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GRAND SAULT/FALLS



PLAN DE DÉNEIGEMENT
SNOW & ICE CONTROL PLAN

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Disclaimer

This plan is based on normal winter weather conditions, reliability and availability of resources both human and physical. The Grand Falls Regional Municipality does not guarantee a level of service under abnormal or extreme winter conditions nor in the event of a work stoppage.

INTRODUCTION

1.1 General

The Grand Falls Regional Municipality manages snow plowing and salting for all asphalted streets in both Grand Falls wards, as well as seven roads in the Saint-André ward, including a few kilometers of chip-sealed streets. It also clears snow from sidewalks, parking lots, and fire hydrants.

1.2 Aim

The goal is to provide effective and efficient snow and ice control in the Grand Falls Regional Municipality, ensuring that this level of service is clearly understood by operators, supervisors, senior staff, council members, and the public.

1.3 Mission

To provide a consistent level of snow and ice control in the Grand Falls Regional Municipality.

1.4 Policy

The Grand Falls Regional Municipality provides snow removal and ice control on streets and sidewalks according to pre-established priorities. Streets are prioritized based on their importance in the overall transportation network.

Priority 1 – Streets are arterial and heavily travelled collector streets.

Priority 2 – Streets are collectors and some heavily travelled local streets.

Priority 3 – Streets are typically local streets.

Higher priority streets are serviced earlier in the storm response and are given higher level of service.

2.0 RESPONSIBILITIES

The Streets Division Coordinator reports to the Director of Operations Services and is responsible for overseeing snow and ice control in the Grand Falls Regional Municipality. The coordinator, or their designate, ensures that the winter storm response follows the Snow and Ice Control Plan. They are well-versed in this plan and oversee winter maintenance tasks to ensure safe driving conditions and smooth traffic flow.

General procedures will align with established protocols, with streets prioritized as follows:

- Priority 1: Arterials and heavily trafficked collectors
- Priority 2: Collectors and busy local streets
- Priority 3: Local streets

Remember, even if you don't live on a Priority 1 street, you likely travel on one, and servicing these high-traffic roads first benefits everyone.

Evening, night, and weekend crews are critical to storm response. While they follow the Snow and Ice Control Plan, they are expected to use judgment and adapt to changing conditions.

Operators of snow control vehicles and equipment must always prioritize safety and efficiency. They are responsible for ensuring their vehicles are mechanically sound and their routes are completed according to the Snow and Ice Control Plan. Any issues with equipment should be reported to their supervisors at the start or during storm response operations.

3.0 PROCEDURES

The following snow and ice control policies and procedures have been developed over years of experience, considering available resources and expectations of the Council and community.

Snow and Ice Control During Snowfall Conditions

1. **Weekday Patrols (8 AM to 5 PM, Monday to Friday):** The Streets Division Coordinator or their designate will patrol the streets during and after snow and ice events. They will decide the type and number of vehicles needed based on conditions. For example, light snowfall may only require salt trucks, while heavier snowfall may necessitate additional vehicles like loader or truck plows. In the event of heavy snow, all available equipment may be deployed.
2. **Off-Hours and Statutory Holidays:** Outside regular hours, including statutory holidays, the Grand Falls police will patrol the streets. If they determine streets are icy or snow-covered, they will notify on-call Operations Services personnel, who will then decide the appropriate equipment and number of vehicles for snow and ice removal.
3. **Special Ice Operations:** Icy conditions, either alone or combined with snow, may require additional measures. This could include extra salting or sanding of intersections, heavily traveled routes, and hills.
4. **Equipment Deployment Decisions:** The Coordinator will use their judgment to determine the appropriate equipment for each situation. Factors influencing these decisions include the type of precipitation (light snow, heavy wet snow, ice, etc.), time of day, day of the week, personnel experience, equipment availability, and safety concerns.
5. **Adjusting Schedules:** The Coordinator may adjust operator schedules to ensure timely snow removal, particularly for critical times of the day. Factors include when precipitation begins and its duration.
6. **Broadway Boulevard Snow Removal:** Snow on Broadway Boulevard cannot be pushed to the right side. Instead, it is pushed to the left. At intersections, snow is piled at the ends of the boulevard or in parking areas on side streets. When piles become too large, the snow is hauled to snow dumps by Operations Services.

4.0 SNOW PLOWING

4.1 Objective

The objective for snow plowing is to clear all streets to their full travel width within eight (8) hours of a storm ending for snowfalls up to 30 centimeters. For snowfalls exceeding 30 centimeters, the goal is to clear snow as quickly as equipment and personnel availability permit.

Snowfall amounts and types (wet/heavy, dry/powder, or combinations) can affect these response times, either speeding up or delaying operations.

Details on service levels for different roadway types are outlined in Appendix A, while the street classification map is provided in Appendix C.

4.2 Initial Operation

At the start of a storm, salt is applied to all arterial and some collector streets to prevent the first snowfall from freezing, making the "bare pavement" goal more attainable. In light snowfall conditions, this may be the only action needed. Once snow accumulation reaches four to eight centimeters, salt truck operators begin plowing, and additional plow operators are called in.

The Grand Falls Regional Municipality is divided into eight (8) zones for snow plowing, with equipment assigned based on anticipated road conditions (see Appendix D for plowing route maps). Appendix H lists the equipment available for snow and ice control. Plowing continues within each zone until the snow stops falling and all streets are cleared. Crews typically perform a final pass after the storm to widen streets and clear intersections. However, in cases of prolonged storms or significant snow buildup, this widening may occur after crews have rested.

4.3 Road Hazards

Plowing municipal streets differs from open-road plowing, as it typically occurs at slower speeds due to shorter streets, frequent intersections, and various hazards like manhole covers, valve boxes, and railway tracks that may protrude above the street surface. Although work crews adjust these in the fall, frost action often causes them to resurface. Curbs are also difficult to see during snowstorms, so plow markers are placed strategically in the fall to help operators avoid damaging lawns.

To improve efficiency and reduce equipment damage, plow operators travel their assigned zones with supervisors before snowfall begins. This allows them to familiarize themselves with their routes and any potential hazards.

4.4 Sidewalks

Sidewalk snow clearing and salting/sanding in the Grand Falls Regional Municipality follow these priorities:

Priority 1

1. Sidewalks on heavily traveled arterial streets
2. Sidewalks near school zones

Priority 2

3. Sidewalks on less travelled arterial streets and collector streets
4. Remaining sidewalks

Exceptions:

- 33 meters of sidewalk on Madawaska Road (North side, from Soucy Lane to Park Street) will not be cleared.
- The sidewalk on the overpass bridge on Madawaska Road will also remain uncleared.

(See Appendix F for the Sidewalk Snow Clearing Map.)

The goal is to clear all Priority 1 sidewalks within 24 hours of the end of snowfalls up to 30 centimeters. For larger accumulations, it may take up to 72 hours, depending on snow type (wet, heavy, powder, etc.), prior accumulation, equipment, and staff availability. Priority 2 sidewalks will be cleared once Priority 1 sidewalks are done, during regular working hours. The objective is to complete snow removal within three days after Priority 1 sidewalks are cleared.

Note: The municipality does not aim to maintain bare sidewalks in winter. Snow will be removed, and sand will be applied to improve traction.

4.5 Parking Lots

As a general rule, parking lots are cleared after streets have been plowed. The objective is to clear parking lots within eight (8) hours of the end of a snow event. Snow will be stockpiled in strategic locations within the lots to minimize the loss of parking spaces. If necessary, the stockpiled snow will be transported to the snow dump. (See Appendix E for a list of parking lots.)

4.6 Damage Due to Snow Plowing

Operations Services staff are notified of damages caused by snow removal through reports from other employees, members of the public, or routine inspections.

1. Lawn Damage

Reports of lawn damage due to snow removal are communicated to the Operations Services Department and forwarded to the coordinator for investigation and repair scheduling.

The department will maintain a list of properties with reported lawn damage, with repairs scheduled to commence in the spring when suitable growing conditions are available.

The coordinator ensures that employees assigned to this work are trained or experienced in proper lawn repair procedures and that appropriate precautions are taken to ensure the safety of both employees and the public. Efforts will be made to minimize disruption in the work area during repairs.

5.0 SNOW REMOVAL

After the initial snow plowing operations are completed, snow may be removed from the sides of selected streets, depending on conditions. This is done by loading the snow into trucks for transport to designated disposal locations (snow dumps) or by blowing the snow off the street and sidewalk into adjacent areas. Both staff and equipment, as well as hired equipment and trucks, are utilized for this operation.

If snow accumulations warrant, additional snow may be hauled away from major intersections to improve sightlines.

Due to limited resources, it is not feasible to remove snow from the sides of all streets. However, if necessary for public safety, streets can be widened by blowing snow behind sidewalks, curbs, or ditches.

5.1 Fire Hydrants

Snow clearing around fire hydrants in the Grand Falls Regional Municipality begins after street plowing is complete and sidewalk clearing is underway. Fire hydrants may not be cleared after every snowstorm. The coordinator, in collaboration with lead hands, will assess whether the accumulation of snow around fire hydrants or the snowbank in front of them necessitates activation of the clearing operation. The objective is to clear snow from fire hydrants as soon as available equipment and personnel permit, using the municipality's own equipment.

The Grand Falls Regional Municipality encourages residents to “Adopt a Hydrant,” allowing citizens to voluntarily clear snow from hydrants serving their neighborhoods. These efforts benefit the community by ensuring better fire protection for their properties and those of their neighbors.

5.2 Snow Dumps

The Grand Falls Regional Municipality will maintain two (2) snow dumps for snow disposal: one located on Ennishore Road and another on West River Road (the old municipal landfill site). These sites are marked on the map in Appendix G.

Once the snow has melted in the spring, each snow dump site will be cleared of any garbage and debris.

6.0 SALT AND SAND OPERATIONS

Sodium chloride remains the chemical of choice for snowstorm situations.

6.1 Storage

All salt is stored indoors in a weather-resistant salt storage building at the Operations Services garage, which is specifically designed for this purpose. The salt dome is constructed to ensure water flows away from the building and features an impermeable floor to prevent salt migration into the ground. It has a capacity to store approximately 300 tonnes of salt. After each salt spreading operation, any unused salt is returned to the storage building.

All sand is blended with salt to prevent freezing and is stored in a separate area within the same building as the salt.

6.2 Initial Operation

As previously mentioned, streets are salted at the onset of a snowstorm or freezing rain. Salt trucks are also dispatched at the end of the storm to aid in achieving bare pavement.

6.3 Sand

In the Grand Falls Regional Municipality, sand is applied to paved streets when temperatures fall below the effective range for salt. The streets are sanded in the same manner as they would be salted. Sanding rates are typically higher than salt usage, as sand serves as an abrasive rather than a de-icer. However, sanding can negatively impact street cleanliness, increase sewer cleaning requirements, and affect air quality.

6.4 Accidental Salt Spills

If a significant amount of road salt is spilt, such as from an overturned truck, the Public works department shall be advised by calling the following numbers: (506) 475-7762, Public Works' staff will clean up the site as soon as possible and reuse as much of the salt as possible.

6.5 Critical Areas

During freezing rainstorms and when temperatures drop after a period of thawing, there are critical areas where vehicle movements can become treacherous and sometimes impossible. These occur at major intersections, main routes, hills, bridges, and runoff areas. These critical areas are the first to be salted or sanded in the various districts. In many instances these are the only areas, which require salting and sanding.

The order of priority is as follows:

Arterials and collectors – salted within three (3) hours.

Local streets – salted or sanded within four (4) to six (6) hours.

6.6 General Operations

Levels of service for specific types of roadways are provided in Appendix A. The street classification map is provided in Appendix C.

Unless otherwise specified by the coordinator, no salt is applied on chip sealed streets (example: section of Theriault Street and section of Harley Hill Street) and on gravelled streets. Only sand is to be applied on these streets. For safety reasons, the coordinator may change this procedure.

Salting rates are based on road surface temperature not ambient temperature.

Maximum operating speed for salt/sand applications is 40 km/h.

APPENDIX A

Level of service for roadway types

Arterial and heavily travelled collector streets receive the highest priority. These streets are plowed continuously during the snowstorm, where possible (see guidelines below). The ice control service utilizes controlled salting to maintain clear driving lanes during and following a storm, and a bare centre strip.

Collectors and heavily travelled local streets are plowed after five centimetres of snow accumulation. Salting/sanding is carried out following the storm so as to maintain bare pavement full width.

Local streets are plowed after five to eight centimetres accumulation of snow; salting is carried out for ice control. The level of service accepts a snow packed street with hills, curves, intersections, and hazardous areas treated with salt.

<p>Arterials and heavily travelled collectors (Priority 1)</p>	<ol style="list-style-type: none"> 1. Start immediately plowing and salting at the beginning of the snowstorm. Plowing should start as soon as slush begins to form. 2. Plow continuously during storm, visibility permitting. 3. Normally plowed to bare pavement, shoulder to shoulder, within three to four hours after storm ends.
<p>Collectors and heavily travelled local streets (Priority 2)</p>	<ol style="list-style-type: none"> 1. Plow after five centimetres of snow. 2. Salt as required during the storm. 3. Salting of the entire streets takes place after the storm. 4. Normally plowed to bare pavement, curb to curb, withing five to six hours after storm ends.
<p>Local streets (Priority 3)</p>	<ol style="list-style-type: none"> 1. Start plowing after five to eight centimetres of snow. 2. Salt at intersections during the storm. 3. Salting of hills, curves, intersections, and icy spots takes place after the storm. 4. Normally plowed, curb to curb, withing six to eight hours after storm ends.

NOTE: The completion times in the above table are based on the snowstorm of magnitude up to 30 cm.

The public works coordinator ensures that employees who perform this work are trained for, or experienced in, the proper procedure for winter maintenance (snow and ice removal), and appropriate precautions are taken to ensure the safety of employees and the public.

APPENDIX B

Application rates for road salt

Kilograms per lane kilometer

Pavement Temperature	**Priorité 1**	**Priorité 2**	**Priorité 3**
0°C and above	55 kg	55 kg	25 kg
-4°C to 0°C	65 kg	65 kg	35 kg
-7°C to -4°C	70 kg	70 kg	40 kg
-10°C to -7°C	75 kg	75 kg	45 kg
-13°C to -10°C	80 kg	80 kg	50 kg
Below -13°C	A. If unbonded, try mechanical removal without chemical. B. If bonded, apply salt/sand mix at 200 kg/lane km. C. Apply salt/sand mix as necessary		

APPENDIX C – Snow & Ice Control Plan

APPENDIX D

Parking Lots

Location		
Grand Falls	Drummond	Saint-André
Town Hall 131 Pleasant Street	Town Hall 1413 Tobique Road	Town Hall 492 De L'Église Road
Golden Age Club 125 Manse Street	Fire Station 1412 Tobique Road	Fire Station 505 De L'Église Road
Water Treatment Plant 412 Main Street	Municipal Garage 1412 Tobique Road (Gilbert Street side of building)	Municipal Garage 438 Levesque Street
Marina 499 M ^c Cormick Street	Storage Garage 1457 Tobique Road	Dome
Cross-Country Skiing Parking End of Caswell Street		Villa 29 Villa Street
Centre E.P. Sénéchal Center 60 Ouellette Street		Recreational Center 455 Route 255

APPENDIX E - Snow and Ice Control Equipment List

Public Works Department

- 2 trucks with blade
- 3 tandem trucks with front blade and wing; also used for road salting and sanding;
- 2 tandem trucks with front blade and wing;
- 1 loader with front blade and wing;
- 2 loader with front blade;
- 1 Larue snow blower to hook up to a loader – Capacity: 3,000 tons per hour;
- 3 sidewalk tractors with blades, blower and salt spreaders;
- 1 backhoe with blade;
- 1 tractor with blade and blower;
- 1 backhoe to load salt.

Recreation, Tourist and Culture

- 1 backhoe with front blade;
- 1 tractor with blade (or bucket) and blower.

APPENDIX F – Snow Tips

There are a few things you can do to help yourself:

Sometimes it takes several passes with the maintenance equipment to completely clear the street. Wait until plowing operations are completed and you will only have to shovel your driveway once.

When you shovel your driveway, place the snow on the “downstream” side so your driveway won’t be filled in the next time the plow comes by.

Gear up for winter. Keep your car well tuned, and keep adequate supplies of salt and sand on hand for your driveway.

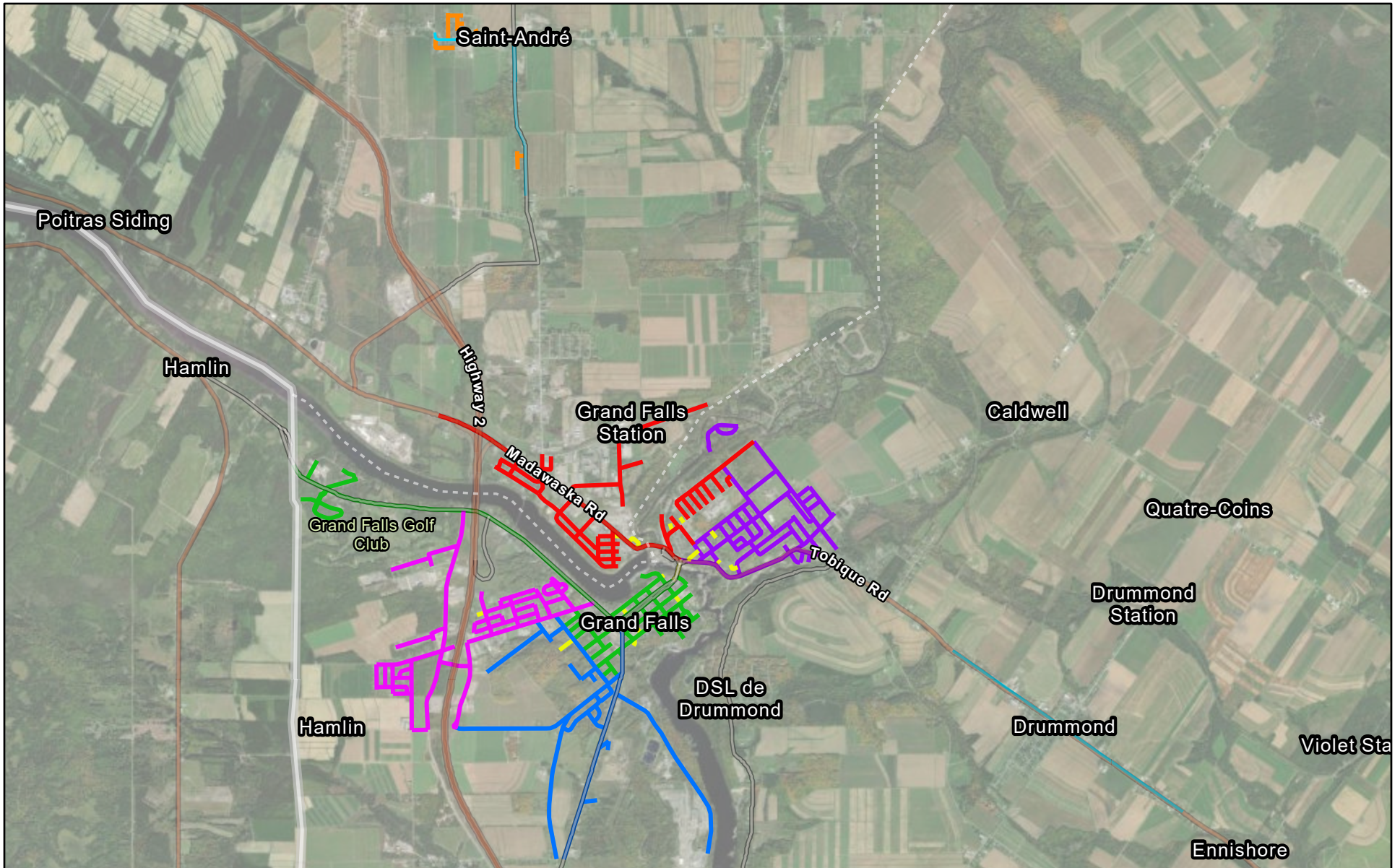
There are things you can do to help the Grand Falls Regional Municipalities’ crews:

- Observe snow bylaw.
- Don’t park overnight on any street from November 1st to second week of April.
- Don’t push snow from a driveway or parking lot onto a street or sidewalk.
- Don’t park your vehicle at the end of your driveway in a way that would impede the Grand Falls Regional Municipalities’ equipment.
- To help prevent localized flooding, try to keep the catch basin adjacent to your property free from ice and snow.
- Please don’t place garbage or garbage containers where they can be buried, damaged or interfere with snow removal operations.
- Avoid unnecessary spinning of tires at intersections. This practice is dangerous and is hazardous to other motorists. It also tends to “ice up” the intersections.
- ADOPT A FIRE HYDRANT – If there is a fire hydrant in front of or near your property, you may remove the snow from around it and make it accessible for emergencies. Help us to help you.

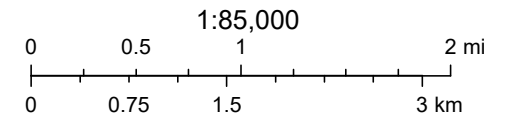
“DRIVE CAREFULLY”

The Public Works Department attempts to minimize the impact of snow and ice for our residents. However, it is each motorist’s responsibility to drive according to the road conditions. If it is slippery, please slow down.

PLAN DE DENEIGEMENT ET DEGLACAGE / SNOW & ICE CONTROL PLAN



10/16/2024



Province of New Brunswick, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, USDA, USFWS,