



PHYSICAL RESOURCES

Physical Resources

Salt Management Plan

2021 – 2022

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Introduction and Objectives

Physical Resources is committed to the minimizing the potential release of sodium and chloride from road salt sources. This commitment is derived from best practices identified by the City of Guelph as it relates to the maintenance of campus roadways and infrastructure for the overall safety of pedestrians and vehicles.

Executive Summary

Physical Resources is committed to the following regarding salt management:

- To use the minimal amount of salt required to maintain safe conditions for the campus community.
- To review and employ best or promising practices related to salt management.
- To apply alternative methods for areas deemed to be environmentally sensitive or sensitive to animals.
- To apply operating procedures that minimize the release of sodium and chloride in meltwater.
- To work in collaboration with the City of Guelph for the management of de-icing agents.

Inquiries regarding the Salt Management Plan at the University of Guelph may be directed to:

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1. Traffic Areas

Traffic areas that are included in the Salt Management Plan at the University include the following:

- All high traffic area roadways (e.g., East Ring Road, South Ring Road, Arboretum Road);
- All controlled traffic stops;
- All high traffic winter pedestrian walkways/stairs (e.g., Wineguard Walk, residence pathways, accessibility walkways); and
- All building main entrances and fire exits primarily located on main campus.

2. Environmentally Sensitive Areas

Environmentally sensitive areas include:

- Areas located within the University Arboretum, Conservatory Gardens and Guelph Turf Institute would be managed with pickled sand which minimizes salt exposure;
- Areas located near ground flower beds and trees/shrubbery surrounded by paved path or walkways; and
- “Ecotraction” is applied to areas where animals on campus may travel to decrease salt exposure.

3. Snow Storage/Disposal Areas

Physical Resources utilizes a small area located in Parking Lot 13 for snow storage and relocation efforts. For disposal of excess snow that cannot be managed within the snow storage area, the University will contract an external provider for permanent disposal. If snow is not able to be contained in this area, the Grounds Manager/Lead Hand will determine that an external provider is required to assist with snow disposal.

Additional information is contained in the Guelph Campus Snow Removal Policy (1.2.16) (Appendix A).

4. Use of Alternative Products

- Physical Resources will utilize Ecotraction on areas that are used by animals located at the Ontario Veterinary College (OVC) on campus.
- A mixture of salt and water, i.e., brine, is used in preparation for a winter storm. The use of brine will help to minimize the use of the salt used after the area is initially plowed.
- Pickled sand is used for some areas on campus such as the Arboretum for environmental reasons, and for use on gravel roadways. Pickled sand may also be used in preparation for an incoming ice storm as a preventative measure for ice management.

5. Operational Measures

To minimize the use of road salt while still maintaining conditions that are safe for pedestrians and vehicles, Physical Resources takes the following operational measures:

5.1. Snow Removal/Disposal and Storage

Brine mixture is used for main roadways and main walkways as a tool to mitigate excessive salt usage. Snow is relocated to P13 for storage until it is deemed full, at which point the Grounds Manager/Lead Hand will contact an external provider to take snow off campus.

Physical Resources will designate each equipment operator to specific parking lots, roadways and main walkways. The ground maintenance crew will be designated smaller areas such as pedestrian walkways, stairs, and specific accessibility routes.

5.2. Timing of Snow Removal/Disposal

Timing of snow removal and disposal is dependent on the arrival of pending weather events and is coordinated between three employee shifts. The night shift is primarily responsible for clearing larger areas such as parking lots and main roadways. The day shift will focus on smaller areas that can be maintained once the University business day open, typically at 8:00 AM.

5.3. Methods and Timing for Application of De-icing Agents

Depending on the anticipated type and timing of expected weather, Physical Resources will ensure a prompt de-icing response for the safety of the campus community. If anticipated weather storm is expected, Physical Resources may utilize preventative measures such as the brine. For areas that cannot be covered by vehicles and operated equipment, Physical Resource will apply de-icing agents manually, i.e., by hand using a pail and paddle.

5.4. Application Rates for De-icing Agents

Typically, de-icing agents distributed by computerized equipment is calibrated to distribute specific quantities of salt within a given distance. Roadways and main walkways are cleared as required depending on weather status. Larger parking lots are typically cleared once then only cleared again once weather has ceased.

Manual de-icing may continue during active weather to ensure safe travel.

5.5. Tracking Usage of De-icing Agents

Physical Resources' standard operating procedure is to use the minimum amount of salt to manage the snow and ice on campus. The addition of two new computerized sidewalk plows will help to ensure more accurate tracking of de-icing.

Physical Resources is investigating strategies for more accurate tracking methods for de-icing that is applied manually.

5.6. Assessment and Monitoring

Physical Resources' Snow Removal Program is reviewed annually. Management is continuously investigating additional assessment methods to ensure the effective and efficient management of salt and de-icing on campus. Physical Resources maintains records and inventory of de-icing substances used as part of snow/ice management as well as records of employee resource time to maintain the campus property.

Appendix A



PHYSICAL RESOURCES

Guelph Campus Snow Removal Policy (1.2.16)

Original Approval Date: December, 2008

Date of Most Recent Review: December, 2021

Review Timeline: Three Years

Approving Authority: Associate Vice-President, Physical Resources

Policy

Throughout the winter months, it is an objective of Physical Resources to reduce snow and ice hazards on main campus sidewalks, steps, ramps, curb cuts, roadways and parking lots. Walkways have ice preventative applied in the morning and throughout the day as required. Access to selected University walkways and stairways will be restricted during the winter months to facilitate an increase in the frequency of snow and ice removal performed on unrestricted walkways and stairways.

Order of priority for snow removal:

1. Roads, parking lots and bus routes.
2. Ontario Veterinary Hospital
3. Fire routes including escape doors and stairways.
4. Sidewalks, ramps, curb cuts and parking stalls used by individuals with disabilities.
5. Sidewalks and main building entrances.

Note: It may take several days to remove a substantial buildup of snowfall from areas which are not able to be cleared using normal snow removal techniques i.e. shoveling or plowing. Questions or concerns regarding snow and ice removal may be submitted by emailing snow@pr.uoguelph.ca or by completing a Snow Removal Survey which is available for download and submission on the University of Guelph, Diversity and Human Rights website at <https://www.uoguelph.ca/diversity-human-rights>.

Heavy Snow Accumulation While the University is Open

In the event of a heavy snowfall while the University is open, during both regular hours and after hours, it is recommended that faculty, staff and students take public transportation. If this is not possible it is also recommended that faculty, staff and students park their vehicles in parking lots which will receive the highest level of maintenance: P10, P12, P23, P24, P26, P30, P31. A map indicating all parking lot locations is posted on the Parking Services and Transportation Planning web site at: <https://www.parking.uoguelph.ca/find-parking/parking-map-and-directions>.

Heavy Snow Accumulation in Residence Student Overnight Parking Lots

In the event of a large snow accumulation in residence student overnight lots due to one heavy snowfall, or repeated snowfalls, a total clearing of the lots will be required.

Responsibility of the Grounds Department, Parking Services and Residence Administration

- The Grounds Manager (or designate) in consultation with the Manager, Parking Services (or designate) notifies the Assistant Director, Student Housing Services (or designate) when a total clear out of residence student parking lots is required.
- The Assistant Director, Student Housing Services coordinates twenty-four (24) hour advance notification to students specifying the requirement that all vehicles in residence student overnight parking lots be moved to assigned lots until snow removal operations are complete.

Responsibility of Residence Students

- Upon receiving 24-hour notification, students shall move their vehicles from residence student overnight parking lots to temporary lots outlined below by 6:00 pm of the next day and returned to their regular overnight lot by 8:00 am the following morning. Tow trucks will assist with vehicle removal if necessary at the owner's expense.

Temporary Residence Student Overnight Parking Lots

- Vehicles in P13 and P17, will move to P12, P14 and P15. Vehicles in P19 will move to P23 and P24. Any vehicle that has not been moved will be towed at the owner's expense.

Relevant Legislation

Ontario Fire Code Reg. 388/97 Sections 2.7.1.7.(1) and 2.7.1.8.(1)
Occupational Health and Safety Act, 1990.

Related Policies, Procedures and Documents

Physical Resources Winter Salt Management Plan
Grounds Snow Removal Program

Revision History

Revision No.	Revision Date (M,Y)	Summary of Change
00	December, 2008	N/A
01	December, 2013	Format
02	December, 2021	Order of priority for snow removal. Campus Map website link update. Deletion of P19 from list of temporary residence student overnight parking lots.