



TOWN OF WINDHAM, NEW HAMPSHIRE

OFFICE OF THE BOARD OF SELECTMEN/TOWN ADMINISTRATOR

3 NORTH LOWELL ROAD – WINDHAM, NEW HAMPSHIRE 03087

PH: 603 432-7732 FAX: 603 965-1234 EMAIL: TOWNADMIN@WINDHAMNH.GOV

BMP: Winter Road Maintenance

Description

The Town of Windham performs a variety of maintenance activities to ensure as best as possible safe winter driving conditions on its roads and parking lots.

The Town of Windham's adopted a *Winter Operations Policy: Snow Removal and Ice Control Procedures*. Adherence to this Ordinance and the following winter maintenance procedures the Town will help to reduce the discharge of pollutants from the MS4.

- Minimize the use and optimize the application of sodium chloride and other salt (while maintaining public safety) and consider opportunities for use of alternative materials.
- Optimize sand and/or chemical application rates through the use, where practicable, of automated application equipment (e.g., zero velocity spreaders), anti-icing and pre-wetting techniques, implementation of pavement management systems, and alternate chemicals. Maintain records of the application of sand, anti-icing and/or de-icing chemicals to document the reduction of chemicals to meet established goals.
- Prevent exposure of deicing product (salt, sand, or alternative products) storage piles to precipitation by enclosing or covering the storage piles. Implement good housekeeping, diversions, containment or other measures to minimize exposure resulting from adding to or removing materials from the pile. Store piles in such a manner as not to impact surface water resources, groundwater resources, recharge areas, and wells.
- The MS4 Permit prohibits snow disposal into waters of the United States. Snow disposal activities, including selection of appropriate snow disposal sites, will adhere to the New Hampshire Department of Environmental Services guidelines.
- Provide training for municipal employees on winter roadway maintenance procedures.

Attachments

Winter Operations Policy: Snow Removal and Ice Control Procedures.

WINTER OPERATIONS POLICY: SNOW REMOVAL AND ICE CONTROL PROCEDURES

(INCLUDES HIGHWAYS, SIDEWALKS, MUNICIPAL FACILITIES AND PARKING AREAS)

SECTION I: GENERAL POLICY - It is the goal and intent of the Town of Windham to provide timely, efficient and cost-effective winter maintenance, snow removal and ice control on the public municipal roadways and their abutting sidewalks, as well as the sidewalks, exterior stairs, ramps, and parking areas adjacent to all municipal facilities, for the safety and benefit of the Town's employees, residents and the general motoring public.

SECTION II: PROCEDURE - The objective stated above will be achieved by the implementation and execution of the procedures and tasks outlined in the Town of Windham Winter Operations Snow Removal and Ice Control Procedures shown in Appendices A and E. Due to the many variables that are inherent in New England weather, each storm and/or weather event may require slightly different effort and/or emphasis on any number of maintenance tasks, which together, determine the overall winter maintenance, snow removal or ice control strategy.

SECTION III: AUTHORITY - This Policy and Procedures are adopted in accordance with the following governing laws of the State of New Hampshire: RSA 41:11; RSA 47:17, RSA 231:92-a, and RSA 507-B:2-b.

SECTION IV: LEVEL OF SERVICE - It is not possible to maintain black roads, sidewalks, exterior stairs, ramps, and parking areas completely free of ice and snow. It is the intention of the Town to provide practical, safe access to homes, businesses and municipal facilities during winter storms. The Town of Windham does not have a bare pavement policy and, as such, citizens and motorists should expect to find snow-covered areas during and after a winter storm.

Roadways: It is our policy to start to conduct snow removal operations on roadways upon accumulation of one to two inches of snowfall, measured at the Windham Highway Department. The Highway Director or his/her designee(s) may, at his/her discretion based upon weather information reports, elect to not remove snow until greater or lesser accumulations. All routes will begin from the Highway Department and the operations will work systematically around their respective routes. No operator will leave his/her assigned route, until completion of said route and receipt of approval from the Highway Director or his/her designee.

Pre-treatment and/or ice control may be addressed prior to the actual storm beginning or during the storm as deemed necessary. It should be noted that salt has a much slower effect on melting snow and ice at temperatures below 25 degrees, and may not be applied until it is warmer, or substitutes may be employed in place of salts.

After the storm has finished, treatment of the roads will begin when all the routes have been cleared. Treatment may consist of sand, sand/salt mix, or straight salt. The Highway Agent or his/her designee(s) will determine the most appropriate

material to use based on current weather, expected weather, time of year and temperature.

During storms of extended duration, the Highway Agent may elect to bring crews in for a rest period. This period will last no longer than four (4) hours, and may last a shorter period if weather conditions worsen. It will be the responsibility of all operators to be sure adequate rest is obtained during this period.

Public Sidewalks: Snow removal operations and/or the treatment of sidewalks are currently sub-contracted to an independent vendor, and will generally commence within twenty-four (24) hours of the end of a snow event involving accumulations of 2" or more. Procedurally, these operations will be conducted in keeping with the vendor contract in place at the time of the event.

Municipal Facilities: Winter maintenance operations for municipal facilities including exterior stairs, ramps, and adjacent sidewalks and parking areas will begin in a timely manner to ensure that all facilities normally open to the public can, during a winter event, open on time and remain so as needed.

SECTION V: COMMAND - Direction of winter maintenance activities for the Town of Windham is vested with the Highway Agent or designee and the Maintenance Director or his/her designee, as applicable, for roads and municipal facilities.

SECTION VI: EXECUTION - The Policy outlined above is intended to serve as the normal operating procedures for winter maintenance, snow removal and/or ice control for the Town of Windham. One or more of the following, which may delay or prevent the implementation of this policy, may impact all or any part of this policy.

Equipment Breakdown	Emergencies
Snow Accumulation in Excess of 1" Per Hour	Personnel Illness
Freezing Rain or Other Icing Conditions	Building Closures
Traffic Congestion	

SECTION VII: ADOPTION - The Town of Windham has adopted the Winter Operations Snow Removal and Ice Control Policy effective **May 2, 2011**. All residents are encouraged to familiarize themselves with the content, as it describes the conditions that one might expect to encounter before, during and following a winter storm event. As always, please remember, under winter storm conditions, caution is the best measure of safety.

AMENDED by the Board of Selectmen: November 7, 2016.

Joel Desilets, Chairman

Bruce Breton, Vice-Chairman

Roger Hohenberger

Ross McLeod

Jennifer Simmons

Board of Selectmen, Town of Windham

APPENDIX A**HIGHWAY DEPARTMENT WINTER OPERATIONS
SNOW REMOVAL AND ICE CONTROL PROCEDURES**

PURPOSE: The purpose of these procedures is to provide a written outline of steps to be taken by the Highway Department during snow and ice events. Due to the wide variety of storms associated with New England weather, the Highway Department reserves the right to modify this plan as needed to best address the particulars of each storm.

This winter maintenance procedure and set of priorities is not intended, nor shall it be construed to, prevent or otherwise limit the exercise of discretion and judgment on the part of the Town's officials and employees who are charged with the difficult job of responding to inclement weather conditions. Such officials and employees may deviate from these priorities whenever, in the exercise of discretion, such deviation is deemed necessary or desirable in the best interest of the public of Windham.

The Highway Agent and his/her designee will be responsible for carrying out these Procedures, and a copy of same shall be provided to every employee involved in the snow removal process.

OPERATION OUTLINE: At the outset of a storm, it is the intent of the Highway Agent to plan in detail a course of action for incoming weather; determining when the snow removal will begin, and who will be involved in the removal on the presumption the event will extend into non-traditional work hours.

After traditional work hours, Fire and/or Police Dispatch shall notify the Highway Agent or the designee in charge, who will proceed to check road conditions and take necessary actions.

Conditions to be considered by the Highway Agent or designee in charge may include, but are not limited to:

1. If the problem is found to be isolated slippery spots, he/she may sand or salt with a small, truck mounted sander unit. He/she may also call in other drivers, if necessary. If the storm necessitates a full crew response, the Highway Agent or his/her designee will make that determination to call in the remaining crew members.
2. Once the storm has progressed to the point of covering the streets, the Department will begin pre-salt operations which will involve all truck-mounted sanders and/or calcium chloride spreaders.
3. Snow plowing will begin when approximately two inches (2") of snow has accumulated. Snow plowing operations will continue throughout the storm via established route assignments (*see Appendix C*) to keep streets passable. Salt/ sand mix treatments will cease until the storm has passed. After final cleanup, the Highway Department may choose to treat the roads with salt/sand mix as deemed necessary.

4. If a Fire or Police emergency should arise during plowing or salting/sanding operations the Highway Agent, upon notification of same, will dispatch the unit closest to that location to ensure the responding emergency unit(s) access is not impeded.
5. During plowing or salting/sanding operations, crew members will keep the Highway Agent apprised of any hazardous or illegal snowplowing activity by private contractors or citizens including, but not limited to, plowing of snow across Town roads or making sidewalks impassable due to driveway plowing.

Also, the Highway Agent will be informed of any illegally parked or abandoned automobiles which are impeding snow removal. The Highway Agent will then notify the Police and, if the owner/operator cannot be located, the vehicle will be towed at the owner's expense.

6. After his/her route has been plowed, each operator of a plow unit with a spreader is responsible for treating his/her route with the appropriate chemical application as determined by the Highway Agent (sand, salt, and/or calcium chloride) before leaving his/her route. Also, the Highway Agent or designee will be notified of the status of each operator's route for possible assignment to assist a fellow driver with his/her route before being released from shift.

PLOW ROUTE PRIORITIES: With a total of 100+ miles of roads from which to remove snow and control ice, and limited pieces of equipment available to address this responsibility, the Highway Department has developed priorities for winter maintenance route activity in order to maximize the effectiveness of their efforts for the motoring public.

1. School bus routes will be given the first priority during school days. Each plow route will ensure that the best possible snow clearance will be completed within one hour of the bus route time.
2. The Town Office Buildings and Police and Fire Stations will be maintained as possible during business hours. Public Safety is a very great concern in this area due to many cars and pedestrians in the area, but our limited resources will dictate our ability to maintain these areas.
3. Public parking areas at the Town Offices, and each municipal department, will be maintained by plowing during the winter storm. The application of slip resistant materials will be applied after the storm as determined necessary by the Highway Agent or designee.
4. Transfer Station/Recycle Center: Transfer station personnel may be required to assist with the Town's general winter maintenance operations. If the facility is open during the snow or ice storm, personnel will plow this area prior to opening for public use. Public areas shall be kept as clear as possible to provide as much safe access as reasonably possible. Sand and other slip resistant materials shall be used in public areas. It often will not be possible to maintain clear ground, but a reasonable effort will be made during storms.

5. Fire Hydrants: Fire Hydrants will be cleared on an as needed basis by Fire Department personnel and or volunteer groups.

ROADS AND SIDEWALKS NOT RECEIVING WINTER MAINTENANCE: The Town of Windham does not maintain a number of roadways and sidewalks as part of its winter maintenance activities. The areas not maintained by the Town include:

- Town roads classified as Class VI roads
- Private roads
- State owned roads unless noted
- School district sidewalks and parking areas, which are responsibility of the school district.
- Parking Area and Sidewalks for the United States Post Office.
- Any private property, residential or commercial entities.

SALT REDUCTION PLAN: The State of New Hampshire Department of Environmental Services (DES) and the United States Environmental Protection Agency (EPA) have identified Dinsmore Brook, the Northern Tributary to Canobie Lake, and Policy Porcupine Brook as impaired water bodies for chloride concentrations that exceed State water quality standards. In order to meet the water quality standards, significant reductions from current chloride loading are required. The Town has agreed to reduce the amount of chlorides applied during snow and ice removal operations while maintaining an acceptable level of service (LOS) on its roadways within the Dinsmore and Policy Brook watershed. The Town has developed a Salt Reduction Plan, attached as an addendum to these town wide procedures, which provides a framework for Windham to achieve the goal of reducing salt usage within this watershed.

ROUTES: Currently, the Town is divided into thirteen major plow and/or treatment routes. All of the routes encompassing the Town's major artery and collector roads are assigned one large truck with a sander and a 2-way plow. Additionally, there are several small trucks with 2-way plows used to assist in support of trucks assigned specific routes. The present routes are listed in Appendix C.

The Town also uses loaders to assist in snow removal, or to push back snow banks that may restrict parking or line of sight distances at intersections. This will occur after the storm is over, sometimes several days after the storm is over.

MANPOWER: The Town of Windham presently has two full-time, one part time, and two winter seasonal employees. In addition, private contractors under contractual agreement with the Town are used to plow and treat town roads and parking lots.

EQUIPMENT: The Highway Department utilizes all the assets of the department as needed to address snow emergencies. A list of the current, rolling stock assets is included in Appendix B.

MATERIALS: The Department uses approximately twelve hundred (1200) tons of salt and three thousand (3000) tons of sand each season. The sand is used as an abrasive and is applied to improve the public's motor vehicle traction. The Department employs salt as de-icing and anti-icing agents. In the "no salt zones" a

liquid de-icing agent may be directly sprayed onto the road. Our sand supply is bid each year and is trucked to our storage area following bid requirements throughout the winter season. Salt is purchased from a supplier as needed. Our storage facility is capable of storing approximately six hundred (600) tons of salt and nine hundred (900) tons of salt/sand mix. All salt is stored inside the Town Salt Shed, under cover.

APPLICATIONS OF MATERIALS: Unless weather conditions require a different approach, winter maintenance routes are treated with a mixture of sand and salt. The mixture is maintained within levels of a maximum of one (1) part salt to two (2) parts sand and a minimum of one (1) part salt to five (5) parts sand. The mixture is applied to the center of the roadway where traffic can work the mix while traveling either way; creating a watery brine which melts snow and/or ice and resists packing of same on the roadway. The crown of the roadway further assists with the dispersion of the brine mixture. Depending on decreasing temperatures and/or other weather conditions, the Highway Agent or his/her designee will make the determination as to when to stop applying salt and change to other add mixtures that are available for use at the time.

MUNICIPAL FACILITY SIDEWALK SNOW REMOVAL: Sidewalk snow removal will be handled by Building Maintenance personnel, with priority to public accesses and handicap areas first. Town municipal buildings only will be addressed; as the School District is responsible for their respective buildings and sidewalks. Priority will be given to offices that are open during the snow event. Police, Fire, Library and Town Office staff should make efforts to assist in keeping sidewalks clear when Maintenance crews are otherwise busy with snow removal operations.

POST STORM OPERATIONS: As determined by the Highway Agent, the snow banks resulting from the previous accumulations shall be pushed back, or shelved, using the plow and wing method or other suitable equipment to make space for future snow storms. Although, during these activities it is nearly impossible to avoid depositing snow into previously cleared driveways, post storm operations are necessary to accomplish the following:

1. Provide room for future snow storage.
2. Reduce and/or prevent melting snow from running onto the travelled roadway pavement where it can result in icing conditions.
3. Increase safe sight distance at intersections and/or driveways.
4. Maintain a uniform line by eliminating protrusions at driveways and/or intersections.

PARKING: In accordance with Section VII of the Town's Traffic Regulations (# WIN 2:03:06:76), no operator shall leave an unattended vehicle on any street between December 1st and April 1st, inclusive, of any year, except in case of an emergency, between the hours of 12:00 midnight and 6:00 am. Further, no vehicle shall be left unattended on any street when new snowfall has accumulated to a depth of two (2) inches, except in case of an emergency. Any vehicle found parked in violation of this section may be moved by or under the direction of a police officer of the Town of Windham to a place where parking is permitted, at the expense of the operator.

SNOW OBSTRUCTION: Also in accordance with Section VII of the Town's Traffic Regulations, no person shall shovel, plow, and in any way, move or cause snow to be moved, from private property to a street or sidewalk. If an operator finds a violation of this, he or she will contact the Highways Agent and report the location of the alleged violation. The Highway Agent will determine the most appropriate response to eliminate this hazard and may request assistance from the Police Department to enforce the ordinance.

DAMAGE TO PRIVATE PROPERTY: Most town roads include a fifty foot (50') right of way, which encompasses ten to twenty feet (10-20') to either side of the paved or graveled road. Homeowners often cultivate extensions of their lawn, install irrigation heads, or erect fences/stonewalls within these areas that, while improving aesthetic appearances, can be obstructive to the performance of proper maintenance on the roadway. The Town is not responsible for damage to private property that is located within the public right of way (ROW).

In the event of personal property damage outside the Town's Right of Way, the Town of Windham will only be responsible to repair or replace damaged property having been in actual contact with the snow removal equipment.

MAILBOXES: In accordance with the Town Right of Way Ordinance (#WIN 2:03:05:92), mail boxes are allowed, at the owner's risk, within the right-of-way for purposes of convenience.

Occasionally, mailboxes are damaged during snow plowing operations for reasons such as poor visibility, the mailbox itself being buried within a snow bank, or the sheer weight and/or volume of the snow being plowed. The type of damage is not deliberate and, in most cases, is unavoidable. Therefore, unless gross negligence can be shown, the Town of Windham will not be responsible for damage to nor will it repair, replace, or re-erect mailboxes that are installed within the Town right of way. Should a resident have a mailbox damage concern they shall complete the "Damage Form" as shown in Appendix D.

The following are suggestions for reducing the possibility of damage and liability:

- Mailboxes shall be sufficiently off the traveled way so as to assure public safety and facilitate snow removal. Design criteria of the U.S. Postal Service shall be adhered to with respect to size and placement of mailboxes.
- Installations should be sufficiently sturdy to withstand the weight of heavy snow resulting from plowing operations.

SCHOOL ACCESS: The Highway Department does not have the responsibility for the clearing of snow and winter treatment of the Town schools access roads or parking lots. On days when school is in session, winter maintenance efforts must be timed to coincide with bus routing and delivery.

SCHOOL CANCELLATIONS: The School Superintendent or designated official representative shall contact the Highways Department to determine the condition of the municipality's roads in order to determine the safety of students using school

buses. The school representative(s) shall make the decision to cancel or postpone school for that day.

APPENDIX B**EQUIPMENT LIST****INTENTIONALLY LEFT BLANK**

APPENDIX C

PLOW ROUTES

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APPENDIX D**PROCEDURE FOR HANDLING MAILBOX/POST CONCERNS*****DAMAGE FORM***

In accordance with Section VIII of the Town of Windham Right of Way Ordinance (WIN 2:03:05:92), an individual may erect and place a receptacle for receipt of U.S. Mail and motor or rural delivery of daily or weekly newspapers without permission of the Selectmen. All such installations shall be sufficiently off the traveled way so as to assure public safety and facilitate snow removal. Design criteria of the U.S. Postal Service shall be adhered to with respect to size and placement of mailboxes.

The Town assumes no liability with respect to loss or damage to mailboxes or newspaper receptacles placed in the right-of-way unless such loss or damage is the result of intentional or willful conduct, or gross negligence. It is the responsibility of the Highway Agent to determine whether any damage reported to the Town is a result of such negligence. Upon being reported to the Town, the Highway Agent will review the site within 3 (three) business days. If negligence is found to be the cause of damage, the Highway Agent is authorized to process reimbursement for replacement of a standard mailbox/post system, not to exceed \$75. A decision by the Highway Agent, may be appealed to the Board of Selectmen.

A resident may submit a request for review by the Highway Agent by completing the following:

Name

Address

Contact Phone #

Date

Please describe the date/nature of the damage:

Office Use Only

Review by Highway Agent

Date

APPENDIX E**MAINTENANCE DEPARTMENT WINTER OPERATIONS
SNOW REMOVAL AND ICE CONTROL PROCEDURES**

PURPOSE: The purpose of these procedures is to provide a written outline of steps to be taken by the Maintenance Department during snow and ice events. Due to the wide variety of storms associated with New England weather, the Maintenance Department reserves the right to modify this plan as needed to best address the particulars of each storm.

This winter maintenance procedure and set of priorities is not intended, nor shall it be construed to, prevent or otherwise limit the exercise of discretion and judgment on the part of the Town's officials and employees who are charged with the difficult job of responding to the inclement weather conditions. Such officials and employees may deviate from these priorities whenever in the exercise of discretion such deviation is deemed necessary or desirable in the best interest of the public of Windham.

The Maintenance Director and his/her designee will be responsible for carrying out these Procedures, and a copy of same shall be provided to every employee involved in the snow removal process.

COVERED FACILITIES: The municipal facilities covered by these procedures include but are not limited to the following sites:

Town Hall	Nesmith Library
Armstrong Building	Police Department
Community Development Department	Fire Department*
Maintenance Department	Senior Center
Administrative Offices (Bartley House)	Searles Building

**Fire personnel, if available, assist Maintenance by maintaining their facility during an event*

OPERATION OUTLINE: Winter maintenance of all walkways, exterior stairs and ramps shall be considered the Maintenance staff's top priority. Normal cleaning of the facilities shall take place only after the successful completion of the winter maintenance requirements. If cleaning is able to be conducted during a winter event, the cleaning shall be performed in the following order: rest room facilities, trash removal, and then vacuuming and floor care.

During normal business hours, the Maintenance Department shall begin winter maintenance of all walkways, stairs and ramps at the first sign of inclement weather and shall continue until the end of normal business hours.

During non-business hours, the Maintenance Department, at the discretion of the Maintenance Director, shall begin winter maintenance of all walkways, stairs and ramps prior to the opening of the municipal facilities for normal business hours. Exceptions to this procedure must be considered when a facility has a meeting scheduled by a town organization or a facility has been rented to a private group or

organization.

There are a variety of surfaces that make up the walkways, stairs and ramps at the municipal facilities and certain surfaces are extremely difficult to keep free of ice during winter ice storms.

Parking Areas: The Highway Department normally maintains the parking areas at all municipal facilities. However, when in the opinion of the Maintenance Director, the parking areas need additional plowing, the Maintenance Department shall either request additional plowing from Highway; or shall undertake the additional plowing with the Maintenance truck. In the event that additional sanding or salt treatment is needed, the Maintenance Department does not have the capability to provide this service and therefore must rely on the Highway Department.

Municipal Facility Sidewalks: Sidewalk snow removal will be handled by Building Maintenance personnel, with priority to public accesses and handicap areas first. Town municipal buildings only will be addressed, as the School District is responsible for their respective buildings and sidewalks. Priority will be given to offices that are open during the snow event. Police, Fire, Library and Town Office staff should make efforts to assist in keep sidewalks clear when Maintenance crews are otherwise occupied with snow removal operations.

Vehicles: The Maintenance Department shall insure that all Town administration vehicles do not interfere with Highway Department snow removal operations of municipal parking areas and shall ensure that the snow is removed from vehicles as soon as practical to allow for use by staff.

MATERIALS: The Department uses approximately two thousand five hundred (2500) pounds of ice melt annually. Materials are purchased in bulk and stored in the Maintenance garage.

The use of ice melt products, sand/salt mixtures, and straight salt shall be in accordance with the following:

1. *Brick/concrete surfaces:* Only ice melt products and plain sand shall be used. The use of either sand/salt mixtures or straight salt is strictly prohibited on these surfaces as they can cause damage.
2. *Asphalt surfaces:* Any of the treatment materials listed above may be used on asphalt surfaces. However, due to cost, sand/salt mixtures or straight salt shall be used whenever possible.
3. *Wood surfaces:* The only area that has a wood surface is the stairs and ramp for the Community Development Department. The walking surfaces consist of man-made material that should not be affected by any of these products.

MAINTENANCE LOGS: The Maintenance Department shall maintain a log of all winter maintenance activities as they pertain to municipal walkways, stairs and ramps. The log shall include the time, activity and employee name performing the tasks.

MANPOWER: The Town of Windham presently has four full-time employees within the Maintenance Department who are assigned to winter operations.

EQUIPMENT: The Maintenance Department utilizes all the assets of the Department as needed to address snow emergencies, including snow shovels, snow blowers, brooms, and non-powered hand or wheel spreaders.

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