



Annual Winter Maintenance Report

Presentation to Infrastructure and Environment Committee (IE12.7)

Date: July 3, 2024

STAFF REPORT OVERVIEW

- **2023-2024 Winter Season Review**
 - High-level winter season review with data
 - Improvements to 2023-24 Winter Season
- **Upcoming 2024-2025 Winter Season**
- **Major Snow Event Response Plan Update**

Going forward, Transportation Services will report annually on the prior winter season's winter maintenance activities



2023-2024 WINTER SEASON REVIEW

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- Toronto got an average annual total of **121.4cm** of snowfall in the **last 5 years**
- **2023-24** was a mild winter with a total of **51cm** of snowfall compared to 145cm of snowfall in previous season, 2022-23
- The most **typical snow event** ranges from **2cm up to 10cm** of accumulation
- The range of snow accumulation for the **2023-24** season was from **1.5 cm to 12 cm**



2023-2024 WINTER SEASON DATA

Summary:

Despite less snowfall than the 2022-23 winter season, there were still a significant number of activations. An activation is triggered when weather conditions reach the City’s approved service level thresholds.

Data on Weather Conditions		
	2022 23	2023 24
Total Amount of Snowfall	145.0 cm	51.0 cm
Range of snow accumulation for the season	1.0 to 26.0 cm	1.5 to 12.0 cm
Total number of snow events	41 events	25 events
Number of Winter Activations		
Types of Activations	2022 23	2023 24
Anti-icing	17	18
Salting – Arterial/Collector Roads	41	25
Salting – Local Roads	40	20
Plowing – Arterial/Collector Roads	11	3
Plowing – Local Roads	8	3
Salting and Plowing – Sidewalks	33	12

2023-2024 WINTER SERVICE REQUEST (SR) DATA

Total SRs reduced almost 10x

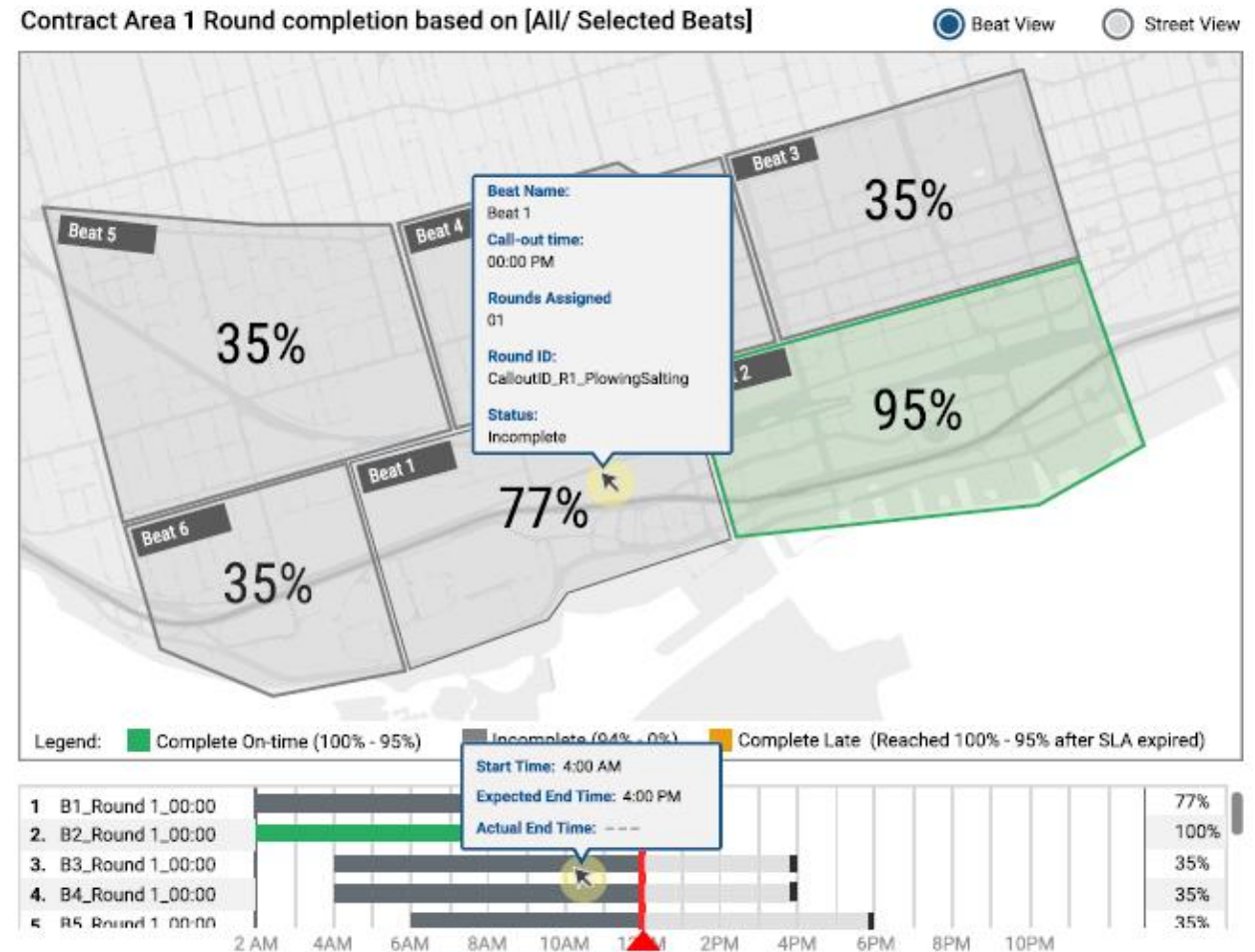
The total number of **SRs reduced significantly to almost one-tenth of the number in 2022-23**, reflecting a milder winter but also improved service delivery for 2023-24 winter season.

Total Number of Service Requests by Type		
Type of SR	2022 23 Total	2023 24 Total
Boulevard Plough Damage	4,239	1,215
Road – Sanding/Salting Required	1,760	459
Driveway-Blocked by Windrow	2,687	302
Sidewalk Icy, Needs Sand/Salt	1,657	279
Sidewalk Snow Clearing	3,746	162
Road Ploughing Required	3,237	130
Walkway – Snow Clearing/Salting Required	518	74
TOTAL	24,239	2,967

IMPROVEMENTS FOR THE 2023-24 SEASON

- Utilized **GPS tracking** on equipment to monitor contractor performance
- Enhanced **standardization and consistency among staff** when managing the 11 winter contracts
- Improved **customer service experience** through the creation of the Customer Experience Working Group leading to updated SR problem codes and messaging

As a result of the above improvements, residents experienced an efficient and consistent winter maintenance service, and a streamlined process for service requests to 311



UPCOMING 2024-25 WINTER SEASON

CONTINUOUS IMPROVEMENTS & OPPORTUNITIES

- **Enhanced weather forecasting reports** and information for improved data accuracy and better pre-storm briefings for better decision making
- Improvements to operational **snow clearing maps** to standardize service levels for cycling infrastructure, transit stops, and appropriate Winter Road Classification
- **Pilot on automated salt-spreader machine** that is controlled by Artificial Intelligence (AI) in real-time
- Review the **Driveway Windrow Opening Program** to improve efficiency and effectiveness, along with fairness and equity for seniors and persons living with disabilities
- Potential **Upcoming “Winter Day”** for the community to learn about the winter services and programs the City has to offer hosted with **SPEC, PCU, PFR, TPA, TTC and TPS**

MAJOR SNOW EVENT RESPONSE PLAN

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- **Major Snow Event Response Plan (MSERP)** is an Action Plan:
 - Vision, 6 Guiding Principles and Prioritization Framework for how to plan and prioritize snow removal when major winter storms occur
 - A tailored consistent approach to the conditions the City is facing
 - Ensure clarity to residents, businesses and visitors on what to expect during a major snow event
 - Clarify staff/contractor roles and responsibilities
 - Improve coordination with contract staff and partner agencies



MAJOR SNOW EVENT RESPONSE PLAN: DRAFT VISION AND GUIDING PRINCIPLES

Vision

To respond to major snow events in a way that ensures:

- all residents, businesses and visitors understand what is happening as response to a major snowstorm event unfolds,
- there are transparent and timely communications about where and when snow will be removed from streets, bike lanes and sidewalks for safe travel, and
- the City staff and contractors direct snow removal in an efficient and equitable manner and where there is the greatest demand

Guiding Principles of the Framework for the Major Snow Event Response Plan



SAFETY



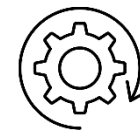
ACCESS



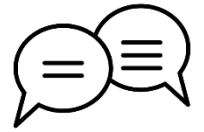
MOBILITY



ENVIRONMENT



EFFICIENCY



COMMUNICATION

PROPOSED BY-LAW CHANGES FOR ADVANCED DECLARATION

By-law updates to Chapter 950-406 regarding parking and standing prohibitions during major snow storm conditions, to enable Transportation Services to be more agile in clearing and removing snow during major winter storms

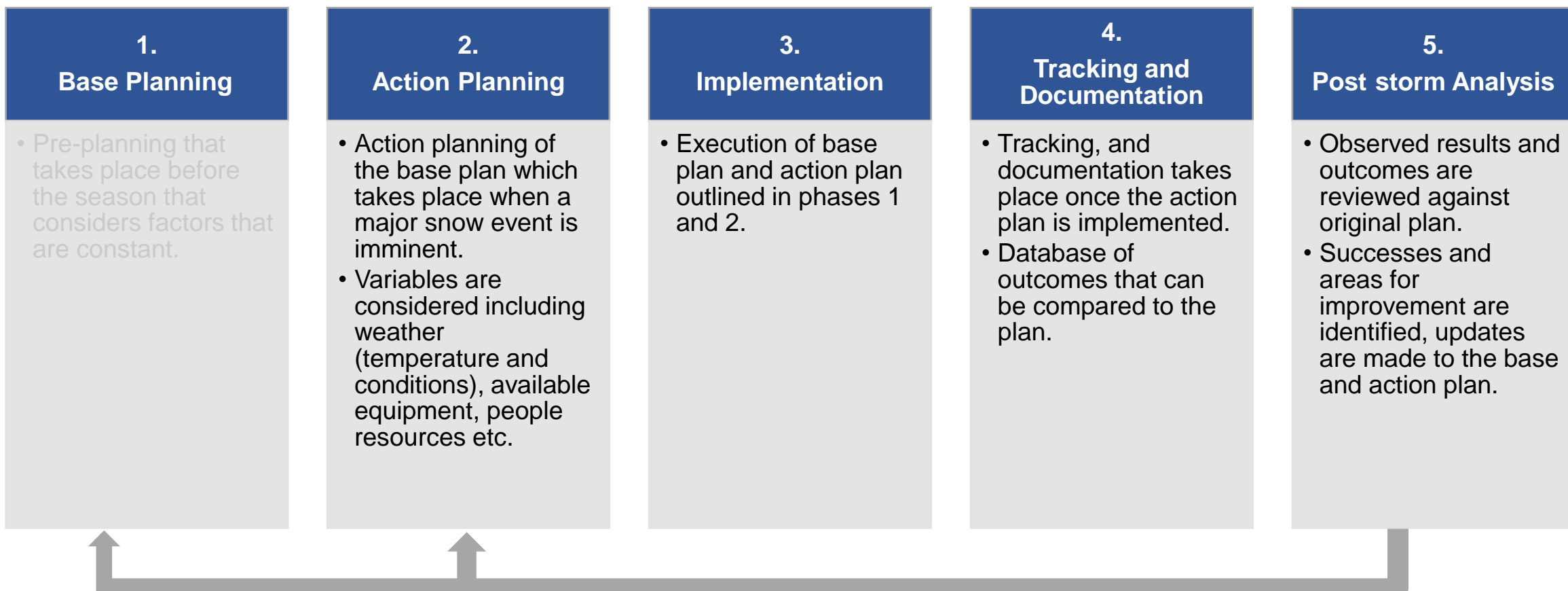
- Change the criteria for declaration to allow for parking prohibition to start before snow falls so that parked cars that would impede snow removal operations can be taken off the streets earlier
- Remove the need for extension of declaration every 72-hours

By-law updates to Chapter 937 and Chapter 27 granting the General Manager of Transportation Services the ability to close highways up to a maximum of 24 hours between November 8th and April 7th seasonally, for the purposes of facilitating efficient snow removal operations

- Chapter 27 will exempt the General Manager of Transportation Services from community council procedure requirements to seek approval from local councillors to close highways

MAJOR SNOW EVENT RESPONSE PLAN:

FIVE PHASE ACTION PLAN



- Data driven approach in Base and Action Planning
- Training program on implementing the 5 Phase Action Plan

COORDINATION AND ENGAGEMENT

- A major snow event is a major incident that requires coordinated response
- Transportation Services will create an Incident Management Team (IMT) to coordinate major snow storm response, and to collaborate with the inter-divisional/inter-agency IMT facilitated by Toronto Emergency Management
- Engagement Strategy with Partner Agencies such as TTC, School Boards, Emergency Services (i.e. Toronto Police, Toronto Fire, Toronto Paramedics) to improve the coordination of snow removal operations



COMMUNICATION STRATEGY – EXTERNAL

- **Public education** on snow removal operations to instill public confidence
 - Update to the Mailer for the upcoming season to include snow removal
- A **communication and media strategy** prior, during, and after major snow events
 - Communication to the public to provide advance notice of snow removal operations and what to expect, including parking prohibition according to Toronto by-law
 - Public and Councillors will be kept informed about the status of the snow removal operations
- Next steps to **improve PlowTO** platform to better address communication to the public

VISIONZERO WINTER 2023-2024

GET TO KNOW OUR PLAN FOR SNOW

The City of Toronto is ready with a snow clearing plan. Here's everything you need to know this winter.

WHAT WE DO

- 1. Watch weather:** We monitor the weather forecast and plan ahead.
- 2. Anti-ice:** Crews spray salt brine on expressways, hills, bridges and other high-priority locations before snow falls to prevent ice from forming.
- 3. Salt roads:** Salt trucks are the first line of defence when the snow starts to fall.
- 4. Clear sidewalks:** Crews start clearing all public sidewalks when the snow is 2 cm deep. Before that, property owners must clear their sidewalks of snow and ice.
- 5. Clear bikeways:** Crews clear on-street bike lanes at the same time as the road. Separated cycle tracks and bike trails are cleared at 2 cm of snow accumulation.
- 6. Plow roads:** Plows clear roads when the snow is this deep:
2.5 cm - expressways
5 cm - major roads and transit routes
8 cm - residential streets
- 7. Clear windows:** After plowing is complete, crews clear 25 cm high snow piles left behind by plows on eligible streets.
- 8. Patrol streets:** We patrol the roads 24/7 and activate clearing operations where required.
- 9. Respond to service requests:** Please wait at least 16 hours after the snow stops falling to connect with 311 - it takes time to clear the snow.

WHEN SNOW IS CLEARED

ALL THE ROADS ARE SALTED FIRST. PLOWS GO OUT LATER, IF REQUIRED.

What we clear	When does clearing start?	What does plowing start?	How much snow is that?	How many hours after the snow stops falling does it take to plow?	How much time does it take to clear?
Expressways (404, 401, 403, 404, 407, 409, 410, 416, 418, 427, 427A, 427B, 427C, 427D, 427E, 427F, 427G, 427H, 427I, 427J, 427K, 427L, 427M, 427N, 427O, 427P, 427Q, 427R, 427S, 427T, 427U, 427V, 427W, 427X, 427Y, 427Z)	When the snow first accumulates	2.5 cm	Golf ball	2 hours	Snow cleared from all lanes
Major roads, transit routes, and streets with hills	When the snow first accumulates	5 cm	House key	6-8 hours	Curbs of roadways is clear of snow
Residential streets	When the snow first accumulates	8 cm	Hard hat	14 hours	Safe and passable*
Separated cycle tracks & trails	When the snow first accumulates	2 cm	Quarter	8 hours	Snow cleared from the lane
Sidewalks	When the snow first accumulates	2 cm	Quarter	12 hours	Safe and passable**

*May vary based on weather conditions.
**Difficult as a surface that can be travelled safely at a reasonable speed.

TORONTO'S SNOW PLAN IS COMPREHENSIVE AND HIGHLY COORDINATED

The City's snow and ice response plan prioritizes the safety and mobility of residents above all else, particularly emergency and transit vehicles. All of our crews are trained with safety in mind.

Toronto's 14,700 lane-km of roads, 7,900 km of sidewalks and 955 km of bike lanes and major trails will be cleared by a large fleet of salting and plowing equipment.

WHAT YOU CAN DO

- Keep a safe distance from snow clearing equipment.
- Clear your sidewalk if less than 2 cm of snow falls.
- Use the PlowTO map to track plows and salt trucks in your neighbourhood: toronto.ca/PlowTO
- Regularly clear around fire hydrants near your property.
- Follow us on social media to get the latest updates.
- Connect with 311 to make a service request approximately 16 hours after snow stops falling: toronto.ca/311

PlowTO Map
Use the PlowTO map to track plows and salt trucks in your neighbourhood, and see an approximate time when an area was last cleared: toronto.ca/PlowTO

Learn More: toronto.ca/snow

Pour consulter ces informations en français, veuillez visiter le site : toronto.ca/snow

繁體中文資訊 : toronto.ca/snow

Upang konsultahin ang impormasyon ng ito sa Tagalog bisitahin: toronto.ca/snow

Para visualizar esta informação em português visite: toronto.ca/snow

Para consultar esta información en español visite: toronto.ca/snow

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Contact **311** 416-338-OTTY (0889) 311@toronto.ca

Please wait about 16 hours after snow stops falling before contacting 311.

X @cityoftoronto @cityofto



NEXT STEPS

- After endorsement of the Major Storm Response Plan by City Council, staff will
 - develop the Base Plan with new priority route maps
 - assign updated snow removal operations for contractors and in-house staff, and
 - create a formal communication plan to proactively inform the public during a storm regarding timelines and removal operations



QUESTIONS