

Council Orientation – Winter Operations



Informing the Community

- burlington.ca/snow provides information
- Service Levels
- Maps
- “What’s Been Plowed?”
- Frequently Asked Questions
- Customer service contact information
- Website updates at 9 am, 4 pm and 11 pm during winter storm events
- Social media updates by communications staff



What is Maintained?

- 1,900 lane km of roads
- 850 km of sidewalks
- 30 km of pathways
- 706 transit stops
- Select parking lots in parks (44 lots after other work completed)
- **Not included:**
 - parking lots at city facilities and city public parking lots (others)
 - Many pathways through parks not included
 - The Brant St Pier
 - The Promenade
 - Community Postal Boxes



Service Levels

- Approved by Council in 1998
- Adjustments over the years include adding the Windrow Program, Anti-icing, multi-use pathway clearing, priority clearing of bikeway and hydro corridor, declaration of 'snow event'
- Season end review is conducted with each member of council
- Opportunity to request adjustments and highlight areas of concern in advance of budget submissions



Service Levels at a Glance

The City of Burlington provides snow clearing throughout the winter to keep our roads and sidewalks safe and passable for pedestrians, cyclists and motorists.

Visit the [road plowing priority map \[PDF\]](#) to see which roads are designated as primary, secondary and residential roads.

Road and Condition	Plowed	Sanded	Salted	Brine
Primary Roads, when a winter storm is coming.				Brine
Primary and secondary roads with snowfall between 1-4 cm.		Sanded**	Salted	
Primary and secondary roads with more than 5 cm of snowfall.	Plowed	Sanded**	Salted	
Residential roads, with less than 7.5 cm of snow.				
Residential roads, with more than 7.5 cm of snow.	Plowed	Sanded		
Sidewalks, multiuse pathways and transit stops with less than 5 cm of snow.				
Sidewalks, multiuse pathways and transit stops with more than 5 cm of snow. *Only done after all the roads are cleared which can be up to 72 hours after snowfall has ended.	Plowed*			

**Sand may be used as an alternative to salt

Salt is used primarily when the temperature is above -10 C. Below -10 degrees C the salt is mixed with an additive in order to allow salt to remain effective.



Determination of Service Levels

Minimum Maintenance Standards for Municipal Highways O Reg. 239/02

- Implemented to assist municipalities with a statutory defense to claims
- Sets out standards based on road classification
- Changes implemented to the MMS in 2018 include winter standards for sidewalks and for bike lanes

Best Practices

- Other municipalities
- Trade organizations, conferences and publications

Salt Management Plan

- Responsible use to reduce amount



Resources

- Operating budget is based on a 5-year rolling average
- 2018 budget \$4.86m
- Excess funds are allocated to a severe weather reserve fund
- The reserve fund is utilized in years when expenses exceed operating budget



Materials Used

- Sand (pickle – mix of 95% sand and 5% road salt)
- Brine (salt solution)
- Promelt* (salt solution with magnesium chloride)
- Road salt



Roads

City Resources

- 14 combo plows
- 28 operators covering 24/7
- Operators work up to 12 hour shifts

Contracted Resources

- 13 combo plows
- 11 plows
- 8 tractors
- Contractor responsible to provide staffing for 24/7 response



Sidewalks & Pathways

City Resources

- 8 sidewalk combo units
- 3 additional units for salting/sanding only
- 8 staff assigned and no ability to cover 24/7
- for sanding/salting requires 11 units plus 3 trucks filling =14 staff

Contracted Resources

- 9 sidewalk plows
- required to cover 24/7
- no material application



Transit Stops

City Resources

- 10 staff assigned to complete snow removal by hand at 700 stops
- Responsible for sanding/salting all bus stops and shelters

Contracted Resources

- Contractor assigned to complete first pass to mechanically clear windrow and concrete pad
- Provides snow removal only



Windrow Program

City Resources

- Oversight of contract
- Manage intake of applications
- Call out contractor when road plowing is nearing completion

Contracted Resources

- Capped at 150 eligible individual driveway locations
- Subsidized program (73% city cost)
- \$53.58 per season for one driveway



Road Patrol

- Teams of 4 staff cover 24/7 operations schedule on a 12-hour shift
- Responsible to monitoring and report road and sidewalk conditions
- Provide immediate response to isolated incidents (fire, watermain break)
- Assist with dispatch service
- Manage weigh-scale and loading operations



Fleet Maintenance

- Motor Vehicle Technicians work on 2 shifts
- On-call for winter season
- 2 MVT's called in for any winter storm event



Operations Management

- 2 Managers have primary oversight
- Manager of Roads Operations (Roads)
- Manager of Parks Operations (Sidewalk & Pathway)
- 10 Supervisors including Parks, Roads, Horticulture, Forestry, Cemetery Services
- Teams of 2 Supervisors
- 2 Teams on-call everyday during winter season



Operations Mgt continued

Supervisors - Team of 2

- Monitors weather, reports are received 4x per day
- Responsible to prepare operational plans, deploy and monitor resources; coordinate with parking control
- Responsible under the OSHA for the safety of all staff/contractors
- Monitor all supplies and order as needed
- Complete all record keeping
- Updates the website 3x day
- Provide updates to communications staff & managers
- **During evening and weekend shifts 2 staff are supervising up to 100 staff (including contractors) utilizing 80 pieces of equipment across the city**



Operational Decision Making

Many considerations in determining response including:

- Current and forecasted weather (temperature, road temperature, wind speed, sunlight)
- Legislative requirements
- Sequencing of deployment
- Available resources including staff, contractors, equipment, materials
- Timing – traffic/rush hour
- Parking bylaw and notice
- Need for snow hauling (bridge decks, downtown, Orchard)



Resident Concerns

Roads

- Some residents not satisfied with level of service for local roads
- Local service standard is hard pack – snow bonds to the pavement
- This is best practice and consistent across other municipalities

Photo of hard pack condition



Resident Concerns continued

Sidewalks

- Timeliness – not fast enough after snowfall
- Residents who clear the sidewalk adjacent to their homes don't want the city plow clearing
- Salting/sanding level of service is only primary and secondary routes and only if extremely slippery
- Lawn/Property damage

Pathways

- Limited number of pathways are cleared
- Not based on criteria, most based on past practice
- Plowing only on asphalt surface
- Many requests are for pathways to schools however not on city property



Resident Concerns continued

Windrows

- Windrow is the snow left that by the plow passing by
- Windrow program is available, limited to first 150 eligible participants
- Maximum has only been reached twice
- It can take up to 16 hours after road plowing has finished to clear windrows

General

- General complaints about having to shovel the windrow
- Parking permits suspended during plowing operations and no place to park vehicles
- Generally residents understand level of service and don't like it



Operational Concerns

Cars Parked on Roads

- Difficult to plow around
- Double parking can result in the plow being unable to access the road
- Installation of parking bays (or lay-bys) create need for extra pass and different equipment
- 600 unique locations including bulbs(cul-de-sacs) and parking bays that require other equipment



CITY OF
Burlington

Operational Concerns continued

Sidewalks

- Curb-faced sidewalks
- Encroachments – objects that are installed or placed on city property
- Irrigation heads, landscape features should be minimum of 18 inches from the sidewalk
- Lawn damage – when the ground is not frozen there is a greater likelihood of damage
- Service standard for repairs is to place topsoil and seed
- Residents can assist by placing markers 12 inches off the edge of the sidewalk

CITY OF
Burlington

Safety

Respect the Plow

- Large equipment with restricted visibility
- Do not follow too close - wide turns and frequent stops may be necessary
- Do not pass any plows



Staff Recommendations

- Complete a review and provide recommendations to council for 2020 budget considerations including the following:
- Improvements to sidewalk, pathway and bike lane clearing in accordance with recent revisions to the Minimum Maintenance Standards
- Increase the management oversight of winter operations on shifts
- Increase oversight of contracted services
- Consider changes to equipment and service provision for plowing (10 year contract preparations are commencing)

Questions?

