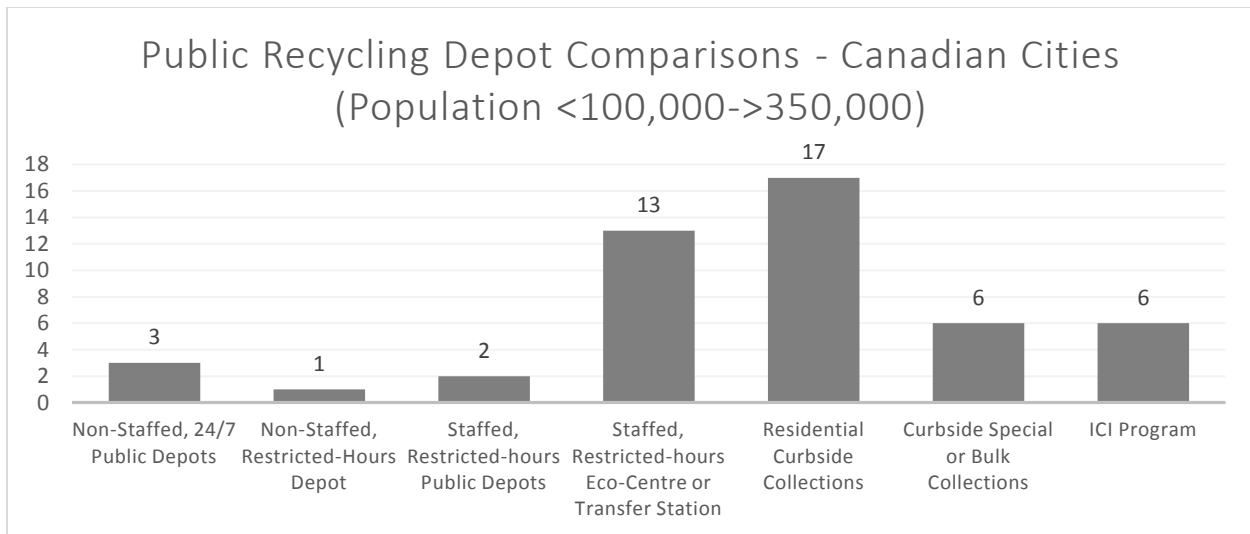


Figure 1. Public recycling depot comparisons from Canadian municipalities with populations from 100,000 to 350,000.

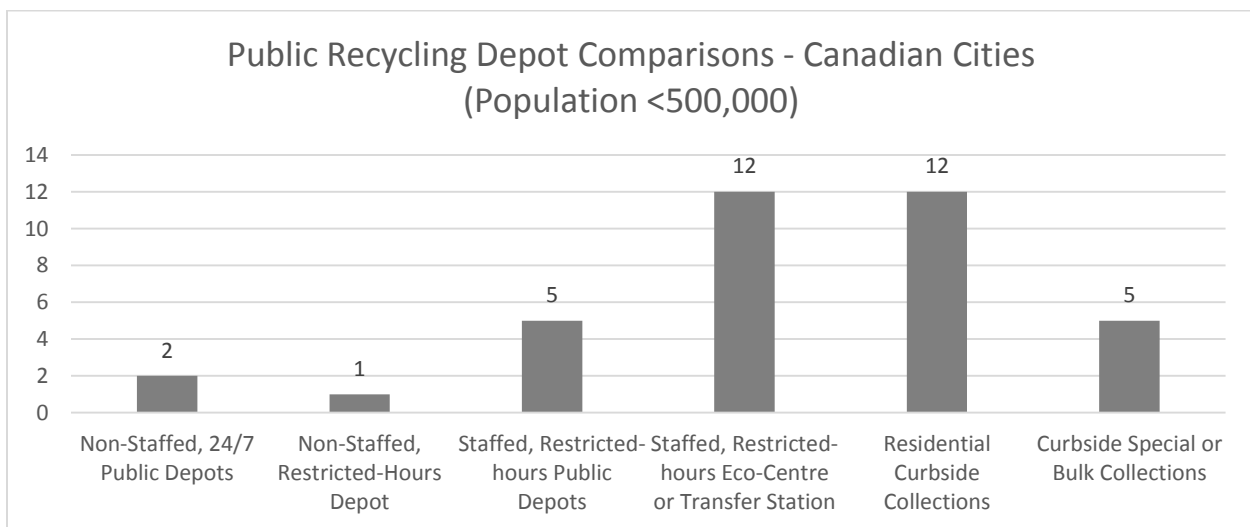


Figure 2. Public recycling depot comparisons from Canadian municipalities with populations over 500,000.

Municipal Examples

A comparison study was completed in January 2022, using five other municipalities across Canada that have similar operations to the City’s public recycling depots. The data was collected using information available on the website as well as phone interviews with staff operating recycling depot programs.

City of Calgary

The City of Calgary does not use surveillance cameras at its 14 public recycling depots; excluding the three sites managed by the private waste sector. On January 31, 2022, it was mentioned that surveillance footage may be released for city depots on shared

property with private businesses if issues arise. The sites are monitored daily and are fenced, but operating hours are not restricted.

On February 1, 2022, the City mentioned that they are piloting a portable surveillance system for their sites. A camera is installed behind a trailer and the footage is recorded by Corporate Security and released upon request. This pilot has reduced contamination by an estimated 20% at their most problematic recycling depot. Retrieving footage for illegal activities is difficult and time consuming. Costs for this pilot have not yet been calculated as the pilot has not yet been completed.

City of Edmonton

The City of Edmonton does not use surveillance cameras at its 13 public recycling depots, one Waste Management transfer station, and four Eco Stations. The public recycling depots are monitored daily and are fenced; however, operating hours and public access are not restricted. To combat illegal dumping and to increase waste diversion of recyclables not accepted in the residential curbside recycling program, the City's transfer station and eco stations sites are fully fenced, with restricted hours and staffing. No further details were provided on January 31, 2022, by Waste Management customer care.

City of Lethbridge

The City of Lethbridge uses surveillance cameras at its public recycling depots. The two of three sites are monitored daily and are fenced; however, operating hours are not restricted. The third site is a combination depot and recycling station; similarly designed to a transfer station. It was reported that on January 14, 2022, two of three cameras are currently under maintenance. The third camera is active at the recycling station, but staff indicate that it is an ineffective means to deter illegal dumping or criminal behaviours due to the camera becoming defective during weather constraints (e.g. high winds, sleet).

In 2012, the City of Lethbridge's City Council approved the development of three centralized recycling stations as a solution for: litter management, improved traffic flow, and barrier free access. These sites were designed to increase previous issues such as recycling capacity, provide better wind shelter and litter containment screens, increased lighting, etc.³

It was recommended by the City of Lethbridge that the City of Saskatoon not pursue surveillance cameras to deter illegal dumping and/or criminal activity at its public recycling depots.

City of Regina

As of January 25, 2022, the City of Regina does not use surveillance cameras at its two public recycling depots. The sites are monitored daily and are fenced; however, operating hours are not restricted. To combat illegal dumping, employees monitor the site multiple

³ Information Brief: South Park and Recycling Station (D10). 2016. Accessed from: <https://www.lethbridge.ca/living-here/Projects-Initiatives/Current-Projects/Pages/South-Side-Parks-Depot.aspx>

times per day and report suspicious activity. Signage was improved to give better direction to residents on the recycling program for what is and is not accepted.

City of Winnipeg

It was recorded in 2019, that the City of Winnipeg had an Illegal Dumping Surveillance Program⁴ pilot that used high-resolution camera equipment to address illegal dumping activities. It appears that this pilot has been discontinued in 2022. The four sites are monitored daily and are fenced; however, operating hours are not restricted. No further information was provided on January 6, 2022, by the Waste Diversion Department.

The pilot indicated that persons caught on surveillance video committing illegally dumping activities will be identified using the license plate number. The registered owner of the vehicle will be committed to the offence. Pending the circumstance, a penalty notice may be issued, and the accused will have to pay an administrative penalty, or a Provincial offence ticket may be issued, and the accused will be subject to a fine and/or will have to respond to the ticket in Provincial Bylaw Court.

For privacy, each CCTV unit will retain images for a maximum of seven days or until overwritten by new images. Images are stored on Community Bylaw Enforcement Services' secure network and will be retained for a maximum of 21 days. The images will be used for any part of any legal investigation or information request. All images will be subject to review by a City of Winnipeg Community Bylaw Enforcement Service employee. Images may be released to a Community Bylaw enforcement officer or police officer if illegal dumping or criminal activity is recorded.

Readiness and Costing for City of Saskatoon Implementation

Even though there have been scarce documentation proving the cost-benefit of using surveillance cameras, communities continue to install them in public areas for criminal activity and safety concerns. Currently, the City does not have the infrastructure or staffing to undertake live monitoring. Additionally, cameras do pose an increased risk of privacy concerns from residents and prior to implementation, a privacy assessment would need to be undertaken to ensure compliance with all related legislation.

Estimated costs for camera installation were prepared for each of the recycling depots. A network connection, additional lighting and two or three cameras would be required, depending on the location.

⁴ Information Brief: Illegal Dumping Surveillance Program. 2019. Accessed from: https://www.winnipeg.ca/cms/BLES/illegal_dumping_surveillance.stm

Table 1. Camera Option Costs for the City of Saskatoon's Public Recycling Depots.

Depot	Cameras	Lighting	Network	Total Capital	Annual Operating
Lakewood	\$17,000	\$ 0	\$ 5,000	\$ 22,000	\$ 600
University	\$12,000	\$ 2,000	\$ 5,000	\$ 19,000	\$ 600
Lawson	\$17,000	\$ 2,500	\$ 4,000	\$ 23,500	\$ 600
TOTAL	\$46,000	\$ 4,500	\$ 14,000	\$ 64,500	\$ 1,800

Annual operating costs do not include time for EPOs to process and ticket waste bylaw violations, as it is assumed that this will be a part of their existing duties. As such, illegal dumping at the recycling depots will be prioritized along with other duties and not all illegal dumping occurrences will be investigated. Additional personnel would be requested if illegal dumping investigations strain existing resources.