TORONTO

REPORT FOR ACTION

Winter Maintenance Program Review

Date: October 2, 2019
To: Infrastructure and Environment Committee
From: General Manager, Transportation Services
Wards: All

SUMMARY

Transportation Services' winter operations program provides a variety of winter service operations including anti-icing, de-icing, snow plowing and snow removal to keep roads and sidewalks safe and passable. Each year, Council dedicates approximately $90 million annually to deliver the winter operations program, which is approximately equal to 1 percent of the City's overall budget.

With climate change and risks of winter events taking place outside the regular winter season, it is critical that Transportation Services continues to review and update service levels to provide a safe and reliable transportation network for all.

In addition, the public's expectations of the services we provide continues to evolve. With intensification and greater reliance on active transportation, the public expects access to sidewalks, cycling infrastructure and transit during winter months and the City's snow-clearing must continue to respond to this change.

In March 2019, following a letter and request by Mayor Tory, City Council requested a review of winter operations services including:

- A review of best practices and technology used in other winter cities;
- A study of existing service levels related to snow removal and whether or not they should be increased;
- The threshold for declaring a major snow event to trigger parking restrictions along key routes so those routes can be cleared more quickly and thoroughly;
- How to establish a zero tolerance system for vehicles blocking streetcar routes; and,
- The cost of clearing the sidewalks in the Toronto and East York community council area and a detailed look at the benefits of harmonizing the city's sidewalk clearing using a lens of equity, accessibility and safety.

Additionally, In response to broad-based public concern about winter maintenance in Toronto last winter, the Ombudsman and representatives of her office met twice with City staff from Transportation Services, 311 Toronto and Strategic Communications to emphasize the need for clear and accessible information on the winter maintenance program as part of any program review and next steps.

Following this direction, Transportation Services engaged HDR, Inc. to undertake a comprehensive review of the existing winter maintenance services. Transportation Services also engaged Ipsos Public Affairs to solicit feedback from Toronto residents and road users on their opinion of the City's winter services.

This report provides a summary of HDR's recommendations and Ipsos Public Affairs' survey results. Based on this work, it was found that the City of Toronto meets or exceeds the winter maintenance levels of service for roadways, bike lanes and sidewalks as compared to other GTHA peer cities i.e., Brampton, Hamilton, Mississauga, London, and York Region. Areas of comparison include target road surface conditions, snow accumulation thresholds for snow plowing, target road clearing completion times, sidewalk clearing practices, and property owner responsibility for sidewalk maintenance. In addition, Toronto is one of only a few cities in Canada that provides a windrow clearing service. Furthermore, results from the Ipsos survey found that a majority (57 percent) of residents are satisfied with the winter maintenance services provided by the City of Toronto. The survey results highlighted the need to better communicate with the public about the services they can expect during winter weather.

Based on the recommendations contained within the HDR report, staff will undertake an equipment test using in-house equipment to mechanically clear snow from sidewalks in areas of the city not currently serviced. The testing will prioritize locations that are currently part of the senior sidewalk clearing program, where seniors and persons with disabilities can apply to have their sidewalks cleared manually by the City at no cost. During the test, staff will also undertake the development of an inventory of sidewalk conditions and encroachments. Furthermore, staff will implement an improved communications campaign to better inform the public about the services the City provides and the service levels they can expect during winter weather.

The remaining recommendations from HDR will be reviewed for feasibility and will be incorporated and reported back to Council in advance of the next round of winter contracts for 2022 - 2029.

RECOMMENDATIONS

The General Manager, Transportation Services recommends that:

1. Infrastructure and Environment Committee receive this report for information.

FINANCIAL IMPACT

The estimated cost to the City to conduct the mechanical sidewalk equipment test, is approximately $300,000 annually using in-house staff. The equipment testing will take place during the 2019/2020 winter season.

Funding of $75,000 (net of HST recoveries) required in December 2019 for the mechanical sidewalk clearing testing is available on a one-time basis within the 2019 Approved Operating Budget for Transportation Services. The remaining balance of $225,000 for the 2020 portion of the 2019/2020 winter season mechanical equipment testing will be accommodated as part of the winter maintenance program within the 2020 Operating Budget submission for Transportation Services.

Table 1. Operating Budget Funding Details - Mechanical Sidewalk Clearing Equipment Testing (2019/2020 Winter Season)

Operating Accounts	2019	2020			Total (net of HST recoveries)
	December	January	February	March	
TP0109	$75,000	$75,000	$75,000	$75,000	$300,000

Funding of $19,141,963 is available in the Transportation Services Extreme Weather Stabilization Reserve Fund (XR1407) to be used at the discretion of the Chief Financial Officer and General Manager, Transportation Services to partially offset budget deficits in the Operating and Capital Budgets for Transportation Services as a result of unbudgeted extreme weather-related costs such as snow removal.

The Chief Financial Officer and Treasurer has reviewed this report and agrees with the financial impact information.

DECISION HISTORY

At its meeting on March 7, 2019 City Council requested the General Manager, Transportation Services to include the following items in the review of winter maintenance review the:

a. cost and considerations for the delivery of enhanced snow clearing on:
    i. sidewalks on residential streets in every neighbourhood in Toronto;
    ii. pathways in Parks; and
    iii. enforcement of parking that obstructs Toronto Transit Commission and bike lanes; and
b. cost of increasing the amount of snow removal City-wide.

City Council also directed the General Manager, Transportation Services and the Deputy City Manager, Infrastructure and Development Services, in consultation with the City Manager, to include a review of sidewalk snow clearing and salting, and road maintenance (pot hole repair) in consultation with CUPE Local 416 as well as investigate opportunities to improve efficiency and quality of service through insourcing where appropriate.
http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2019.EX2.5

At its meeting on June 10, 11, 12 and 13, 2014 City Council adopted PW31.1 Confirmation of Levels of Service for Winter Maintenance of Bikeways, Windrow Opening, Sidewalks and Accessibility for Ontarians with Disabilities Act (AODA) Compliance.
http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2014.PW31.1

At its meeting on December 16, 17 and 18, 2013 City Council adopted PW27.15 Confirmation of Levels of Service for Roadway and Roadside Winter Maintenance Services.
http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2013.PW27.15

COMMENTS

Overview of Toronto's Winter Maintenance Program

Transportation Services' mission is to build and maintain a resilient transportation network so that people connect with the places, activities and communities they value. This mission is required to keep people moving safely in Toronto's diverse and changing city. Creating a resilient winter maintenance program requires examination of the goals and services provided on a regular basis--especially as climate change results in more volatile winter seasons that start earlier in the year, last longer and can have extended periods of freezing weather and snow coverage.

Toronto's existing winter maintenance program is based on four main activities: anti-icing, de-icing, snow plowing and snow removal. The selection of the most appropriate activity to respond to a particular winter condition is principally based on the road conditions, amount of accumulated snowfall and prevailing temperatures. Based on these factors, which are unique for each storm, the staff response team identifies appropriate maintenance methods that may include proactively treating the road to minimize ice accumulation, clearing and/or removal of the accumulated snow and ice quickly, responsively and in keeping with our Council-approved winter service levels.

During the winter season, Transportation Services staff patrol the expressways, arterial roads, and potential “trouble spots” like hills on collector or local roads, 24 hours per day, 7 days per week. Staff also monitor detailed weather forecasts supplied by various service providers. In this way, the appropriate response and action to any given weather conditions can be activated in a timely manner.

In addition to these major winter service operations, work crews ensure that catch-basins, drains, and culverts are cleared of debris and are functional, and that intersections, crosswalks, transit stops and many sidewalks are also cleared of snow and ice. The effective deployment of winter service operations makes it possible for emergency vehicles and the public to travel safely, for the transit system to provide the public with timely service and for commerce to continue functioning. Attachment 1 identifies the City Council approved Winter Maintenance Levels of Service for 2015 to 2022.

Last year represented a particularly challenging winter season as the city received several snow storms close together with little to no thaw cycle in-between, meaning that the snow did not melt away. In response, the City mobilized snow removal on select roads to ensure they remained passable for emergency vehicles.

Overview of Existing Service Levels

The City's winter service levels were last reviewed and approved by Council in 2013 for roadways and in 2014 for bikeways, windrow services, and sidewalks. Table 1 provides details regarding the service levels and services descriptions for the various right-of-way areas maintained during the winter season.

Table 1. High-Level Overview of Winter Operations Service Levels

Service Area	Service Description
Roads	**Anti-Icing** Salt brine is applied to expressways, hills and bridges up to 24 hours before snow falls.
	De-Icing When snow begins to stick, de-icing and when necessary traction agents are spread on pavement. Depending on snow intensity, operations can continue during the snow event.
	Salting When the snow begins to stick, expressways, major and local roads are salted and must be completed on all serviced roads between one and 24 hours from the end of snowfall.
	Plowing When snow accumulations reach 2.5 cm on expressways and 5 cm on arterials and collectors, plowing may commence and continues until all streets are cleared. On local roads, plowing starts when the snowfall has exceeded 8 cm and has substantially stopped. Depending on the road classification, plowing is completed between 2 and 16 hours after snow has stopped.
	Snow removal Snow removal is generally required when several significant snow events occur with little or no thaw cycle in between. Snow removal may take place either by loading snow into trucks and hauling it to another location, or through rapid onsite melting.
Bike Lanes	**De-Icing** On-street bike lanes are de-iced as part of the roadway de-icing operation. During a storm, de-icing on arterial roads, where the majority of bike lanes are located starts when snow begins to stick and continues until plowing operations begin, or until snowfall stops.
	Salting Salting begins on cycling routes at the same time as salting on the adjacent road.
	Plowing Plowing is initiated after 5 cm of accumulation and is continuous until the operation is complete. For a period of 48 – 72 hours after the storm, plows are sent out again to "clean up" curb lanes by moving snow as close as possible to the sidewalk, without blocking the sidewalk.

Service Area	Service Description
	Priority Bike Lanes Priority bike lanes which connect key east/west and north/south routes receive higher levels of salting, plowing and snow removal than the roads they are adjacent to.
Sidewalks	**De-Icing and Plowing** Where feasible, low pedestrian volume sidewalks are cleared starting at 8 cm of snow accumulation and high pedestrian volume sidewalks are cleared starting at 2 cm. Staff may also initiate sidewalk clearing or de-icing in response to icy conditions.
Transit Stops & Crosswalks	**De-Icing and Plowing** Transit stops and crosswalks are cleared within 48 hours of the completion of arterial and collector road plowing operations or when icy conditions exist. A de-icer is also applied to passenger waiting areas to allow safe egress for passengers boarding/alighting transit vehicles.

More detailed information on the winter maintenance service levels can be found in Attachments 1 and 2.

In addition to the above city-wide services provided, Transportation Services also provides a driveway windrow clearing service in some areas, primarily outside the downtown core and not in some areas of North York. A windrow is a collection of snow at the end of a driveway after a snow plow has cleared the road. Mechanical driveway clearing is only undertaken when roadway plowing is activated. In the area where windrow clearing service is provided, residents can expect their windrow to be cleared within 2 hours of the road being plowed. Toronto is one of only a few cities in Canada that provides a windrow clearing service.

Transportation Services also provides mechanical sidewalk clearing in most areas of the city outside of the downtown core. In areas where mechanical sidewalk clearing has been deemed not feasible, Municipal Code Chapter 719, Snow and Ice Removal states that businesses and property owners are responsible for ensuring that all ice and snow is cleared from their sidewalks, steps, landings and parking spaces within 12 hours of snowfall and to maintain them in a clear condition afterward. The Chapter further prohibits the clearing of snow from private property and depositing onto the public roadway, sidewalk or lane. Seniors and persons with disabilities can apply to have their sidewalks cleared manually by the City at no cost.

Mechanical Sidewalk Clearing and the Accessibility for Ontarians with Disabilities Act (AODA)

The City of Toronto is in compliance with the Accessibility for Ontarians with Disabilities Act (AODA) as it applies to winter maintenance of sidewalks. The Act requires that municipalities have multi-year accessibility plans that contain procedures and policies about maintenance of public infrastructure and public spaces such as sidewalks. Specifically, the Act requires the prompt clearing of snow along accessible routes intended for winter use, including sidewalks, pathways and trails. The AODA does not require municipalities to clear all sidewalks of snow, nor does it state a minimum width to which sidewalks should be cleared. In fact, Toronto’s levels of service exceeds

Ontario's Minimum Maintenance Standards (MMS). However, it is recognized that people with disabilities are particularly limited in their mobility by snow events.

Communicating with the Public

During the winter season, Transportation Services utilizes a number of different methods to update the public on winter services and weather including, media, social media, online resources and newsletters.

Each year, staff work with the Mayor and Chair of the Infrastructure and Environment Committee to host a winter operations press conference to "launch" the winter season and provide information about service levels, equipment and operational plans. Transportation staff participate in many different interviews throughout the winter season, for instance, last year staff participated in approximately 100 individual media interviews and approximately 10 general media interviews that attracted most major media outlets. Staff also release media bulletins and news releases to update the media and residents on plans for snow clearing work, completed work and other relevant messages.

Winter service information is shared through the various City Twitter, Facebook and Instagram accounts. The City also hosts a number of online resources which provide information about winter service levels and includes the PlowTO map. The PlowTO map shows updated information about the location of plows, sidewalk plows, and salt trucks so that residents can find out when their streets and sidewalks were last plowed and salted.

Transportation Services also uses the City Update newsletter, which is distributed to approximately 15,000 residents and as of last year, a quarterly Divisional Newsletter to keep the public updated about major issues, such as winter services.

Consultation with the City Ombudsman

In response to broad-based public concern about winter maintenance in Toronto last winter, the Ombudsman and representatives of her office met twice with City staff from Transportation Services, 311 Toronto and Strategic Communications in March and April, 2019.

City staff provided a high-level review of Toronto's current Winter Maintenance program (in terms of both service and communication) and explained the City's planned review of the program.

The Ombudsman told staff that the public needs clear and accessible information on the following questions, all of which need to be addressed in the review, report and subsequent action plan:

1) What are the elements of the City's winter maintenance program?

2) What are Toronto's levels of service? (Including sidewalks, laneways, windrows, bike lanes, TTC stops, etc.)

3) Why are the levels of service as they are? Why do they differ from one part of the City to another?

4) What should a member of the public do if the City does not meet its service levels?

5) What can that person expect will happen next, and when?

Based on some of these conversations and in addition to any proposed changes outlined in this report, staff will also investigate providing an equity lens to the winter snow clearing program and are developing an approach to address locations such as seniors residences and community centres that may not otherwise be captured or prioritized by our procedures.

Summary of HDR Winter Maintenance Program Review

HDR was engaged by Transportation Services to conduct a fulsome review of the City's winter maintenance program. The review included:

- A review of best practices and technology used in other winter cities;
- A study of existing service levels related to snow removal and whether or not they should be increased;
- The threshold for declaring a major snow event to trigger parking restrictions along key routes so those routes can be cleared more quickly and thoroughly;
- How to establish a zero tolerance system for vehicles blocking streetcar routes; and
- The cost of clearing the sidewalks in the Toronto and East York community council area and a detailed look at the benefits of harmonizing the city's sidewalk clearing using a lens of equity, accessibility and safety.

Some of their recommendations can be immediately put into practice, while others require further review of feasibility and costs prior to the next round of winter contracts for 2022 - 2029. See Attachment 2 for the complete HDR report and Attachment 3 for more information on the City's plan to address all recommendations.

Level of Service Assessment and GTHA Comparison

Overall, the City of Toronto meets or exceeds the winter maintenance levels of service for roadways, bike lanes and sidewalks as compared to other GTHA peer cities i.e., Brampton, Hamilton, Mississauga, London, and York Region. Areas of comparison include target road surface conditions, snow accumulation thresholds for snow plowing, target road clearing completion times, sidewalk clearing practices, and property owner responsibility for sidewalk maintenance.

Many of the cities do not plow major roads until 8cm of snow accumulation while Toronto begins plowing of expressways at 2.5cm and arterial roads at 5cm. The City also surpasses its peers when comparing level of service for collector roads and is in alignment with respect to local streets. Attachment 4 provides the municipal comparative analysis based on the service levels for road surface conditions, snow clearing triggers and completion time.

Sidewalk Assessment

Mechanical Clearing Equipment Testing

Although Toronto provides a sidewalk snow clearing program in most City areas, approximately 1,400 (17.7 percent) of the City's 7,900 km sidewalks are currently not mechanically cleared. When the program was initially launched, consideration to roadway and sidewalk widths, encroachments, and equipment limitations at the time precluded these sidewalks from being included in the sidewalk clearing program. Given advancements in technology, and with consideration to providing equitable, accessible and safe transportation options to residents, HDR has recommended that Transportation Services:

- Conduct a physical inventory of the 1,400 km of sidewalks that are currently not mechanically cleared to confirm the sidewalk segment lengths, widths and encroachments which will assist with program development.

- During the 2019 / 2020 winter season conduct a snow clearing trial program on approximately 250 km of the sidewalks which are currently not cleared to assess program feasibility, staffing, manual clearing, equipment and cost.

- Review sidewalk encroachment management, resident responsibilities and bylaw control.

Based on these recommendations, staff will undertake a physical inventory of the sidewalks that are not currently included in the mechanical sidewalk clearing program and propose an equipment test to expand the mechanical sidewalk clearing program during the 2019/2020 season. Although HDR recommends a sidewalk clearing trial covering 250 km of sidewalks, due to limitations in the amount of available testing equipment that can be used during the testing period as well as unknown challenges in the number of encroachments (both legal and illegal) it is only feasible for Transportation Services to test equipment in a smaller more contained fashion first. Lessons learned from this initial testing can be used to inform program considerations and recommendations moving forward. In order to maximize the impact of the equipment testing priority will be given towards areas of the city where seniors and persons with disabilities receive manual snow clearing. It is anticipated that the mechanical clearing may allow for more timely services and improved reliability for residents receiving manual snow clearing.

The objective of the equipment testing is to determine the feasibility of more fully expanding the mechanical program in the future.

Harmonized Sidewalk Service Levels Provision

As part of the review on sidewalk service levels, HDR recommends that the City:

- Initiate snow clearing on low volume sidewalks at a 2cm accumulation of snow (currently 8cm) to improve equity of service, safety, and pedestrian mobility.

Since the introduction of mechanical sidewalk clearing 4 years ago, staff have reviewed the existing levels of service and are now proposing to harmonize to the level of service

for clearing on low volume sidewalks from 8cm to 2cm so that all sidewalks (both low and high volume) that receive mechanical clearing will receive a consistent level of service. As part of the 2020 Budget Submission, staff will recommend a harmonization of service levels. This will improve accessibility and access to transit and other key destinations by pedestrians

Review of the Major Storm Condition

HDR recommends that the City:

- Review the efficacy of the Major Snow Storm Condition declaration and consider a more robust application of the program to improve parking control and snow clearing along major City routes.

City of Toronto Municipal Code Chapter 950, Traffic and Parking, prohibits the parking and standing of a vehicle on certain highways, on a streetcar track, and in areas that block the passage of a streetcar when a major snow storm condition has been declared by the Mayor or General Manager, Transportation Services. Since amalgamation, a major snow storm condition has not been declared.

Currently, the major snow storm condition (formerly referred to as a snow emergency) can be declared when at least five centimetres of snow have fallen, or in the opinion of the General Manager, when snow is required to be removed to allow for the proper movement of vehicles.

When a major snow storm condition is declared, parking on those roads designated as snow routes is prohibited for a period of 72 hours, which may be increased or decreased as appropriate at the discretion of the General Manager.

Although this condition is rarely implemented, it is essential that the ability to declare such a condition exists to ensure the clearing of snow and the efficient flow of traffic following major winter events. More frequent use of the major snow storm condition will require that there is permanent funding in place to support the resulting snow removal operation and towing of illegally parked vehicles.

Designated Snow Routes are all signed, are primarily located in the downtown core and include all streetcar routes. Parking on a designated Snow Route during a major snow event is subject to a fine of up to $200 and may result in the vehicle being impounded. In addition to regularly signed routes, Transportation Services may place temporary signs to notify the public of impending snow removal operations. Where such signs are posted, parking on that road is prohibited until snow removal has been completed and the signs removed. The snow removal operations take place either during the daytime from 7 a.m. to 7 p.m. or during the evening from 7 p.m. of one day to 7 a.m. of the next day and the required temporary signage is posted by 8 p.m. the previous day for daytime snow removal operations and by 3 p.m. of the same day for evening operations.

Staff will continue to review the practicality of the current major snow storm condition declaration criteria and the cost and operational implications of implementing declaration activities, including towing illegally parked vehicles.

Snow Removal

While not a frequent activity, snow removal may be undertaken when several significant snow events occur with little or no thaw cycle in between. Snow removal is an unbudgeted activity and, depending on the scale of the removal, can typically be accommodated within Transportation Services' overall winter operations budget.

Snow removal operations undertaken this past winter cost approximately $3,900,000. That amount represents removal of snow on approximately 500 km of roads including bike lanes, bridges, Business Improvement Areas (e.g., Kensington Market, Entertainment District), laneways and school zones. In addition, snow was removed on approximately 1000 km of local roads, primarily in Toronto & East York to ensure the safe passage of emergency vehicles. A full removal operation with the scope of that undertaken in February, 2008 when the city experienced its worst winter on record with approximately 200 cm, would cost approximately $15,000,000 to $20,000,000.

In the event that Transportation Services exceeds the annual winter maintenance budget, funding for snow removal could be drawn from the Transportation Services Extreme Weather Stabilization Reserve fund.

Climate Assessment & Shoulder Season Preparedness

Section 4 of the HDR report provides a summary of Toronto climate data with a focus on weather events during the fringe periods of April, October, and November. The trend of snowfall and snowfall frequency over the 25 year period (1994 to 2019) is relatively flat with variation above or below the average every few years. Based on the climate data it can be concluded that the current winter maintenance program is an appropriately robust program for most winters; however, the occasional weather event before December 1 or after March 31, will challenge the City's ability to respond.

Of concern are significant weather events which occur outside of the core winter maintenance period of mid-November to mid-April when there is not a full complement of staff and equipment available. The climate data indicates that significant April weather events are sometimes possible.

The volume of contracted winter equipment available to Transportation Services ramps up in the fall and winds down in the spring based on historical weather events and current climatology assessments. The direct liquid application trucks are the first units to arrive on October 1 and remain until April 15. Expressway and arterial road salt trucks begin to arrive on November 15 and remain until April 7.

Most of the equipment required under Transportation Services' winter contracts arrives no later than December 1 of each winter season and remain available until March 31. Specifically, this includes all local road plows and all sidewalk plows. Contractors are paid a daily standby rate to ensure that equipment and staff are available. All equipment on standby is required to be located within City owned facilities and is subject to regular inspections by Transportation Services staff. Allowing contractors to leave the vehicles on City property not only enables regular inspections by City staff, but also ensures that the contractors are spread across the city and able to respond to winter events

according to the approved service levels, which in most cases requires response within 15 minutes of hitting a service level threshold.

Transportation Services has recently responded to three notable winter weather events that have occurred outside of the December 1 to March 31 period:

- April 14 - 17, 2018 ice storm. Staff recalled 25% of the salters and 30% of the sidewalk plows at a cost of approximately $4.5M. This event required an unusually long response period as it was unique in both intensity and duration particularly at such a late point in the season.
- November 15 - 16, 2018 snow event. Staff advanced the commencement date for 30% of the sidewalk machines at a cost of approximately $300k.
- April 1 – 15, 2019 based on a long range forecast, staff extended the termination date for 50% of the roadway salters, expressway/arterial plows and sidewalk machines at a cost of approximately $1.5M.

This additional equipment was required in order to ensure pedestrian mobility, support the objectives of Vision Zero, and minimize claims due to slips and falls while also delivering equitable services to both motorists and pedestrians. The amount and type of equipment advanced or extended is dependent on the nature of the weather event and availability. Contractor parking locations during the offseason are not always within the GTA and don't facilitate a prompt recall of the equipment during shoulder season events.

To mitigate the risk of a major fringe weather event, HDR recommends that the City should consider the following:

- The City should review the retention of contractor equipment within the maintenance depots for possible deployment during major fringe weather events.

Staff are investigating the potential to allow contractors to remain in City owned facilities throughout the shoulder season at no additional cost to the contractors or to the City wherever it is agreeable to both the contractor and staff. This would increase contractor availability for significant shoulder season events such as the city experienced in April, 2018 and April, 2019 and increase the City's ability to respond to winter events outside the typical winter season.

Transportation Winter Maintenance Survey (Ipsos Public Affairs)

Following concerns raised by the Mayor, City Councillors and the Ombudsman's Office that the public needs clear and accessible information about the winter services the City delivers and what services they can expect to receive during winter events, Transportation Services also engaged Ipsos Public Affairs to conduct a public research outreach survey. Survey topics included:

- Residents' satisfaction with winter maintenance services
- Expectations and priorities regarding winter maintenance services
- Knowledge and awareness of current winter maintenance policies
- Contacting the City of Toronto regarding winter maintenance
- Winter maintenance funding preferences

- Communications

The survey was conducted online by Ipsos Public Affairs among City of Toronto residents aged 18 and older. The results of the survey are based on a total of 1,000 online interviews. The key findings from the survey are summarized below and can also be found in Attachment 5.

Satisfaction with Winter Maintenance

- Overall, a majority (57 percent) of residents are satisfied with the winter maintenance services provided by the City of Toronto.
- Seven in ten (70 percent) Torontonians believe that winter maintenance services have either improved (33 percent) or stayed the same (37 percent) over the past five years with cyclists (8 percent) and young respondents (10 percent) being more likely to state that services have significantly improved. One in five (22 percent) residents say it has gotten worse.
- Half (50 percent) of Torontonians state that their expectations for snow plowing and maintenance were met, while the other half of residents state that their expectations were only partially met (36 percent) or not met (15 percent).

Winter Maintenance Priorities

- Torontonians emphasized the speed of snow plowing from sidewalks (43 percent) and the speed of snow plowing from streets and roads (39 percent) when asked about their priorities. Additionally, Torontonians stated that they wished to see expressways prioritized for snow clearing (50 percent), followed by major roads (33 percent), and major sidewalks (10 percent).
- Torontonians are inclined to allow snow to accumulate to 5cm before triggering plowing, although on major roads and expressways nearly a quarter of respondents state that plowing should occur at 2cm.

Budget Implications

- Budget preferences among Torontonians are split, with 31 percent preferring to maintain winter maintenance and snow plowing standards, with no change to the money dedicated to those services, while 30 percent state that winter maintenance and snow plow levels should be expanded by redirecting money from other City services. Those who rate overall winter maintenance services as “poor” are more likely to want the City to redirect funds for winter maintenance (57 percent).
- 96 percent of Torontonians who park on residential streets support a service that would remove snow from streets and roads that have on-street parking.
- Less than a quarter of Torontonians know that 1 percent of the City’s total budget is allocated to winter maintenance.

Knowledge Awareness and Communications

- Only 40 percent of respondents indicated that they were very or somewhat knowledgeable about the City's snow plowing policies, while the remaining 60 percent indicated that they had little or no knowledgeable at all.

- The majority of respondents (86 percent) indicated that they were not aware of the City's PlowTO web service, however drivers and young Torontonians are more aware than most.

Contacting the City of Toronto

- About one in ten (9 percent) residents claim to have contacted the City this past winter about snow plowing. Most of these residents called 311. Among those who did contact the City, nearly half (46 percent) stated that they were unable to get what they needed, and only 36 percent agree that they were satisfied with the overall quality of service.

Communications Assessment

The Toronto Resident Survey identified that there is a general lack of public knowledge and awareness regarding the winter maintenance program, and there is significant concern with the quality and timeliness of resident interaction with the 311 service. The research suggests that residents would react positively to more timely information or at a minimum a greater awareness of how quickly the City responds to winter weather conditions as they develop.

Based on the resident feedback, HDR recommends that:

- The City develop a comprehensive public advertising and communication plan to improve the public's understanding of the City's winter maintenance program policies, level of service, service delivery, activities and responsibilities. As well, the realities of winter maintenance responses to major weather events needs to be better understood.

- The City review the 311 response policies and phone script to ensure the services are meeting the needs of the residents and the winter maintenance program.

City staff have commenced developing a multi-year, multi-media education campaign that will be implemented for the 2019-20 winter season that will inform residents and city street users about the various winter services operations and service levels.

Stakeholder Engagement & Consultation

In addition to the findings from the Resident Survey, the program review secured input from the stakeholder groups Walk Toronto and Cycle Toronto. In general, the groups called for an increased emphasis on sidewalk and cycle facility snow clearing, both from the time of an initial response and ongoing follow up clearing. The groups requested faster initial snow clearing and follow up on crosswalks and intersections where turning vehicles move snow into the pedestrian and cycle travel paths after the initial snow clearing. There was also a request to view snow management of sidewalks, crosswalks and cycle facilities from the perspective of the unique users.

Transportation staff committed to working with 311 Toronto to better capture the issues of residents with mobility challenges and agreed that ongoing maintenance of both cycling and pedestrian focussed infrastructure needed to be improved in the period

between winter events. Upgrades to the outward facing GPS website www.toronto.ca/plowTO will also be introduced for the 2019/20 winter season to better communicate the status of sidewalk clearing activities to the public.

As staff continue to work through the mechanical snow clearing pilot, they will engage with the Toronto Accessibility Advisory Committee.

CONTACT

Vincent Sferrazza
Director, Operations & Maintenance
Transportation Services
(Tel) 416-338-0977
Email: Vincent.Sferrazza@toronto.ca

SIGNATURE

Barbara Gray
General Manager, Transportation Services

ATTACHMENTS

Attachment 1 - Winter Maintenance Levels of Service 2015 - 2022
Attachment 2 - Winter Maintenance Program Review (HDR)
Attachment 3 - Winter Maintenance Program Review Recommendations Table
Attachment 4 - Summary of Winter Maintenance Programs by Jurisdiction
Attachment 5 - Key Findings from the Ipsos Public Affairs Survey