

CITY OF PORT WASHINGTON

SNOW & ICE CONTROL POLICY AND PROCEDURES MANUAL

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POLICY & PROCEDURE MANUAL

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SNOW AND ICE CONTROL POLICY AND PROCEDURES MANUAL

EXECUTIVE SUMMARY

The City of Port Washington's Snow and Ice Policy is focused on delivering a service that is designed for safe travel in winter months but is also environmentally friendly and cost effective. The City will utilize best management practices to optimally apply de-icing salts while still providing safe travel on roads. The strategy that will allow for this is the use of anti-icing liquid spray applications and pre-wetting of rock salt. To further reduce the use of salt, salting of secondary streets is limited to hills, curves, and intersections. Road salt is no longer applied to the flat, straight sections of secondary streets after plowing procedures.

All of the City's storm sewers discharge directly into freshwater streams and ultimately into Lake Michigan. Excessive use of road salt damages vehicles, infrastructure, and landscaping, and severely impairs aquatic life and drinking water once it reaches streams, lakes, and ground water. Sodium chloride is a permanent pollutant source which only increase in concentration over time. However, the use of de-icing salts is the most effective means of controlling ice and maintaining safe roads in winter.

OBJECTIVES

1. Minimize hazards of slippery road conditions encountered by motorists and pedestrians through snow and ice control on city streets and sidewalks.
2. Restore traveling conditions for the convenience of the general public as soon as possible after each winter storm event.
3. Provide a level of service that is fiscally and environmentally responsible.

CLASSES OF ROAD

For snow and ice control purposes, there are three distinct classes of road, which are maintained at different levels under the city's winter road maintenance policy. These are listed in priority order as follows;

1. Main Streets: These include arterials, collectors, bridges, as well as the hills. At certain times of the day, streets surrounding schools.
2. Residential (secondary) Streets: These include lesser-traveled streets, Cul-du-sacs, and dead-end streets.
3. Alleys: Alleys are the lowest priority for snow and ice control for the reason that they cannot be opened up until the adjacent street has been plowed.

4. Parking Lots: Are classified as secondary and will be plowed when snow event has ended or cleared on occasion during a major snow event.
5. Sidewalks: Are classified either primary for downtown business district or secondary for residential sidewalks and bike paths

GENERAL POLICY STATEMENT

The goal of the City of Port Washington's snow and ice control policy is to provide an environmentally sound and cost effective removal of snow and ice from city streets resulting in safe travel throughout the city. This does not mean roads will have bare pavement or that drivers will not have to adjust for winter conditions. During a storm, arterial streets and the hills near the arterial streets receive top priority followed by other main streets. These streets are salted over their entire length and/or plowed to remove ice and snow to the greatest extent practicable. After the main streets are in good driving condition and we have received at least 2"-3" of snow, residential streets are plowed. During an overnight storm, residential streets may have more than 3" of snow before being cleared. Residential streets are plowed curb to curb but only salted on intersections, hills, and curves.

If the snow/ice occurs during the night, the objective would be to have the mains streets and hills treated prior to 6:00 a.m. If the snow/ice falls prior to school opening, the areas around the schools will be treated prior to 7:00 a.m.

The decision to plow streets or apply chemicals can vary based on pavement temperature as well as the weather forecast and requires considerable judgment from those responsible.

TRAINING

The Department of Public Works Operations has attended training sessions on snow plowing, chemical application, safety, and equipment prior to each year's winter season.

The training will involve everyone who may drive a plow truck during the winter season. The review is imperative, so everyone is operating in a similar manner. A snowplow training program will provide all drives experience prior to winter season, as available.

In addition to the formalized classroom training, an equally important segment is driving the route. Drivers will be allowed to drive the route prior to the winter season looking for potential obstacles and hazards. Drivers will also train alternates, and new employees on the routes for best service.

EQUIPMENT

Prior to the startup of snow plowing operations, the head mechanic will check over all equipment used for the snow plowing operations. Before each storm he will provide a list of equipment that is in need of repair. The effectiveness of snow and ice control corresponds directly to the condition of the equipment owned by the City. Therefore, it is critical to have a regular replacement schedule for equipment that is obsolete.

Ice Control Procedures

The control of frost, snow and ice shall be accomplished through anti-icing, de-icing, and pre-wetting combined with plowing operations. The key to this policy is to be sensitive to our environment, utilize materials that produce good results, and find and use equipment that meets our specific needs.

The operation of liquid anti-icing is a critical part of winter roadway maintenance for Port Washington. **Anti-icing** is a process used to prevent the bond between snow and ice to the pavement. Prior to a storm, depending on weather conditions, a truck may be sent out to spray the roads with salt brine or a salt brine Beet Heet mix. **De-icing** is a process whereby liquid or treated salt is applied after the accumulation of snow or ice. **Pre-wetting** is a process where liquid chemicals (salt brine, Beet Heet, etc.) is sprayed onto dry rock salt to improve its adherence to the pavement and activate the melting process more quickly. The previous method of dry application of road salt is no longer utilized, as it results in significant scatter causing wasted salt and unnecessary harm to the environment. Currently, all six salt trucks are equipped with pre-wetting equipment. All salt trucks are also equipped to mount plows when necessary. In addition, 3 loaders, and two tandem dump trucks are also equipped with plows.

The two liquids that the city will utilize are salt brine and Beet Heet. Salt brine is a mixture of sodium chloride and water at a ratio of 23.3% sodium chloride and 76.7% water. Salt brine is used for anti-icing when above 20 degrees and pre-wetting rock salt. Salt brine does not increase the melting capacity of salt but acts as an igniter instantly activating road salt when applied to streets and reducing salt scatter. Beet Heet when mixed with salt brine drastically increases the melting capacity of salt and can be used in lower temperatures. This will allow for lower application rates of road salt being put down resulting in cost savings and will help reduce the environmental impact.

PLOWING ROUTES: PROECEDURES

There are a series of instructions given to drivers at the beginning of the season. The objective is to clear accumulated amounts of snow and ice from the streets and get as close to the curb, as possible. Supervisors and Operators recognize that plowing is four times more effective than chemical usage to remove snow. The following is a list of general instructions given to plow truck drivers:

1. All streets cleared curb to curb.
2. Employees should communicate with their supervisor if they leave their route or experience mechanical difficulties
3. Accidents, injuries, and or property damage must be reported to supervisor immediately.
4. Employees should notify their supervisor when their route is complete for reassignment to unfinished routes or areas.
5. Ask supervisor what should be done with emptying and or/ filling trucks at end of shift.
6. Fuel the vehicle and park in assigned parking stall.
7. Salt truck drivers are to complete product forms and log time.

ROUTE SECTIONS

The entire city has been divided into 15 separate routes. The city does not have any backup equipment for plowing city streets. There are backup pickup trucks for alleys or parking lots. If a piece of equipment or vehicle breaks down for the street routes the routes expand and will take longer to get through. For smaller snow falls 2 inch or less not all personal will be called in. For snow falls of less than 1 inch four employees will be called in and the city will just get salted.

Each route is mapped out and is available in the Street Department break room. There is a map for each scenario depending on size of storm and how many employees are called upon to handle the storm. Mains, Hill, and schools depending on day are given priority must be cleared before 7:00 a.m.

PARKING LOTS

Whenever possible, parking lots will be plowed and or treated prior to their normal use period. Plowing will be done during off-peak hours or prior to the surrounding businesses opening to increase efficiency and reduce conflicts with vehicles and pedestrians.

ALLEYS

The City of Port Washington is responsible for clearing all city alleys. Alleys are plowed with two passes trying to equally distribute snow. If there are no houses on one side of an alley all snow should be taken away from the driveways. Operators should watch for obstructions such as walls, fences, garages, overhangs, etc. Chemicals will only be used on alleys with large hills on an as needed basis.

SIDEWALKS

There are two sidewalk routes both of which are the responsibility of the Parks and Forestry Department. Sidewalks will be completed within 48 hours after the cessation of any snowfall, sleet, or freezing rain when applicable. Priority will be given around the downtown business district and schools. With sidewalks there is a heavy emphasis of mechanical removal of snow.

City of Port Washington Ordinance 370-9 states owner, tenant, occupant, or otherwise, to remove and clear away, snow and ice from such sidewalk as in front of or abuts said building, lot, or land within 24 hours of the cessation of any fall of snow, sleet, or freezing rain. **Also, no person shall deposit or cause to be deposited any snow and ice on or against a fire hydrant or on any sidewalk, roadway, or loading and unloading zone areas.** Sidewalks that are the responsibility of the city are plowed and or treated by the Street Department and Parks Department. All other sidewalks are the responsibility of the property owner, occupant, or tenant.

BOULEVARDS

Depending on the street, operators may plow toward or away from the boulevard.

DEAD ENDS AND CUL-DU-SACS

Most of the Cul-du-sacs in the city are plowed by loaders but if the bulb is large enough, a Cul-Du-Sac may be plowed with a "5-yarder". In some cases where a Cul-Du-Sac is located on a route for a tandem or "5-yarder" the adjacent road may be plowed but the Cul-Du-Sac will not. Once the nearest loader is done with their route, they will make their way to plow the Cul-Du-Sacs that were not plowed.

SNOW CLEANUP

Following a snow fall, the City of Port Washington will attempt to minimize all snow and ice cleanup. On the routes, cleanup is part of the overall plowing operation, but some cleanup will be necessary after the snow fall. As soon as the streets on all routes have been plowed curb to curb, operators will turn their attention to detail work. They open boulevard crossovers

and clean windrows from across intersections. During this time operators also address snow islands, which are areas of snow where vehicles were parked preventing the snow from being completely cleaned. This includes widening areas where the snow was not completely pushed back to the curb.

SNOW HAULING

There are several areas where snow is temporarily stored during an initial operation and then removed later at a more convenient time. The removal is usually an early morning or daytime operation and follows within the first few days of a storm. The following is a list of areas which may need snow hauling:

- City Hall
- Library
- Senior Center
- Police and Fire Station
- Lot Behind Associated Bank
- Lot behind Duluth Trading Company
- Lot behind Pasta Shop
- Pebble House Parking Lot
- Lot on corner of Jackson and Lake St.
- Cul-Du-Sacs

The downtown area is normally hauled out starting during the early morning hours after several snowfalls. The snow is pulled off the sidewalk and into the road where it is blown into trucks and hauled away. Following several major snowfalls there may be other areas of the city where roads get very narrow. On these roads the blower may be ran down the gutter lines and blown into trucks to widen roads. Management will direct where these operations occur. All snow is currently hauled to the Street Department at 333 N. Moore Rd. or to the marina parking lot.

DAMAGE COMPLAINTS

Due to the nature of snow plowing operations, accidents will occur occasionally. The snow plowing team's priority is safety and to prevent these occurrences. However, when they occur a supervisor will respond and thoroughly investigate the circumstances surrounding the accident or property damage. The following is a list of the more common types of damage that may occur and procedures for investigation and resolution.

Mailboxes

While plow truck operators make every effort to avoid mailboxes, they do on occasion hit or knock one over. Operators must report these occurrences to their supervisor. In addition,

mailboxes can be knocked over without the operator's knowledge; therefore, reports of damaged mailboxes may come from a resident rather than a driver. If damage occurs and the damage was caused by a city vehicle, Street Department staff will investigate the incident as soon as possible and verify if the mailbox was in compliance with the postal regulations and was **properly maintained by the homeowner.**

The city's mailbox replacement policy is to either replace the struck mailbox with a standard mailbox and post if needed or give the homeowner \$45.00 for a new mailbox.

Vehicular Damage

Anytime a City vehicle is involved in an accident with another vehicle the appropriate law enforcement officials must be notified to investigate the accident. It is important that all such accidents, not matter how minor, are reported. A supervisor should also be on scene to perform an investigation.

Terrace Damage

Most terrace damage occurs because a plow "rides" over the curb or there is no curb, causing a rip up of the sod adjacent to the curb. This can occur throughout the season, but more often occurs early or late in the snow season when there is little or no frost in the ground.

Repairs to sod will be made on a complaint basis only. The reason for this is often if sod is merely ripped up it can be replaced in the spring and take root without installing new sod or seed.

City staff will develop a list of such properties where damage was reported and will be repaired in spring. It should be noted that all of the above listed damaged must have been done by a City of Port Washington plow truck in order to be repaired.

Snow Plowing Pre-Trip Inspection

1. All Lights and Signals
2. Tires
3. Fluid Levels (Oil, Transmission, Hydraulic, Brake)
4. Windshield wipers and fluid
5. Spreader/spinner/ chains
6. Plow Bolts/Pins/locking mechanisms
7. Back up Alarm
8. Horn
9. Mirrors
10. Heater Defroster
11. Grease if needed

