



Council Policy #C46

Snow and Ice Control

Approved by Council Resolution #21/05/11

1. PURPOSE:

To establish snow and ice control service standards in order to provide a safe and reliable transportation network within the geographic boundaries of the City. The intent of this policy is to provide a framework which continuously improves the effective delivery of winter maintenance services and management of materials used in winter maintenance operations.

The Community expects the City to deliver a timely, measured and prioritized response to winter weather conditions to support the safe mobility of people and goods across Beaumont.

2. POLICY STATEMENT:

Beaumont will provide efficient and cost-effective winter maintenance to ensure, as is reasonably practicable, the safety of users of the municipal roads, sidewalks, and trail networks, while striving to minimize adverse impacts to the environment and conform to the *Municipal Government Act* and all other regulations governing winter operations on public roads and pathways.

3. DEFINITIONS:

In this Policy, unless the context otherwise requires:

Arterial Roadways: Refers to major roadways that expedite the movement of vehicles between communities and major destinations, carry the highest traffic volume, and serve as essential to providing access to neighbourhood entrances.

Alley: Refers to a narrow roadway providing access to the rear of buildings and properties.

Assigned Collectors: Refers to the roadways that are elevated to a higher priority status for strategic or emergency access purposes.

Bare Pavement: Means an asphalt surface with a layer of snow not exceeding two (2) cm in depth.

Boulevard: Refers to the area from the edge of the asphalt or back of curb to the edge of sidewalk, separate landscape area, trail or walkway.

Collector Roadways: Refers to the roadways that connect local streets to arterial roads and carry moderate volumes of traffic; this type of roadway carries vehicles between arterial and residential roadways.

Commercial District and Main Street Districts: Refers to the Commercial District within Montalet, Montrose, Place Chaleureuse, and Beau Val. The downtown area Centre-Ville is classified under our Main Street District.

Extreme Weather Event: Refers to the immediate demand for snow and ice control services and exceeds the available City resources to the extent that emergency vehicle and citizen mobility is compromised.

Ice Control: The application of aggregate abrasives and/or chemicals to a driving or walking surface to improve traction.

Local Roadways: Refers to roadways that provide direct access to residential and commercial properties.

Passable: Refers to maintaining a driving lane in such a condition that Protective Services and Ambulance vehicles can use the street in an emergency response.

Parking Lots: Refers to City-owned or operated sites or part of a site for the parking of vehicles, and includes the parking spaces and all other areas required for access and circulation within the facility.

Road Right-of-Way: Refers to the space over the land that is reserved for transportation purposes and contains, among other things, the driving surface (paved or unpaved), concrete curbs and gutters, drainage ditches, sidewalks, street lights, boulevards, and utility infrastructure such as manholes, water valves, fire hydrants etc.

Rutting: The formation of troughs and ridges in excess of 10 cm in depth in compacted snow and ice.

Sanding: Refers to the application of abrasive material for traction control.

Salt: Means road salts that contain inorganic chloride salts with or without ferrocyanide salts to prevent the formation of ice.

Sidewalk: Refers to a concrete walkway located within the road right-of-way (boulevard) and adjacent to a city-owned asset or premise.

Snow Drifting: Depositing of windblown snow on roadways or lands which makes the passage of vehicles difficult or impossible.

Snow Event: Means an accumulation of five (5) cm or more. For the ice control activity, the term *snow event* shall also include rain or freezing rain or other weather conditions that have a similar effect on road surfaces. The end of a snow event is when winter precipitation no longer accumulates on roadway surfaces.

Snowpack: Refers to snow accumulation on the roadway that has been packed by vehicle traffic.

Snow Plowing: Means the pushing of accumulated snow from roadway surfaces to the middle or sides of a roadway or lane.

Alleys: the pushing of accumulated snow from the centreline of the alley surface, leaving snow ridges on each side, such that one vehicle width is provided.

Roads: the pushing of accumulated snow from driving or parking lanes. The resulting snow ridges may be stored in centre medians or in parking lanes adjacent to curbs.

Snow Removal: Refers to the reducing or cleaning away of snow ridges or piles. Typically, this is accomplished by redistributing this excess snow to existing snow ridges on the same block and if this is not possible then it is removed by loading and hauling off site.

Snow Ridge: The row of excess snow formed by plowing roads, alleys, trails or sidewalks.

Snow Storage: Refers to the activity of relocating and storing snow within designated areas in order to ensure a safe and accessible transportation network is reasonably maintained.

Trails: Means an asphalt pathway or concrete walk located on or adjacent to public lands that is interconnected to the greater pathway/sidewalk system.

Windrowing: The plowing of snow ridges into long continuous piles parallel with the road for storage or to facilitate removal.

4. OBJECTIVES:

This Snow and Ice Policy has the following performance and end condition objectives:

- a) That the operational activities are being undertaken during a typical weather event during a typical winter season. The City acknowledges that Beaumont may be subject to extreme or extraordinary weather which diminishes the City's ability to achieve the policy objectives within the stated time frames.
- b) That the activities detailed herein attempt to reduce hazardous conditions are beyond the City's control and dangerous conditions may nonetheless result despite the City's efforts.
- c) That winter road, sidewalk and trail safety is a cooperative activity between users of the active transportation network and the City. The City expects that users of the transportation network will exercise reasonable care for their own safety when travelling during winter conditions.
- d) That monitoring, reviewing and optimizing winter operations on a regular basis will occur to incorporate enhanced processes, new technologies, and new developments.
- e) Communicate information to the public about snow and ice control operations, both in advance of and during the winter season.
- f) The City will ensure that all Municipally-managed and controlled roads and publicly owned pathways within the municipality are maintained in accordance with the *Municipal Government Act*, RSA 2000, c. M-26 (Sections 18, 530 and 531)

5. GUIDELINES

Service Levels – Schedules 1 and 2

Service levels including how, when and where the City sands, salts, plows, and removes snow and ice depends on the City Council-approved priority system. In setting priorities, consideration is given to criteria such as traffic volume, road classification, terrain, emergency services, drift exposure and potential drainage issues.

The snow and ice service levels describe the varying levels of response to different snow accumulation events. The sequence and the methodology of services provided at each level, including monitoring the efficiency of clearing roadways, parking lots and active transportation networks will be based on operational efficiency, including route optimization and other relevant applicable factors.

The snow and ice control program will “reset” when continuous snow events are experienced.

The City will assume no liability whatsoever for damage to obstructions or landscaping of any kind placed or developed within a road right-of-way without a permit.

Ice Control (Sanding and Rock Chips)

As road conditions become slippery, abrasives and/or melting agents may be applied to hazardous locations such as intersections, curves, hills, school areas and pedestrian crosswalks. Residential intersections, and lane entrances and exits only as required. It is not common practice to sand streets in their entirety unless severe weather conditions warrant such actions. Ice control for residential areas will predominantly consist of rock chips. De-icing agents in residential areas will not be used unless weather conditions deem it necessary.

Crews adjust snow and ice control materials depending on the prevailing temperature and weather conditions.

To assist the public with neutralizing ice on sidewalks in front or alongside private property, the City will make available rock chips in designated areas located throughout out the City.

Snow Plowing

Roads shall be plowed and have snow and ice control operations to ensure they are passable to emergency services, waste collection and the general public, as per approved service levels. Residential roads will be bladed flat to minimize rutting, but snowpack on varying depths may be left to minimize driving difficulty. Alleys will be monitored to maintain one-way traffic.

Snow Removal

Removal and disposal of snow in an approved snow disposal facility is carried out in those areas where inadequate physical space exists to store the snow onsite and/or the presence of windrow interferes with the normal winter movement of vehicular and/or pedestrian traffic and sight restrictions at intersections and around fire hydrants.

The City shall take advantage of mechanically blowing snow to adjacent municipally-owned properties to accommodate snow storage wherever possible, rather than resorting to hauling.

Drifting

Drifting snow will be controlled by the strategic placement of snow fencing. Snow drifts that render roads, sidewalks, or trails impassible will be cleared per the approved service level.

Snow Storage Site Management

The City's permanent snow storage site is located at the Operations Facility Yard and is for City use only. As this permanent site has limited capacity, many temporary snow storage sites are located throughout the City, as approved annually by Council.

Parking Bans

Parking bans may be implemented, as required, to provide for space for winter operations to commence. Areas where parking is to be banned will be signed in advance. Vehicles that do not adhere to the parking ban shall be ticketed and towed; and the owner of the vehicle shall be responsible for all associated costs in accordance with the Traffic Bylaw.

Weather Monitoring and Extreme weather conditions

Monitoring the weather, both current and forecast in the next 24 hours, during winter operations shall occur once every shift. When severe weather conditions reach a point where winter operations cannot continue without compromising public and/or employee safety, temporary road closures may be implemented.

In the event of Extreme winter snowfall that is classified as an emergency/disaster, the overall response to the event may be coordinated under the direction of the City's Municipal Emergency Disaster Plan.

Snow Melt

City crews will remove snow from roads to reduce snow melt. Occasionally, pushed or graded snow will be stored in piles along the middle and/or the side of the road to slow down snow melt and reduce flooding around catch basins. On warm days, crews will begin defrosting catch basins, culverts, and begin clearing gutters to improve drainage.

Street, Sidewalk and Trail Sweeping

Beaumont conducts an annual Spring Street Sweeping Program for Beaumont's roadways, sidewalks, and trails. Sanding material and other debris that has accumulated on the roads during the winter is removed through this process. The City begins with bulk clean-up of the roads and then advances to the more detailed cleaning within neighbourhoods.

Owners and Occupants of Private Property

The following outlines the responsibilities of the owners and occupants of private property in snow and ice control.

Sidewalks

- a) The owner or occupant of a private parcel of land adjacent to a sidewalk that runs in front or along any adjacent side of the property (corner lots) shall remove ice and snow from the sidewalk within forty-eight (48) hours after two (2) centimetres of accumulated snow has been deposited.
 - (1) Refer to Snow Removal Bylaw 477-9 for further information on the responsibilities of owners and occupants of private property regarding sidewalk snow and ice control.

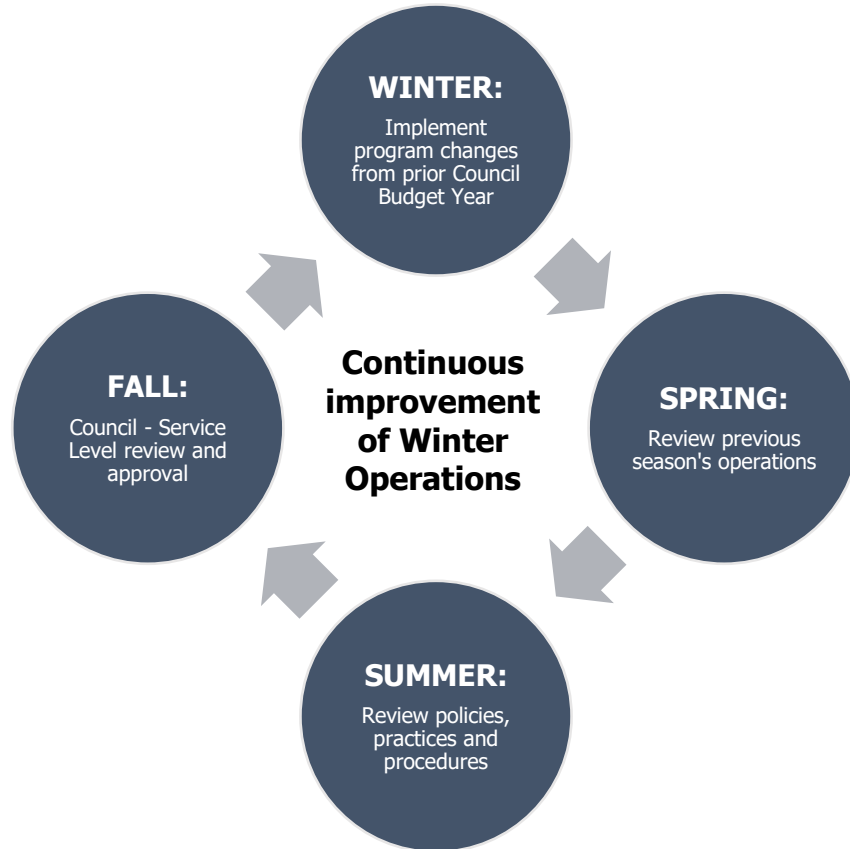
Fire Hydrants

- a) Fire Hydrants located on a resident's property, must be cleared of snow by the owner and occupant, of a minimum clearance of a one and half (1.5) meters distance always.

- b) Privately owned fire hydrants located on private property must be maintained and cleared of snow by the owner, of a minimum clearance of a one and half (1.5) meters distance all ways.
- (1) Refer to the Utilities Services Bylaw 689-08 for further information on the responsibilities of owners and occupants of private property regarding fire hydrant snow and ice control measures.

6. MONITORING AND PROCESS IMPROVEMENTS

The purpose of monitoring and updating is to provide a basis for continuous improvement of the snow and ice operations for Beaumont.



7. COMMUNICATIONS

Street signs, used during snow plowing, removal, and street cleaning, are placed forty-eight (48) hours prior to work commencing. Sign locations are identified on the interactive map found on our webpage at <https://www.beaumont.ab.ca/191/Snow-and-Ice-Control>.

Following a winter storm event and during all subsequent snow clearing operations, the public will be kept informed of snow and ice control operations on Beaumont's website.

Residents are asked to report concerns regarding winter operations through the online "Service Beaumont" portal found on the city's website: www.beaumont.ab.ca. Resident inquiries will be responded to by Guest Services during normal work hours.

All media inquiries are to be responded to by the City's Communications Department or designate.

8. AUTHORITY/RESPONSIBILITY TO IMPLEMENT

City Council to:

- a. Approve the levels of service annually.
- b. Be notified when an Extreme Winter Condition or an emergency/disaster is declared.

Chief Administrative Officer (or designate) to:

- a. Declare an Extreme Winter Condition to allow administration the ability to obtain additional resources to perform snow and ice control.
- b. Report to City Council on expenditures associated with Extreme Weather Conditions.

Director responsible for Winter Operations (or designate) to:

- a. Periodically review and update the Snow and Ice Control Policy in accordance with City Council defined service levels.
- b. Shall be responsible for ensuring the effective administration of this Policy.

Manager responsible for Winter Operations to:

- a. Develop and initiate procedures relating to the day-to-day implementation of the Snow and Ice Control Policy.
- b. Keep records and manage the day-to-day operations to ensure compliance with the Snow and Ice Control Policy.

Policy Record

Adopted by Council: May 25, 2021

Council Resolution: 21/05/11

Cross Reference:

- Regulate and Control the Removal of Snow, Ice and Debris Bylaw
- Utilities Services Bylaw

Administrative Responsibility: Director, Operations

Next Review Date: 2024

Schedule 1 Service Levels

Table A – Road Network						
Priority	Descriptions	Ice Control (Refer to map on Schedule B1)		Plowing (Refer to map on Schedule B2)		Removal (Refer to maps on Schedules B3, B4, & B5)
		Minimum Metrics	Timelines	Minimum Metrics	Timelines	
Priority 1: Arterials, Assigned Collectors	<ul style="list-style-type: none"> • All major routes with an above average daily traffic volume • All routes with a posted speed limit of 50 km/h or greater • Main route from a residential neighborhood • Emergency vehicle station • Commercial or Main Street Districts 	After 1 cm snow accumulation	Within 8 hours after the end of a snow event	After 5 cm snow accumulation	Within 24 hours after the end of a snow event	Snow on the road or windrows exceed one (1) metre in height or is of sufficient size to impede the flow of traffic or sight lines.
Priority 2: Collectors	<ul style="list-style-type: none"> • All secondary routes with an average daily traffic volume • Main route from a residential neighborhood • Bus routes (school and transit) • School zones on school days • Transit stops on operating days 	After 1 cm snow accumulation	Within 12 hours after the completion of Priority 1 roads	After 5 -10 cm snow accumulation	Within 48 hours after the completion of Priority 1 roads	Snow on the road or windrows exceed one (1) metre in height or is of sufficient size to impede the flow of traffic or sight lines.
Priority 3: Local	<ul style="list-style-type: none"> • Residential roadways 	After 1 cm snow accumulation	Within 24 hours after the completion of Priority 2 roads	Over 10 cm snowpack	After Priority 2 roads are complete	Unrestricted travel lanes to maintain two-way traffic flow.
Priority 4: Local	<ul style="list-style-type: none"> • Residential roadways • Cul-de-sacs 	After plowing operations completed	As required after Priority 3	Over 12 cm snowpack	After Priority 3 roads are complete	When compacted snow exceeds fifteen (15) centimetres. Where Cul-de-sac temporary snow storage piles are created, they will be removed once per season.
Priority 5: Local, Alley and Other	<ul style="list-style-type: none"> • Residential roadways • Cul-de-sacs • Alleys • Designated areas near city winter recreational locations 	After plowing operations completed	As required after Priority 4	After a snow event	After Priority 4 roads are complete	When compacted snow exceeds twenty (20) centimetres. Where Cul-de-sac temporary snow storage piles are created, they will be removed once per season.

Schedule 1 Service Levels

Table B – City-Owned Parking Lots (Refer to map on Schedule B6)			
Priority	Descriptions	Minimum Metrics	Timelines
Priority 1:	<ul style="list-style-type: none"> • Emergency Service • Administrative facilities 	After 5 -10 cm snow accumulation	Within 48 hours after the end of a snow event
Priority 2:	<ul style="list-style-type: none"> • Recreational facilities • City operated daycare facilities 	After 5 -10 cm snow accumulation	Within 72 hours after the end of a snow event
Priority 3:	<ul style="list-style-type: none"> • Cemetery • Operational yards 	After 5 -10 cm snow accumulation	Within 96 hours after the end of a snow event
Priority 4:	<ul style="list-style-type: none"> • Overflow lots • Outdoor Recreational programming locations 	After 5 -10 cm snow accumulation	Within 96 hours after the end of a snow event and after Priority 3 lots are completed
Notes: 1) Parking areas shall be cleared and initially snow will be stockpiled within the parking lot areas; stockpiles will be removed as City resources warrant. 2) Ice Control will be provided as required.			

Table C – Sidewalk and Trails (Refer to maps on Schedule C and D)		
Priority	Minimum Metrics	Timelines
Priority 1:	After 2 cm snow accumulation	Within 24 hours after the end of a snow event
Priority 2:	After 2 cm snow accumulation	Will commence immediately upon completion of Priority 1

Schedule 2

Service Level Maps

Index of Maps found in current approved fiscal year budget documents

Schedule A – Street, Sidewalk and Trail Sweeping
Schedule B1 – Roadway Ice Control
Schedule B2 – Roadway Snow Plowing
Schedule B3 – Snow Pile Locations
Schedule B4 – Roadway Snow Removal
Schedule B5 – Alley Snow Removal
Schedule B6 – Parking Lots Snow Removal
Schedule C – Trail and Sidewalk Snow Plowing
Schedule D – City Building Entrances Snow Clearing