

Policy



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Department/Section Public Works		Policy Number POL-PWK-01
Subject Winter Control Quality Standards		Enacted by Council: November 8, 2022
		Motion # THC-221108-9
		Review Period Annually
Date Amended October 7, 2022	Amending Motion # THC-191015-11	Section(s) Amended

Policy:

In consideration of the changing weather conditions that may be experienced during the winter season, the Public Works Department will strive to achieve the objectives and goals of the Winter Control Program as approved by Municipal Council, to deliver an efficient and effective winter maintenance program, while considering variables such as weather conditions and availability of manpower and equipment.

The goal will be to achieve the levels of service contained herein, and as a Minimum, the Municipality of Trent Hills will adhere to the Minimum Maintenance Standards (MMS) for Municipal Highways as prescribed by the Ontario Ministry of Transportation under O. Reg. 239/02, as amended from time to time.

Objectives:

- Deliver an efficient and effective Winter Maintenance Program and to meet the objectives as set out in this Policy;
- Promote public safety and to reduce hazards to motorists and pedestrians that may be experienced as a result of changing winter weather conditions;
- Provide safe and passable transportation routes under changing winter storm conditions for emergency vehicles and the travelling public;
- Provide continued access to communities, businesses, industry and facilities.

Definitions:

For the purpose of this policy, the following definitions apply:

“as soon as practicable” means without undue delay, having regard to prevailing circumstances, available resources, and budgeted funds;

“cm” means centimetres;

“conditions” defines the state in which the subject matter is found. The standard indicates the condition being measured;

“day” means a 24-hour period;

“ice” means all kinds of ice, however formed;

“motor vehicle” has the same meaning as in subsection 1 (1) of the Highway Traffic Act, except that it does not include a motor assisted bicycle;

“non-paved surface” means a surface that is not a paved surface;

“paved surface” means a surface with a wearing layer of asphalt, concrete, or surface treatment (an asphalt emulsion and aggregate);

“road” refers specifically to the portion of road surface normally travelled on a roadway assumed by a roadway authority, but not including on-street parking or stopping zones;

“roadway” means the part of the highway that is improved, designed or ordinarily used for vehicular traffic, but does not include the shoulder, and, where a highway includes two or more separate roadways, the term “roadway” refers to any one roadway separately and not to all of the roadways collectively;

“road class” means a Class 1, 2, 3, 4, 5 or 6 road designated as such by posted speed and traffic volume in accordance with O. Reg. 239/02, as may be amended from time to time;

“Minimum Maintenance Standard” means Ontario Regulation 239/02, Minimum Maintenance Standards for Municipal Highways;

“operations” means those activities the Public Works Department performs to improve a condition or sustain a road standard. Operations are normally defined by guidelines (not policy), with discretion of the Manager of Roads and Urban Services or designate to choose various methods to achieve results cost-effectively;

“salt” means 100% crushed salt and/or salt treated with an additive designed to improve its effectiveness for winter control operations;

“sand” means a fine aggregate intended for application to roads during winter conditions to improve frictional properties of the road surface;

“snow accumulation” means the natural accumulation of any of the following that, alone or together, covers more than half a lane width of a roadway:

1. Newly-fallen snow.
2. Wind-blown snow.
3. Slush;

“substantial probability” means a significant likelihood considerably in excess of 51 per cent;

“surface” means the top of a roadway or shoulder;

“weather” means air temperature, wind and precipitation. O. Reg. 239/02, s. 1 (1); O. Reg. 23/10, s. 1 (1); O. Reg. 47/13, s. 1.

Winter Season Defined:

For the purpose of the Municipality of Trent Hills - Winter Control Quality Standard, winter is that period from November 15th to and including April 15th of the calendar year.

Weather Monitoring:

From October 1st to April 30th, the Public Works Department will monitor weather conditions, both current and forecast to occur in the next 24 hours, three times per calendar day.

Winter Road Patrol:

For the purpose of Winter Road Patrol, winter is that period from November 15th to and including April 15th of the calendar year.

During normal winter weather conditions, daily winter road patrols will be conducted along traffic corridors that are representative of the Municipalities roads. Reports (Appendix A) on road conditions will be completed for the duration of the winter season, every day of the week.

In the event there is a substantial probability of snow accumulation on roadways, ice formation on roadways or icy roadways, road patrol staff and/or staff working on call duties shall inspect road conditions as required and shall complete reports in relation to this standard. Staff will use judgement and discretion in determining resources required

to address road conditions for the purpose of calling out winter maintenance staff and equipment.

Hours of Work:

Hours of Winter Maintenance Operations

Subject to the commencement and duration of a winter storm event, maintenance staff will be deployed at the discretion of On-Call staff and/or Winter Night Patrol staff.

Equipment will not be deployed between the hours of 6:00 pm to 4:00 am, except for that of the Night Patrolman (1) which hours of operation are 5:00 pm to 4:00 am 7 days a week from November 15 to and including April 15.

Winter Night Patrol

During normal winter weather conditions, the Winter Night Patrol Person (1) will conduct at least one daily winter road patrol along traffic corridors that are representative of the Municipalities roads and a report (Appendix A) on road conditions will be completed for the duration of the winter season, every day of the week.

During winter storm events the Night Patrol Person shall conduct winter maintenance operations and provide further assistance within the confines of the Winter Maintenance Night Patrol duties. A second Night Patrol Person may be deployed at the discretion of the Manager of Roads and Urban Services or designate subject to availability and conformance with hours of work legislation.

Stoppage of Work:

The Municipality of Trent Hills adheres to all Hours of Service Legislations, and only allows employees to work in accordance with this legislation unless an employee must work due to an emergency. Working hours shall be in accordance with the Highway Traffic Act (O. Reg. 555/06) Hours of Service Legislation.

All or aspects of winter control activities may be suspended on some or all of the roads at the discretion of the Manager of Roads and Urban Services or designate, when it is deemed to be unsafe for the staff and the equipment to be on the road due to weather conditions such as, but not limited to, visibility impairments, drifting snow, freezing rain or ice conditions.

Winter control operations may also be suspended in local areas when vehicles or other obstructions make winter control operations ineffective or difficult.

If winter control operations are suspended, roads may be temporarily closed to vehicular traffic at the discretion of the Manager of Roads and Urban Services or designate.

Winter Control Operations – Level of Service:

Snow Clearing

As a minimum, the Municipality of Trent Hills policy for snow clearing is to deploy resources as soon as practicable to clear snow accumulations after becoming aware that the snow accumulation is greater than the depths set out in Table 8.1 and to ensure that the accumulation of snow is maintained at levels less than or equal to the maximum depths specified within the time frames indicated in this policy for the duration of the storm. During the storm, the objective will be to maintain one through lane in each direction.

Subject to observed conditions and/or forecasted weather conditions, resources may be deployed prior to reaching the accumulation depths set out in Table 8.1 in an effort to ensure that the accumulation of snow is maintained at levels less than or equal to the maximum depths specified within the time frames indicated in this policy for the duration of the storm.

Following a storm event and once snow accumulation has ended, and within the time specified in Table 8.1, the objective will be to return the road to at least the minimum surface condition stated in Table 8.1.

Snow Accumulation and Surface Condition Level of Service Table

Road Characteristics		Response to Snow Accumulation		Surface Condition	
Road Class	Road Surface	Maximum Depth	Time	Condition Objective	Time
3	Asphalt	8 cm	12 hours	As bare as possible	18 hours
3	Surface Treatment	8 cm	12 hours	As bare as possible	18 hours
4	Asphalt	8 cm	16 hours	As bare as possible	24 hours
4	Surface Treatment	8 cm	16 hours	Snow packed	24 hours
4	Gravel	8 cm	16 hours	Snow packed	24 hours
5	Asphalt	10 cm	24 hours	Centre bare	24 hours
5	Surface Treatment	10 cm	24 hours	Snow packed	24 hours
5	Gravel	10 cm	24 hours	Snow packed	24 hours
6	Asphalt	10 cm	24 hours	As bare as possible	24 hours
6	Surface Treatment	10 cm	24 hours	Snow packed	24 hours
6	Gravel	10 cm	24 hours	Snow packed	24 hours
6	Sidewalks/Lanes/Other	15 cm	36 hours	As bare as possible	36 hours
6	Municipal Parking Lots	15 cm	36 hours	As bare as possible	36 hours

Ice Formation Prevention and Treatment of Icy Roadways

For the purpose of the prevention of ice formation on its roadways the Municipality of Trent Hills shall do the following in the 24-hour period preceding an alleged formation of ice on a roadway:

- (1) monitor the weather in accordance with SECTION 5.0
- (2) patrol representative roadways in accordance with SECTION 6.0
- (3) if it is determined that there is a substantial probability of ice forming on a roadway, as a result from the activities noted above under paragraph (1) or (2), treat the roadway to prevent ice formation within the time set out in Table 8.2 to this section, starting from the time that the Director, Manager, Patrol Person, or designate determines is the appropriate time to deploy resources for that purpose.

In the event that ice forms on a road despite the efforts listed above, the Municipality of Trent Hills shall treat the icy roadway, by means of applying material to the roadway, including but not limited to, salt, sand or any combination of salt and sand, within the minimum times set out in Tables 8.2 and 8.3

Ice Formation Prevention Table

	Minimum Standards to Treat Icy Roads
Road Class	Response Time
3	16 hours
4	24 hours
5	24 hours
6	24 hours

Icy Roadways Response Time Table

	Minimum Standards to Treat Icy Roads
Road Class	Response Time
3	8 hours
4	16 hours
5	16 hours
6	24 hours

Priority Winter Control Route:

During extreme winter storm conditions and/or between the hours of 6 p.m. to 4 a.m., winter control operations will be conducted along the Priority Winter Control Route identified in Table 9.1 below provided a work stoppage has not been implemented as outlined in SECTION 7.3 of this policy.

Road	From	To
Front Street North	Seymour Depot	Bridge Street East
Bridge Street West	Front Street North	County Road Boundary
Bridge Street East	Margaret Street	Front Street North
Major Street	Front Street North	Oliver Road
Oliver Road	Major Street	Market Street
Isabella Street	Oliver Road	Booth Street North
Market Street	Oliver Road	Front Street North
Booth Street North	Isabella Street	Bridge Street East
Margaret Street	Market Street	Bridge Street East
Centre Street	Bridge Street East	Burnbrae Road
Grand Road	Bridge Street West	Industrial Drive
Queen Street	Bridge Street West	Nelson Road
Industrial Drive	Grand Road	Ranney Gorge Drive
Ranney Gorge Drive	Industrial Drive	Seymour Quarry Road
Seymour Quarry Drive	Ranney Gorge Drive	County Road 30
Trent Drive	Grand Road	Saskatoon Avenue
Saskatoon Avenue	Trent Drive	Front Street
River Street	Saskatoon Avenue	Doxsee Avenue South
Doxsee Avenue South	Second Street	Bridge Street East
Second Street	Saskatoon Avenue	Cockburn Street
Cockburn Street	Second Street	Centre Street

Winter Control Operations – General:

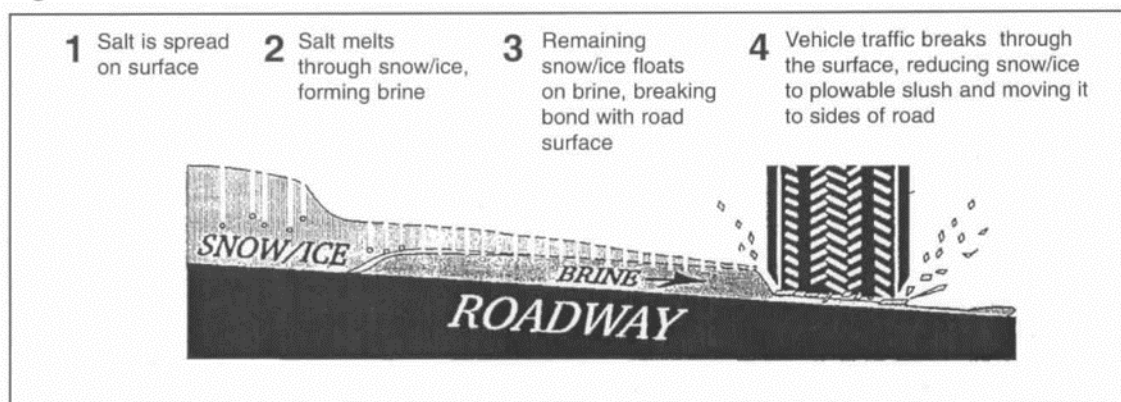
The Municipality of Trent Hills currently has approximately 1062 lane kilometers of road, comprised of approximately 96 lane kilometers of asphalt, 460 lane kilometers of surface treatment, and 506 lane kilometers of gravel roads.

For the purpose of winter control operations, the Municipalities roads have been subdivided into designated plow routes. Public Works staff will begin winter control operations in the general priority sequence set out in prescribed plow routes or as directed by the Manager of Public Works or designate, taking into consideration the start and expected duration of a winter storm event.

Designated routes take approximately six (6) to eight (8) hours to complete, depending on weather, traffic, available staff and equipment, and number of vehicles parked on the roadways.

Application of Salt

- The Municipality of Trent Hills uses both salt and treated salt within its Urban Centres.
- The use of salt is to be limited, in terms of both quantity and frequency, to that which is necessary to prevent snow and ice from bonding to the pavement or to remove ice, once formed on the pavement.
- Salt or treated salt applied to snow, forms a brine mixture. This reduces the possibility of the snow bonding to, or packing on, the pavement. It also prevents ice build-up and allows the plow to remove the snow easier. Salt, assisted by sun, traffic and warmer daytime temperatures, is also used as a melting agent to eliminate icy conditions.
- If the pavement is dry and the snow is not packing, salting is not recommended.
- Generally, 100% salt is not to be applied to gravel and surface treated roads.
- Normal application rate for treated salt is 90 – 120 kg/km/lane.



Application of Sand / Winter Grit

- Generally, grit used for winter maintenance will be approximately 4% mix ratio of salt to sand and will be stored indoors.
- The use of grit is to be limited, in terms of both quantity and frequency, to that which is necessary to address road conditions at the judgement of the Operator.
- Generally, grit is only to be applied to hot mix asphalt roads when it is determined that salt will be ineffective to address road conditions.
- Normal application rates for sanding conditions is 600 kg. to 800 kg. per km.

Preseason Preparation

- Winter maintenance equipment will be set up for operation prior to November 1st and operated to ensure proper working order.
- Supervisors and Operators will review routes to become familiar with road alignments and new hazards and conditions that may have developed since the

previous winter season, such as mail boxes, driveway entrances, deteriorating road surfaces, manholes, etc.

Snow Dumps

- Snow dump locations shall be reviewed annually to determine availability and functionality relative to any change in operations.
- Snow dump locations are as follows:
 - Hastings Public Works Depot
 - Campbellford Public Works Depot
 - Municipal Industrial Park
 - Percy Fairgrounds

Communications

- All maintenance staff to be contacted by cellular phone to ensure immediate response to call out in the event of winter storm conditions.
- Cellular phones shall be provided to Supervisors and staff working on-call duties.
- All maintenance vehicles shall be equipped with two-way radio equipment.

Prior to Storm Event

- As a minimum, weather monitoring will be conducted on a regular basis as described in SECTION 5.0 of this policy. Further weather monitoring may be conducted when possible through the gathering of information via the following available sources:
 - Environment Canada Weather monitoring channel, Peterborough (Harwood Site) VHF 162.55 mhz;
 - Environment Canada Public Weather Recording, Phone 705-743-5852;
 - Environment Canada Web site (Peterborough and Trenton)
- Inspect equipment to ensure proper working order. Have any breakdown repaired immediately.
- Organize or call out operators according to conditions. Under certain conditions, it may be beneficial to apply deicers immediately before precipitation begins.
- Continue road patrolling as the storm begins, to direct and monitor effectiveness of winter maintenance operations and to relay road and weather information.
- Ensure that there is adequate salt and sand available.

During Storm Event

- Conduct road inspections to monitor weather and road conditions.
- Predetermined routes for plowing, sanding and salting will be followed in all instances except in cases of extreme emergency or critical situations, upon determination by Manager of Roads and Urban Services or designate.
- Spot sanding and salting/treated salting may be carried out at bridges, intersections, hills, curves and other locations, as required. Operators shall use judgement to address well known areas of continuous problem and concern.
- Special attention and consideration will be given to roads leading to emergency services, such as hospitals and fire stations.

- Generally, accumulation of precipitation is to be plowed to the right of the traveled portion of the roadway.
- Vehicle operating speeds will be set at the discretion and judgement of the Operator based on storm conditions.
- Subject to observed conditions and/or forecasted weather conditions, resources may be deployed prior to reaching the accumulation depths set out in Table 8.1 in an effort to ensure that the accumulation of snow is maintained at levels less than or equal to the maximum depths specified within the time frames indicated in this policy for the duration of the storm.
- The Manager of Roads and Urban Services or designate shall have the authority to pull municipal equipment off the road during the most extreme and severe conditions (i.e. white outs, ice storms, etc.) at his/her discretion.

Between Storm Events

- Continue road patrol as described in SECTION 5.0 of this policy.
- Check and clear drainage facilities.
- Check and clear signs, highway markers and fire hydrants.
- Clean-up and winging will be carried out principally during regularly scheduled shifts after the storm, at the discretion of the Manager of Roads and Urban Services or designate.
- Push back snow at intersections to improve site lines.
- Note any damage that may have resulted from previous storms.

Snow Removal

- Snow removal will be conducted in the business districts and within the Hospital Area when snow banks exceed 1.0 metre in height, or at the determination of the Manager of Road and Urban Services or designate.
- Snow removal shall be conducted as time and resources permit.
- Snow removal will be conducted in residential neighbourhoods only under extreme winter snow accumulations.

Snow Removal - Accessible Parking Sidewalk Access

- Curbside snow buildup on the sidewalk adjacent to public accessible parking spaces due to prior snowplowing activities will be cleared away as bare as reasonable to permit easy access between the parking space and the adjacent sidewalk.
- Mechanical or manual means of snow clearing will be utilized depending on available resources, and the most practical procedures determined on a site by site basis. Where practical, curbside clearing will be integrated with Sidewalk clearing.
- Clearing activities will commence upon determination by the Manager of Roads and Urban Services or designate that conditions warrant deployment of resources.

Mail Box Damage

- The Municipality will consider repair/replacement of a damaged mailbox if the damage caused is clearly the result of an impact by a plow operated by the Municipality.
- The Municipality will not replace or repair mailboxes damaged by the impact of snow propelled by a plow when plowing snow during a snowfall event.
- Even if impacted by a plow, the Municipality will not replace a mailbox assembly that has been constructed or installed in a manner that interferes with routine snow removal or in a manner which clearly presents an unacceptable risk to snow removal operations or the traveling public.
- Owners are encouraged to contact Canada Post for installation specifications for new mailbox installations.

Sand/Salt/Winter Grit Pick-up

- Supplies of sand, winter grit and salt/treated salt are not provided and is prohibited for pick-up by the general public or by private enterprise.

Interference with Winter Control Operations:

In order to achieve the objectives of the Winter Control Quality Standards, as approved by Municipal Council, it is necessary to enforce the by-laws under the Highway Traffic Act (Section 170, Subsection (7)) and the Municipal By-law 2008-84.

Ticketing and Towing Procedures

- Vehicles parked in contravention of the Highway Traffic Act and the Municipal By-law will be tagged with a warning notice by Municipal staff. Municipal staff will endeavor to place a warning notice on all vehicles in contravention prior to parking fines or removal, except under emergency or safety considerations, at the discretion of the supervisor on duty.
- During the Winter Control Program from November 15 through April 15 one warning notice will be issued per vehicle.
- Vehicles that have been previously tagged with a warning notice will be removed or ticketed in violation of the Highway Traffic Act and the Municipal By-law 2008-84.
- When a vehicle is being towed and impounded, municipal staff must contact the O.P.P. Communications Centre at 1-888-310-1122 prior to removal. The centre will require identification, municipality, and reason for vehicle removal, license plate number and location of impoundment.
- The Municipality and/or staff will not be responsible for the towing service, storage or any related charges or damages to the impoundment.

Disclaimer:

The Municipality of Trent Hills Winter Control Quality Standards Policy is based on normal winter weather conditions, and the reliability and availability of both human and physical resources.

The Municipality of Trent Hills cannot guarantee a level of service under abnormal or extreme winter conditions and/or in the event of a work stoppage or equipment failure.

It is acknowledged that conditions may occur which may temporarily prevent achieving the service levels detailed herein. In such cases, efforts will be made to keep roads open and passable, consistent with available resources.