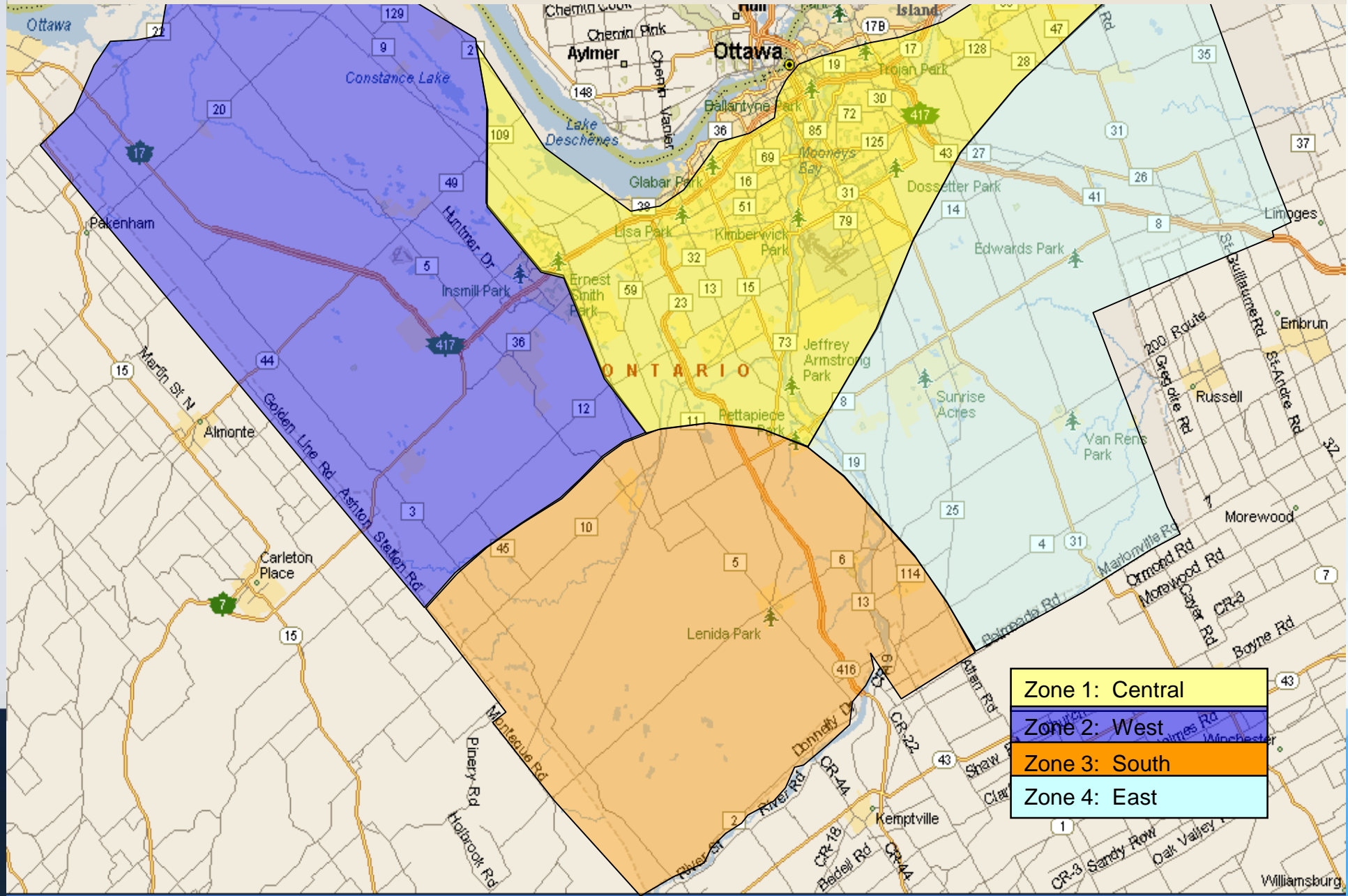
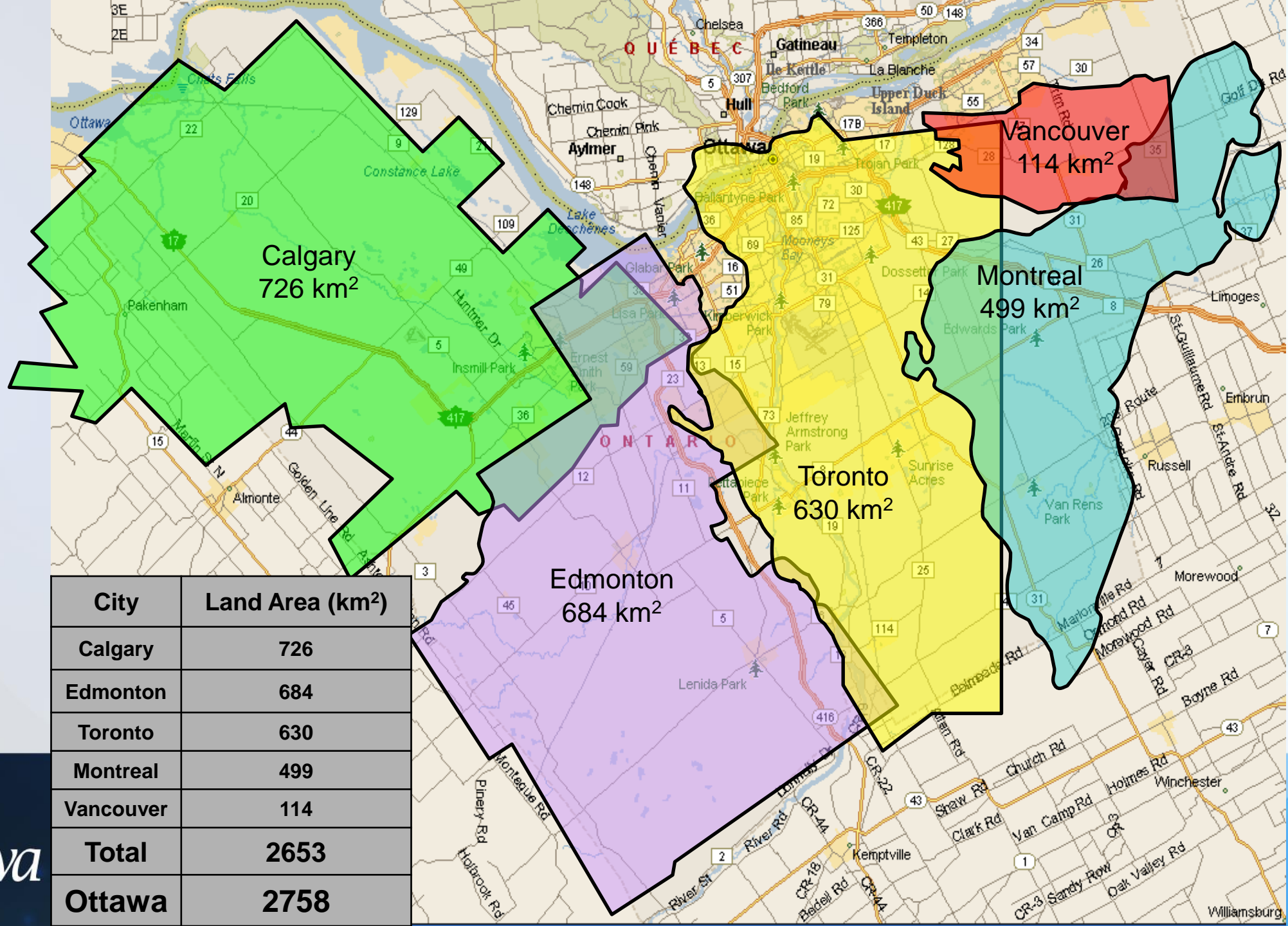


Winter Operations in the City of Ottawa

Public Works and Environmental Services Department

City of Ottawa – 4 Weather Zones





City	Land Area (km ²)
Calgary	726
Edmonton	684
Toronto	630
Montreal	499
Vancouver	114
Total	2653
Ottawa	2758

2018/2019 Winter Season

- Ottawa received approximately 287cm of snow and over 85 hours of freezing rain as of March 17th.
- Operations were further challenged by the rapid nature of the 48 freeze-thaw cycles that the City has experienced
- Back to back snowfalls of 25+ cm causes snow storage capacity reduction, minimal recovery period, and repetitive operations.
- These combined conditions present extreme challenges to maintain snow packed standard on class 2 sidewalks and residential roads



Winter Maintenance

By the numbers



Please stay at least **15 metres** (three cars lengths) back from a snow vehicle



ottawa.ca **3-1-1**
TTY/ATS 613-580-2401

2018-662



During a storm...

The storm begins

- Snow clearing operations begin
- **Clearing** is the focus

After the storm

- Clearing in all appropriate areas is completed
- **If quantity is there**, snow removal operations could be undertaken

Road clearing

- Clear the width of the road
- Clear bank high only if it is a **safety issue**



Ottawa

Plowing through a winter storm

Crews are deployed:

When storm begins

Highway 174 and Transitway

Major roads and arterials
(Woodroffe, Montreal Road, Bank, etc.)

After accumulation

Sidewalks and cycle lanes in the downtown core

Secondary roads and minor collectors
(Chapel, Dovercourt, Springbrook, etc.)

Residential roads and lanes
(Billings, Waverley, Smith, etc.)

Residential sidewalks

Cleaning up intersections and pedestrian crossings

Bus stops

2017-129_07

Extreme Winter Storm Conditions

- Snow events that exceed normal conditions
- Snow and ice control will be carried out based on the capacity of resources
 - As continuous as practicable
 - Consistent with the classes of the roads
- Regular updates
 - Council
 - Media
 - Operations staff
 - Call centre

What to expect during a winter storm



Minimum depth of snow before we deploy		End of snowfall – time needed to clear snow
At accumulation	Major roads – Highway 174 and Transitway	
2.5 cm	Downtown core, winter cycling network	4 hours
5 cm	Secondary roads	6 hours
5 cm	Most sidewalks	16 hours
7 cm +	Most residential roads	10 hours
	Bus Stops	24 hours

Winter Maintenance Quality Standards (MQS)

- The MQS for the City's roads, sidewalks and pathways ensure a consistent level of service is provided
 - Council set the standards
 - These standards exceed the provincial average
 - They also exceed most other municipal standards
- Roads, sidewalks and pathways with similar characteristics and function are grouped together in classes
- Classes are used to prioritize maintenance, including the frequency of snow plowing, ice control and snow removal

Maintenance Road Classification

Road Maintenance Class		Road Type & Lane kms	Minimum Depth of Snow Accumulation for Deployment of Resources (Depth as per MMSMH)	Time to Clear Snow Accumulation From the End of Snow Accumulation or Time to Treat Icy Conditions (Time as per MMSMH)	Treatment Standard		
					Bare Pavement	Centre Bare	Snow Packed
1	A	High Priority Roads	As accumulation begins (2.5-8 cm depending on class)	2 h (3-4 h)	√		
	B				√		
2	A	Most Arterials		3 h (3-6 h)	√		
	B				√		
3	A	Most Major Collectors			4 h (8-12 h)	√	
	B			√			
4	A	Most Minor Collectors		5 cm (8 cm)	6 h (12-16 h)	√	
	B					√	
	C						√
5	A, C	Residential Roads and Lanes	7 cm (10 cm)	10 h (16-24 h)			√
	B		10 cm (not defined)	16 h (not defined)			√

Maintenance Sidewalk/Pathway Classification

Sidewalk/ Pathway Maintenance Classification & kilometres		Minimum Depth of Snow Accumulation for Deployment of Resources	Time to Clear Snow Accumulation From the End of Snow Accumulation or Time to Treat Icy Conditions	Treatment Standard	
				Bare Surface	Snow Packed
1	<ul style="list-style-type: none"> Downtown business district Byward Market large employment centres special tourism areas 	2.5 cm	4 h	√	
2	<ul style="list-style-type: none"> downtown/urban residential neighbourhoods where sidewalks are only safe place to walk sidewalks in Villages pathways that serve as main community links or to access transit services sidewalks along roads with transit service, emergency facilities, public facilities or retail/commercial frontages pathways designated as part of City cycling routes 	5 cm	12 h	Sidewalks directly adjacent to arterial roads	All other locations
3	<ul style="list-style-type: none"> sidewalks along rural and suburban collector and residential roads paved pathways in rural and suburban neighbourhoods (pathways that are winter maintained) 	5 cm	16 h		√
4	<ul style="list-style-type: none"> unpaved pathways and trails paved pathways that are not winter maintained 	Not winter maintained			

High Buildings



Winter Overnight Parking



Blue GRYB Icebreaking Technology



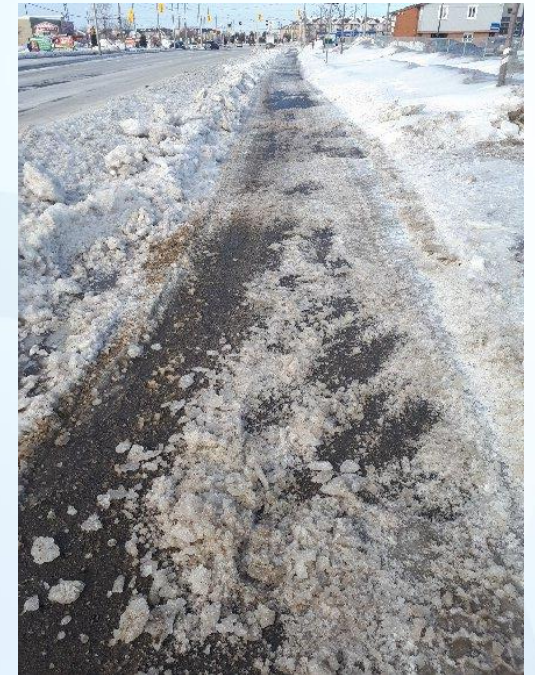
Before



During



After



2019 / 2020 Improvements

- **Improvements for next winter**
 - Continue exploring new pilots
 - One sided parking
 - Temporary no stopping
 - Equipment
 - Managing snow pack more effectively
 - Monitoring sidewalk equipment replacement schedules citywide
 - Leading practices from other cities
 - Incorporating Councillor and resident feedback from 2018/2019

MQS refresh

- Undertaking a review to update our Maintenance Quality Standards.
- This is an extensive citywide undertaking with over 6,000km of roads and approx. 2,300km of sidewalks.



Questions?

Thank you!