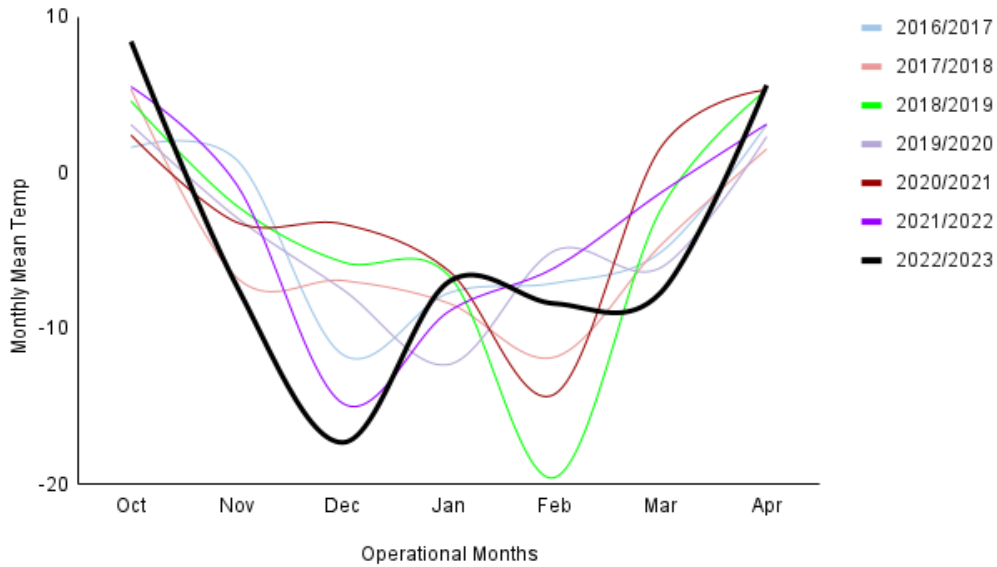


## Snow and Ice Control Summary - Operational Performance (2022-23)

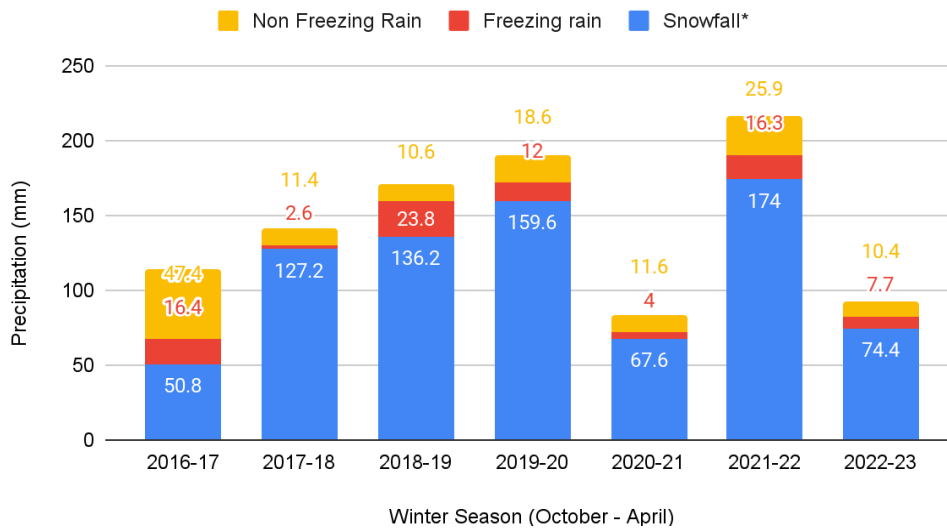
### Temperature



### Precipitation

From November 1, 2022 to March 30, 2023, there were 44 precipitation days, compared with 53.7 average precipitation days from 2016 to 2023. There were 42 snow days, two rain days and no freezing rain days during this period. There were a total of three snow events for Roadways and 20 snow events for Active Pathways. For Roadways, a snow event is declared when there is an accumulation of two centimeters or more. For Active Pathways, a snow event is declared when snowfall (any amount) occurs within 48 hours.

#### Comparison: Total Amounts of Precipitation

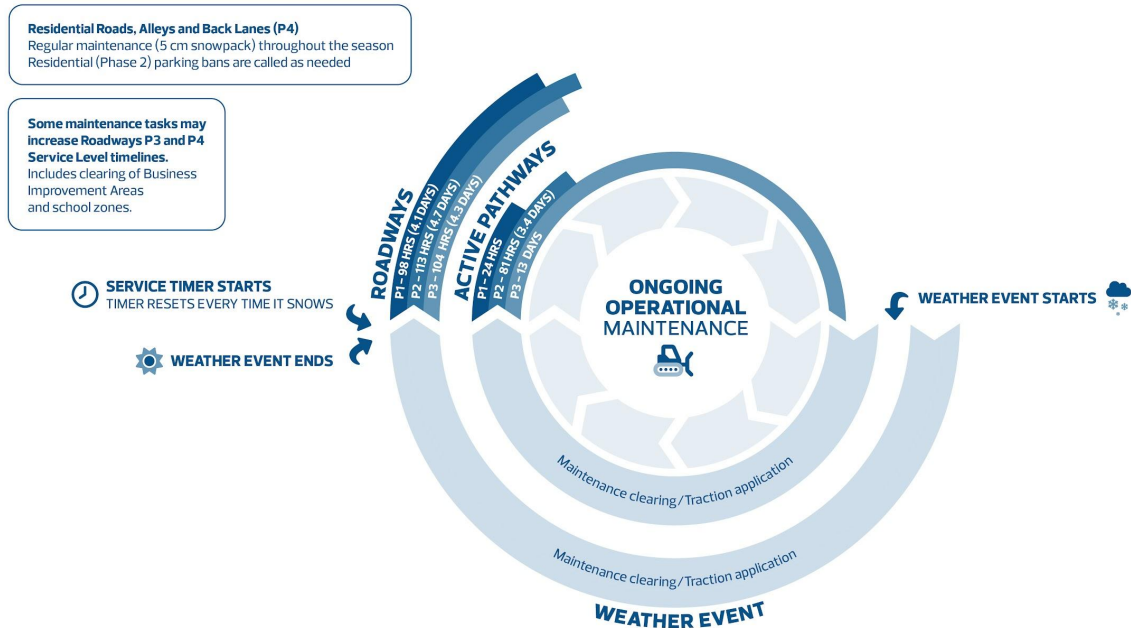


*Precipitation equivalent used to show snowfall measurements (1 cm snow = 1 mm precipitation), as is common practice with meteorological measurements.*

### Service Delivery Scorecard

The Snow and Ice Control program uses a priority system to order maintenance work and identify targeted completion timelines following a weather event. There are separate priority hierarchies, staff and equipment for Roadways and Active Pathways. Crews are always out maintaining Roadways and Active Pathways. While snow is falling, crews will:

- Focus on clearing major roads like Whitemud Drive and Yellowhead Trail
- Clear and apply sand/salt to on/off ramps, bridge decks and river valley hills



ROADWAYS SCORECARD				
Priority Level	2021-22 Winter Season		2022-23 Winter Season	
	Service Level <i>(not aligned to budget)</i>	On-time % Completion	Service Level <i>(aligned to budget)</i>	On-time % Completion
P1 - Arterial, BIAs	1.5 days	76%	4 days	98%
P2 - Collector, bus routes	2 days	37%	5 days	90%
P3 - Industrial, rural	5 days	89.1%	5 days	97%
P4 - Residential	9 days	59.98%	8 days	80%
P4 - School zones	9 days	not measured	8 days	97%




Target success rate is 80% on-time completion or higher.





ACTIVE PATHWAYS SCORECARD				
Priority Level	2021-22 Winter Season		2022-23 Winter Season	
	Service Level <i>(not aligned to budget)</i>	On-time % Completion	Service Level <i>(aligned to budget)</i>	On-time % Completion
P1 - City facilities/ centres, some bus stops, stairs	1 day	99%	1 day	99%
P1 - Prioritized bike routes	1 day	91%	1 day	96%
P1 - LRT Stations	1 day	99%	1 day	99%
P1 - Hard surface trails (river valley)	1 day	87%	1 day	85%
P2 - Parking lots	2 days	not measured	4 days	85%
P2 - Non-prioritized, separated bike lanes	2 days	87%	4 days	95%
P2 - Pedestrian bridges	2 days	90%	4 days	95%
P2 - All-season stairs (separate from City facility areas)	2 days	88%	4 days	88%
P2 - City maintained sidewalks, wheelchair ramps, shared paths	2 days	68%	4 days	80%
P3 - Manually cleared areas (bus stops, paths, etc)	5 days	69%	13 days	96%
P3 - Bus stops	5 days	42%	13 days	81%
P3 - Community sandboxes	5 days	58%	13 days	92%

*Target success rate is 80% on-time completion or higher.*

**Equipment Utilization Rates**

Equipment utilization rates are both a function of the number of staff available to operate the equipment as well as having well maintained and properly functioning equipment.

ROADWAYS EQUIPMENT						
Equipment Type	Max Total Available (in yard)		Max Units Used (daily)		% Max Utilization of Bookout Rate*	
	2022-23	2021-22	2022-23	2021-22	2022-23	2021-22
Graders	19	19	9	12	 47.37%	63.16%
Loaders	13	14	10	10	 76.92%	71.43%
Tandem Sanders/Plows	114	119	78	57	 68.42%	47.90%
<b>Total Units</b>	<b>146</b>	<b>152</b>	<b>97</b>	<b>79</b>	--	--

ACTIVE PATHWAYS EQUIPMENT						
Equipment Type	Max Total Available (in yard)		Max Units Used (daily)		% Max Utilization of Bookout Rate*	
	2022-23	2021-22	2022-23	2021-22	2022-23	2021-22
John Deere (JD)	31	18	18	11	 58.06%	61.11%
Toolcat	21	20	18	17	 85.71%	85.00%
Bobcat/Skid Steer	6	5	3	3	 50.00%	60.00%
MV	4	5	4	4	 100.00%	80.00%
Tractor	2	2	2	2	100.00%	100.00%
<b>Total Units</b>	<b>64</b>	<b>50</b>	<b>45</b>	<b>37</b>	--	--

\*Bookout rate: Approximately 20% of equipment on reserve for equipment repairs and maintenance

**Parking Ban Enforcement**

This season, Phase 1 parking bans were called in November and December, corresponding to snowfall, and a Phase 2 parking ban was called at the end of January due to melting conditions caused by unseasonably warm weather.

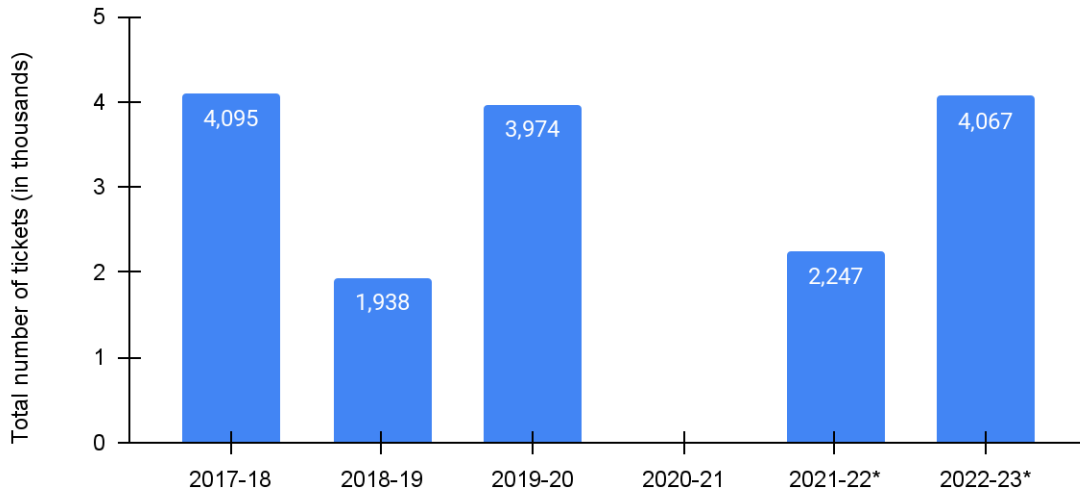
PARKING BANS		
Type	2022-23	2021-22
<b>Phase 1</b>	Nov 8 - 14 Dec 19 - 24 <b>Average Length: 5 days</b>	Nov 16 - 20 Dec 14 - 20 Mar 4 - 7 <b>Average Length: 4 days</b>
<b>Phase 2</b>	Jan 24 - Feb 8 <b>Average Length: 15 days</b>	Nov 30-Dec 8 Dec 20-27, Jan 10- Feb 4* <b>Average Length: 24 days</b>
<b>Total</b>	<b>3</b>	<b>5</b>

*\*Phase 2 parking ban was paused due to extreme cold weather and resumed January 10.*

A new Snow and Ice Officer (SIO) position was created to support the parking ban enforcement. 15 seasonal SIO staff were hired for the season.

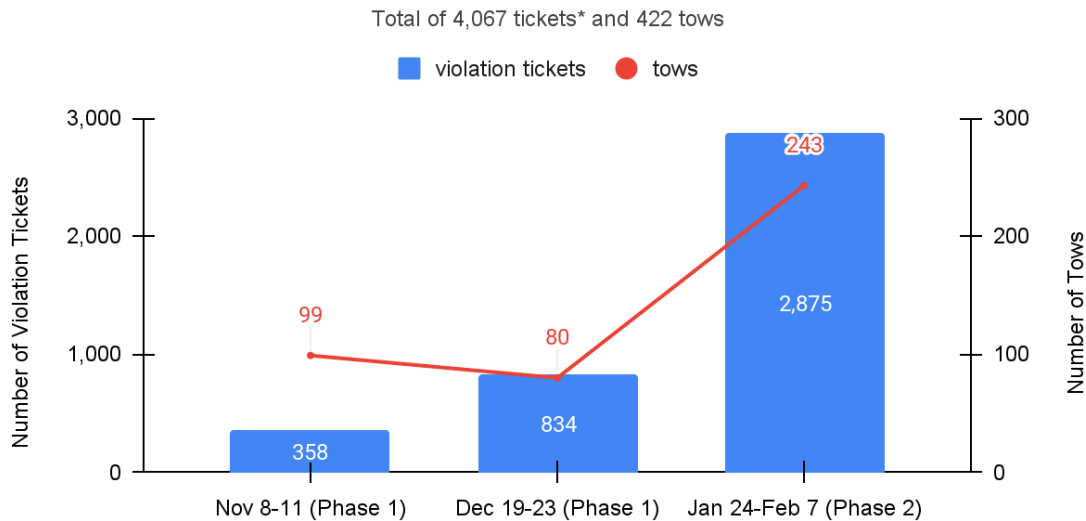
**Number of Parking Ban Violation Tickets**

No parking bans were called in 2020-21, therefore no tickets were issued.



\*Includes both Phase 1 and Phase 2 parking bans.

### Parking Enforcement Summary for 2022-23 Season: Violation Tickets and Tows by Parking Ban Date



\*Number does not include any cancelled tickets (data until March 31, 2023)

*The above graphs reflect the number of tickets issued and does not take into account any further outcomes, such as cancellations and appeals.*

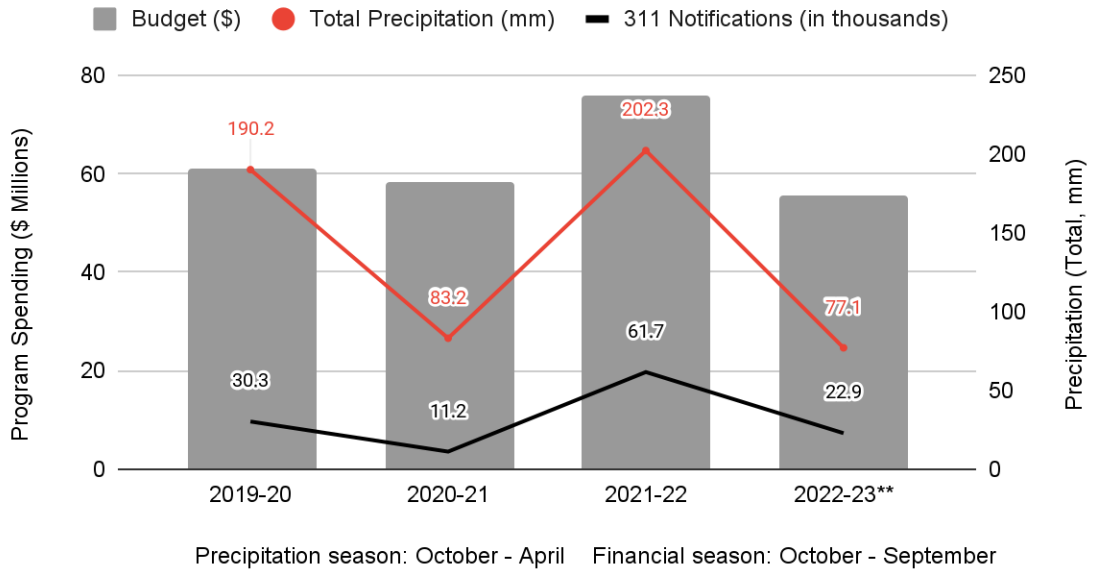
### Communications

Administration made a number of improvements to Snow and Ice Control program communications:

- A new Snow and Ice Control information postcard was developed and sent to 450,000 households.
- Edmonton's first Name a Plow Contest launched this year and received 2,157 submissions/votes.
- An updated parking ban notification service launched in October 2022, on the new City of Edmonton service notifications platform (my.edmonton.ca). Approximately 31,000 subscribers signed up to be notified about upcoming Snow and Ice Control parking bans.
- Residents were highly engaged in the topic of Snow and Ice Control this season, as indicated by over 26 million Facebook post impressions, over 137,000 web page views.
- Street and digital signage, as well as news media (radio, television, newspapers) continue to be the dominant sources of Snow and Ice Control information for residents.
- Overall, 311 inquiries decreased in 2022-23 from the previous winter season. Inquiries about windrows also declined, with the return to maintaining a 5 cm snowpack in residential areas. Average processing time for Snow and Ice Control inquiries provided to 311 has improved over the past three seasons due to the successful streamlining of processes.

**Comparison: SNIC Budget, Winter Precipitation and 311 Notifications**

\*Precipitation includes snow and rain (freezing and non-freezing)

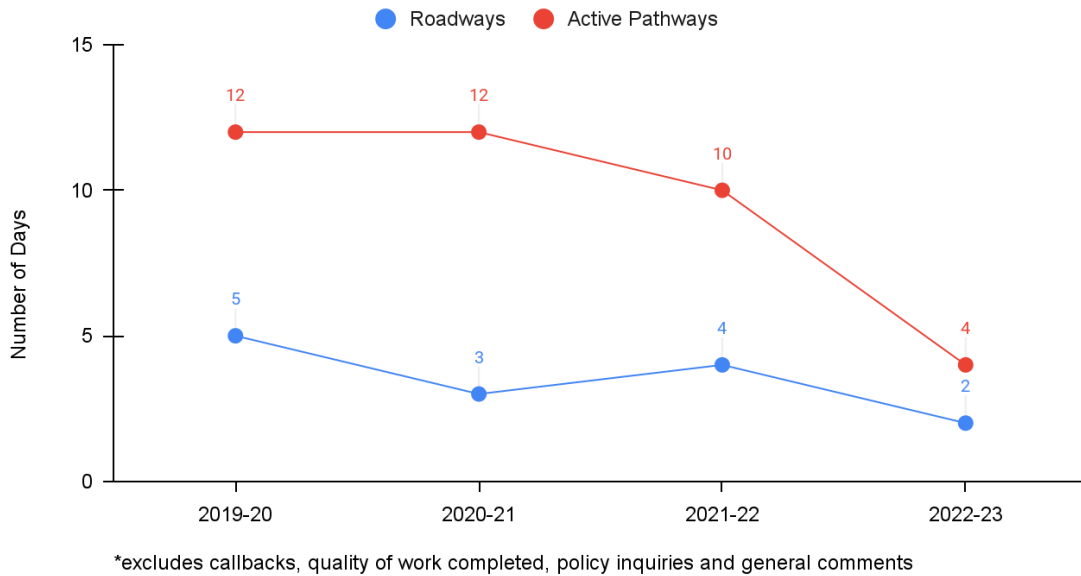


*Total Snow and Ice Control notifications include requests for callbacks, quality of work completed (commendations and complaints), policy inquiries and general comments.*

*\*\*2022-23 Budget is until March 2023*

**Average Processing Time for Snow and Ice Notifications**

Includes notifications for all SNIC related tasks except for exclusions\* noted below



### **Environmental Monitoring and Reporting**









The Snow and Ice Control program continues to improve environmental performance and focus on efforts to protect the soil and watershed from potential impacts, including the development of a corporate watershed management framework.

- Sand and salt mixtures are stored in the lowest volumes required to serve operational needs and meet service levels for road safety. Funding has been approved to provide future covered on-site storage.
- Concentrated salt piles are covered to reduce chloride contamination from run-off during rain events.
- Snow storage site upgrades over the next 8-10 years will improve environmental performance and reduce potential impacts from meltwater.
- The City follows Environment Canada's Code of Practice for the Environmental Management of Road Salts and provincial Snow Disposal Guidelines. The City's five snow storage sites are registered as a designated activity under the provincial Environmental Protection and Enhancement Act (EPEA).
- Administration participates in regular internal and external audits under the ISO 14001 standard and investigates, cleans and reports spills and releases as part of Enviso, the City's environmental management system.
- Operational procedures for snow storage pond and site maintenance include monitoring of soil, groundwater and surface water and reporting to regulators as required.



**Inventory**

The amount of roads and paths to be maintained is trending upward, particularly residential roads, machine cleared paths, bike lanes, and trails in natural areas, and manually cleared areas, such as around bus stops and benches.

Roadways	% Change in Inventory (2020-21 to 2022-23)	Active Pathways	% Change in Inventory (2020-21 to 2022-23)
P1	0% (arterials)	P1	 33.6% (bike lanes) 10.1 to 111.7% (facilities, LRT platforms, paths)
P2	 8.6% (collector routes)	P2	 14.7% (bike lanes) 3.4 to 211.2% (stairs, bridges, paths, natural areas)  -19.7% for parking lots
P3	 -11% (industrial, rural) <sup>1</sup>	P3	 7.8% (community sandboxes) 12.6 to 138.3% (manually cleared areas, parking lots)  -11 to 23% in facilities, bus stops <sup>2</sup>
P4	 23.3% (residential)		

<sup>1</sup> Decrease due to recategorization of inventory between priority categories.

<sup>2</sup> Decrease due to: reprioritization and recategorization of inventory; Edmonton Transit Service bus route redesign (changes in number of bus stops)