

Town of Voluntown Snow and Ice Control Policy

Created By VTDPW

Approved by the BOS, 1/11/2022

PURPOSE

To clearly identify performance expectations, scope of work, materials used, and to describe operational procedures specific to snow and ice control by the Town of Voluntown.

GENERAL POLICY

To provide Snow and Ice Control to Identified (see Scope) Town of Voluntown property and rights-of-way for vehicular, and pedestrian passage including but not limited to the event of emergency. The level of expectation identified to be met are bare and dry roads at the earliest practical time following the cessation of snow and or ice storm. It is impractical to maintain bare pavement continuously during a winter storm. There are many variables affecting winter maintenance operations such as type of precipitation, air and road temperature, traffic, wind, time of day, and day of week. Judgement based on experience is essential in conducting and timing remedial work to overcome ice and snow hazards. It is impractical to develop specific rules on winter maintenance due to the numerous variables. It is the intent of the Town of Voluntown to use the minimum deicing or anti-icing material needed to restore safe travel conditions as soon as practical following the cessation of winter storms.



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SCOPE

- i) Town Roads
 - (1) 30 miles of improved roads
 - (2) Town/State Road intersections
 - (3) 2.25 miles unimproved roads
 - (4) Dennison Hill Road (2021-22 Contractor)
- ii) Parking lots
 - (1) Town Hall / Library
 - (2) Recreation Department
 - (3) Transfer Station (Contractor 2021-22)
 - (4) DPW (Department of Public Works) Garage
 - (5) School Parking Lot (Contractor 2021-22) Emergency Assist
 - (6) State Boat Launch Helipad
- iii) Emergency Hydrant access
 - (1) Sawmill Pond
 - (2) Beachdale Avenue
 - (3) Hodge Pond
- iv) Sidewalks
 - (1) ½ Mile Village
- v) Bus Turnarounds
 - (1) Gardner road
 - (2) Beachdale Avenue
 - (3) Congdon Road
 - (4) Hell Hollow Road
 - (5) Hodge Pond Road
 - (6) Rockville Road
 - (7) Boat launch Parking Lot
- vi) Transfer Station (Contractor 2021-22)
- vii) Department Public Works Town Garage Facility
 - (1) Fuel pump must stay open for busses, emergency equipment
- viii) Other shared responsibilities owned by state and or other towns.
 - (1) State Boat Launch Parking Lot (Helipad)
 - (2) Hell Hollow Road (Access to Voluntown Roads), (Emergency Water Source)
 - (3) Gallup Homestead Road Access to Bailey Pond Road (Town of Sterling)
 - (4) DEP Trail 1 Entrance (Access to Voluntown Residence)

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OPERATIONS

Mechanical removal (plowing) is the most economical method of snow removal with the least environmental impact. Snow removal and ice control usually requires the timely application of chemical-abrasive mixture to roadway surfaces in combination with aggressive snow plowing operations. In 2021 the Town of Voluntown employs a 1:1 chemical-abrasive mixture of sodium chloride (common salt) and abrasives (sand and fine mineral aggregates). Plow Units are equipped with calibrated mechanical spreaders that accurately control the application rates of materials. Employees are instructed in the proper dispensing of the necessary quantity at the appropriate time.

MATERIALS

Sodium Chloride- The use of sodium chloride combined with snow plowing is the most effective, most economical, and safest snow and ice control method currently available. Salt is most effective for melting purposes at temperatures above 20 degrees F., with reduced melting abilities as the temperature drops. In general, the purpose of salt is to (1) reduce adherence of snow to the pavement, (2) keep the snow in a “mealy” condition and thereby permit nearly full removal by plowing, and (3) prevent the formation of ice or snow ice (hard pack). Salt is not intended to take the place of snowplows. Salt also prevents abrasives from freezing.

Abrasives are used to provide immediate traction on roadways, especially hills, curves, intersections, and other areas to increase traction in low temperature situations when salt melting capability is reduced.

MATERIAL APPLICATION

The Town of Voluntown’s use of 1:1 chemical-abrasive mixture is in consideration of special geographic features of the Town of Voluntown, cost, cleanup, storage, and service expectation. This mix also may be used to provide immediate traction and melting action in case of emergency. The following guidelines for use of chemical-abrasive mixture are recommended:

RATES OF APPLICATION

		<u>1:1 Salt/Abrasive Mixture</u>
<u>Conditions</u>	<u>Temp</u>	<u>Salt Portion LBS PER LANE MILE</u>
Sleet & Freezing Rain	Variable	300 lbs. PLM
Snow	20 Degrees and Up	250 lbs. PLM
Snow	Below 20 Degrees	250 lbs. PLM, 300 lbs. PLM hills, intersections

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SPREADING PRACTICES

Each material spreading unit should be calibrated annually to ensure that selected rates of application are attained. Salt-abrasive mixtures are normally applied to the middle (crown) of the road and on the high side of banked curves. Spread width may vary depending on the action of the traffic. Width of material spread (throw plus roll) should be restricted to increase the effectiveness of the application. Spreading applications in the Town of Voluntown should be conducted at speeds 25mph or less. Spread patterns are to be adjusted to retain material within the lane where material is required. Timing of the initial application during each storm is critical. Salt-abrasive mixture is applied early in the storm so that a brine develops on the pavement and prevents buildup of packed snow. Initial application may be delayed until there is sufficient accumulation on the pavement to hold and contain the material spread depending on temperature and precipitation.

Portions of each plow run are unique due to various physical conditions and will require a greater application rate or an additional application during some storms. However, these areas should be judged and treated separately and not used as a measure to evaluate the entire plow run.

Frozen precipitation including sleet and the build-up of ice caused by freezing rain are special situations, and not subject to procedures above. When a changeover from snow or sleet to freezing rain is predicted or anticipated, snow and or sleet is left on the pavement to capture the freezing rain thereby preventing a glare ice situation, which without question is the most treacherous condition that occurs on roads. Treatment includes application of salt portion of salt-abrasive mixture at a rate of 300 lbs. per lane mile as needed throughout the storm. Heavy rain tends to wash off applied salt and sand, making it difficult to keep the pavement ice-free.

PLOW OPERATIONS

Truck mounted snowplows are used to clear Town of Voluntown 30 miles of road and other identified responsibilities (see SCOPE) of frozen precipitation.

For light accumulation snowfalls, snow squalls of short duration, plowing may begin immediately and include simultaneous spreading of salt-abrasive mixture to provide the desired expectation results quickly and efficiently.

For snowstorms with predicted accumulation more than 2 inches, plowing usually begins after the initial salt-abrasive mixture has formed a brine and after 1-2 inches of snow has fallen and plowing continues for the duration of the storm. Consideration must be given to the time required for the salt chemical reaction to occur as to not plow off the active ingredient before it has had time to work. After the storm terminates, a final cleanup plow run is made, and a light salt-abrasive application is made as necessary to remove any remaining residue.

The Town of Voluntown intends to perform snow removal and ice control operations in a consistent and impartial manner throughout the Town. The following information is provided to clarify actions regarding this policy.

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PLOW ROUTES

The town is divided into 5 plow routes. Identified as North Run, Eastern Run, Village Run, South Run, and Dennison Hill Road. All are done simultaneously, methodically, and repeatedly. These runs may be modified to best achieve the service expectation with the available resources.

<u>NORTH</u>	<u>EAST</u>	<u>VILLAGE</u>	<u>SOUTH</u>	<u>DENNISON HILL ROAD</u>
CAMPBELL MILL ROAD	FORGE HILL	GATE STREET	HI-TOP HILL ROAD	DENNISON HILL ROAD
WYLIE SCHOOL RD N.	TEN ROD ROAD	LILLIBRIDGE AVENUE	WILSON ROAD	
STONE HILL ROAD	VALLEY DRIVE	CARROLL ROLL	KINNIE ROAD	
BROWN ROAD	TANGLEWOOD LANE	DEP TRAIL 1	HODGE POND ROAD	
WILLIAMS ROAD	LAKESIDE TERRACE	CHURCH STREET	GALLUP ROAD	
CONGDON ROAD	BENNETT ROAD	BEACHDALE AVENUE	RACHEL LANE	
HELL HOLLOW ROAD	BENNETT CIRCLE	SHETUCKET TURNPIKE	SAND HILL ROAD	
GARDNER ROAD	BENNETT EXTENSION	WYLIE SCHOOL RD S.	WHEELER ROAD	
BAILEY POND ROAD	LAURAL DRIVE	NORTH SHORE ROAD		
MOHUNGGANUCK RD.	BEACHVIEW ROAD	BASSETT MILL ROAD		
	JAMES ROAD EXT.			
	JAMES ROAD			
	TARKLIN HILL ROAD			

OTHER EMERGENCIES

The resources identified by this policy responsible for snow and ice control shall only be dispatched to other emergencies occurring during snow and ice control operations by the Town of Voluntown First Selectman or designee. Exceptions include non-electrical tree hazards blocking road. Road impediments that include possible electrical hazards shall follow Tree Emergency Policy.

WIDENING, PUSHING BACK SNOWBANKS

Following storms with heavy snowfall or when several storms result in substantial snow banking the Town of Voluntown will perform roadway widening by pushing back snowbanks known as (Pushing Back). This is done to (1) provide room for future snow storage. (2) Reduces or prevents melted snow from running out into the roadway pavement and creating an ice condition. (3) Increases safe sight lines at intersections and driveways. (4) Maintains a uniform line by eliminating protrusions at driveways and intersections.

DRIVEWAYS

Town of Voluntown residents are responsible for access to his or her driveway. Unfortunately, there is no way to prevent depositing snow in previously cleaned driveways or walkways except to leave a hazardous projecting mound of snow. The Town of Voluntown recommends leaving the roadside snow in place until the Town has completed the final cleanup and pushback.

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PRIVATE SNOW IMPEDIMENTS

The Town of Voluntown Prohibits anyone from depositing snow / ice onto town roads. This is dangerous to the use of the roads and impedes the Towns cleanup efforts. This includes from private or commercial snow / ice removal efforts intentional or unintentional.

MAILBOX DAMAGE

Occasionally mailboxes or other supporting devices are damaged by snow plowing operations due to poor visibility, the mailbox being buried on a snowbank, or lack of structural integrity to withstand the weight / or volume of the snow being plowed. This damage is not deliberate and in most cases is unavoidable. Town of Voluntown is not responsible for damage and does not repair, replace, or re-erect boxes or supporting devices that are located within the town right-of-way. These mailboxes, support devices are located within the town limits and are the responsibility if the Mailbox, supporting device owner. There is limited \$25 financial hardship support if needed for damaged mailbox repair / replacement efforts. Please refer to USPS reference for mailbox installation, and to verify if your mailbox is currently correctly placed. <https://www.usps.com/manage/mailboxes.htm>

PRIVATE IMPEDIMENTS IN ROAD

The Town of Voluntown Prohibits impediments to winter snow operations in the town right of way including but not limited to roads, shoulders, cul-de-sacs. Town right-of-way shall be free of impediments including but not limited to vehicles, boats, trailers, campers, basketball hoops. Impediments create a safety hazard to residence, pedestrians, as well as vehicle operators by reducing sightlines, forcing operators to veer out of travel lane, and leaving windrows of plowable material in travel lane. Basketball hoops extend into the road possibly contacting the plow truck body or mirrors, and possibly becoming a projectile causing harm to persons or property.

SNOW STAKES

The Town of Voluntown recommends the installation of snow stakes by residence before the soil becomes frozen if desired. Snow Stakes help drivers distinguish between pavement and soil edges, possibly reducing soil damage. It is recommended snow stakes extend above the soil 30"-36" and are contrasted against snow with color or reflectivity. The installation of snow stakes should not interfere with traffic.

SAND FOR RESIDENT USE

Voluntown Public Works keeps sand for resident use in a bin located behind the Town Hall at the old town garage.

RESOURCES

- i) Town of Voluntown Public Works Equipment
- ii) Town of Voluntown Full Time Employees
- iii) Contractors

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PROCEDURE

Pre-season

- (1) Evaluate, Procure, Mix, Store, Salt / Abrasive Mix
 - (a) Stored on location off of Brown Road
 - (b) Mix, pushed up into covered containment area
- (2) Cut back offending branches from roadside trees to reduce possible damage to Town of Voluntown Snow / Ice Control Equipment (Roadside Mowing)
- (3) Evaluate, Procure, Maintain, Repair, Modify Snow / Ice Control Equipment
 - (a) Truck Preventative Maintenance, Repairs
 - (i) Oil and Fluid Changes (2021-22 Truck 1,2,3,550, Mini Loader)
 - (ii) Plow Cutting Edges (Procure and install when needed)
 - (iii) Visual Inspections and repair of salt storage facility
 - (iv) Inspect and repair Truck Lighting
- (4) Install delineators to aid in safe equipment operation around know hazards
 - (a) Storm Drain Culverts
 - (b) Stones / Ledge
 - (c) Hazardous Road Edges
 - (d) Turnarounds

In-Season (Example 2" + Precipitation)

- (5) Pre-Snow / Ice Event
 - (i) Shift before event, or Continuation of Previous Event
 1. Close out current mechanical repairs, maintenance, modifications
 2. Fill Resident salt / Abrasives mix container located old Town Garage
 3. Check / Replenish salt supply to town hall and library
 4. Load trucks salt sand mix
 5. Storm Drain Inspection, debris removal if needed
 6. Normal daily operations
 7. Develop general time assessment of event based on available information
 - a. State Storm Emergency Weather Advisory
 - b. Local Meteorology Sources
- (6) On Call Period
 - (a) Team Evaluation of weather and starting time Via Cell / Text, Email.
 - (b) Identify Call in Start Time based on available information

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(c) Pack supplies for unknown duration at work

(7) Active Snow/ Ice Event operations

(a) Route Planning and final preparations / adaptations

(i) Prep for unknown duration at work

(ii) Route changes / Updates

(iii) Safety Update

(b) Pretreat roads with Sand / Salt Mix

(i) Provides vehicular traction and prevents snow adhesion to pavement

(c) Plow travel lanes of road

“Repeat”

(d) Push Back / Cleanup

“Repeat”

(i) Push back Road edges

(ii) Clean up intersections

(iii) Clear bus turnarounds

(iv) Clear Cul-de-Sac

(e) Clear Parking lots Hydrants

(f) Clear Sidewalks / salt required areas

(g) Required DOT safety rest break

(4 hours) after 16hrs

(h) Truck refueling, personal food water break

(TBD)

(i) Field repairs if needed

(TBD)

(8) Post Snow / Ice event

(a) Pre- Bus Run follow up due to freeze refreeze

(i) scraping, sanding

1. Town Roads

2. School (2021-22 Emergency Only)

3. Bus Parking Depot

4. Bus Turnarounds

(b) Storm Drain inspection, impediment removal as needed

(c) Refill resident Salt / Abrasives supply located Old Town Garage

(d) Unload / Reload salt / Abrasives mix from trucks to / from containment area located off Brown Road

(e) Repairs, refresh equipment asap for next event.

(f) Respond to complaints concerns

(TBD)

(g) Evaluate / Improve Sightlines

Resume Normal daily operations

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POLICY EVALUATION

The Town of Voluntown Snow Removal and Ice Control Policy shall be evaluated and revised annually. This revision shall be recorded by updating the revision date in header at a minimum.

COMMUNICATION

A revised copy of this document shall be made available to all employees and contractors who will be expected to provide snow and ice control services for the Town of Voluntown. Any Questions specific to the execution of the snow and ice duties shall be addressed prior to the commencement of snow / ice control activities.