

**Town of Hubbardston  
Highway Department  
Winter Operations Plan  
2010-2011**

This plan will try to address the Highway Department's operations for snow and ice control and snow removal for the town roads, sidewalks, public office parking lots, and school areas.

It will also address some of the police, fire and school issues that may arise.

These are general guidelines for regular winter events. Operations will change depending on the severity of the storm.

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Highway Superintendent

Last printed

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### **General Overview**

The Town of Hubbardston Highway Dept. has the responsibility of maintaining service for 87 miles of accepted town roads (80 miles paved and 7 miles of dirt) school parking lots and public offices and 2 miles of sidewalks, also some private roads.

The Highway Superintendent is directly responsible for daily operations of the Highway Department, under the direction and authority of the Selectboard.

The Highway Department is committed to have all roads plowed and opened for safe passage. This will, however, take some time with the limited personnel, equipment and other resources that the town cannot afford to provide the Highway Department.

### **Resources Used by the Highway Department in the Planning of Winter Operations:**

In order to determine when streets will be cleared in a timely manner before and after the storm, the Highway uses such resources as:

1. Channel 4 My-Cast Radar System will be what the Highway Department uses to determine how to fight storms;
2. Weather Channel;
3. WSRS Radio Station;
4. In house computer generated models such as NEXRAD radar, GOES Satellite etc.

Road conditions are also monitored by our local Police Department, normally, between the hours of 3:00 p.m.— 7:00 am. and on weekends. The Highway Department uses the information from the Police Department to provide the best possible response in making our roadways safe.

It is important that the Highway Department is informed by the Police Department on the following information:

1. Is the problem town wide? Is it restricted to one area? Problem areas need to be described as accurately as possible.
2. What is the nature of the problem?
  - Snow — How much on road and at what rate is it falling?
  - Ice — How bad and what locations?
  - Debris — What size? Is it blocking traffic? Is loader needed?
  - Washouts — How large of an area? Are signs and barrels needed? Are cones needed? Are there potholes?
  - Emergency Access — Police, Fire, Ambulance, Rescue cannot get to a certain

location because of a specific road condition.

- Police Personnel — Is an officer able to stay until Highway personnel arrive?
3. The Highway Department will determine how and what will be needed to correct the problem, but any assistance from the Police Department will be greatly appreciated to help with a more timely response.
  4. When a Highway employee arrives on duty, that person will be in immediate contact with the Police Department so as to inform them from the beginning of the problem to the end of the problem.

### **Town Road and Sidewalk Operations:**

#### **General**

Winter will generally include the months of November 15th to April 15th. This time frame will be directed mostly for snow and ice operations.

Some of the operation procedures are:

1. Pre-winter Preparations (training and equipment)
2. Winter Storms
3. Winter Operations during Non-storm Periods.
4. Post Winter

Items 1-4 are covered below:

1. Pre-winter:
  - a) Update operation plan on a yearly basis. This can be based on previous year's experiences. The Highway Department will inform Police, Fire, School, and Newspapers of the winter plan. This plan will also be viewed and signed off by the Selectboard.
  - b) Employees need to know plow and sand routes.
    - All employees will become familiar with their plow and sand routes before winter so they know where road conditions exist such as obstacles, cold spots, or any other conditions on that route. This should be done yearly because road conditions change from year to year. Every employee will become generally familiar with all routes in case another employees absence.
    - Employees will know where drains, waterways, catch basins, dropped inlets, obstacles, and curbs are and mark same before winter.
    - The Highway will plan sanding routes and plow routes by using the trucks to best utilize its load of material. This saves time and fuel if done correctly.

c) Review call-list for employees, including calendars and police dispatch procedures.

- Make sure radios are in working order.
- Inform crew what weather forecast we will be using to judge our operations

d) Equipment Operation and Maintenance

- Train employees thoroughly on use of their equipment.
- Each employee will be assigned to a specific piece of equipment. This will ensure that employees are more effective in that particular piece of equipment which will make the equipment last longer, cost less to maintain, and do the job in a safe and timely manner.
- All equipment needs to be checked on a regular basis. This includes plows, wings, sanders and hydraulic systems. Items will be replaced if needed. Inspect condition of all moldboards, and cutting edges on all plows. Replace edges as needed and weld as needed. Plows will also be painted.
- We will mount and test all sanders before winter arrives. Check conveyors, spinners, and all movable parts to ensure its working order. Each employee will become familiar with his own sander controls, which will include the setting inside the cab, door gate adjustment and calcium chloride system; which includes where and when calcium chloride will be used as directed by the Highway Superintendent or Foreman. Each truck is different in control settings.
- Make sure all lights are working correctly and all wires are replaced, if corroded.
- Tire chains will be inspected and repaired as needed.
- To keep equipment in top condition at all times, which includes washing and greasing equipment after use.
- We will inventory and order all parts in the autumn so the items will be on hand as needed. Trying to have a small inventory on parts such as headlights, hoses, nuts and bolts, filters, etc. is beneficial because these parts are hard to locate during a storm.
- Materials
  - We will ensure that a winter stockpile will be on hand during the month of November, which will normally be 5000 cubic yards of screened sand, approximately 3/8 minus.
  - 1/2" trap rock for dirt roads will be purchased as needed.
  - We will have access to salt and calcium chloride before winter months. An average of 1200 tons of salt will be used and 2,000-4000 gallons of calcium chloride will be used.
  - Some gravel and pea stone will be stored at the highway garage, in case of washouts.
  - Training sessions on material applications will be in effect. Example:

How calcium and salt work, when to use extra salt, special storm situations, special ways to de-ice certain problems.

## 2. Winter Storm Operation

Judgment by the Highway Superintendent and/or Foreman will determine the timing of when the department will perform snow and ice control.

Highway Department personnel will be called in accordingly from the call-in list procedure discussed later on.

The Highway will determine its operation by the Channel 4 My-Cast Weather System installed at the garage. A somewhat detailed plan will be determined, but each storm differs so much that a set of strict guidelines is impossible to follow or enforce. A larger amount of discretion will be asserted by the Superintendent or Foreman.

### Snow plowing and Sanding Operations:

The Highway Department has organized its equipment into five major sand routes. The Highway Department has organized its equipment to have seven major plow routes, providing there is winter seasonal help, otherwise there will be six plow routes. Each sand route will be approximately 15 miles. Routes will be listed on separate sets of maps.

- We will provide highest priority coverage to roads with the heaviest usage. Route 68 and Route 62 as being major numbered routes. Secondary main roads are Williamsville Road, New Templeton Road, New Westminster Road, Barre Road, and Burnshirt Rd.
- During snow and ice storms, sand and plow trucks (normally within their own plow routes) will give priority to clearing roadways for emergency calls such as ambulance, fire or police matters.
- Mile Road and Streeter Road, if approved, will be plowed and sanded by a private contractor, if available.
- Plow routes will be designed for right-handed turns so as to avoid windrows on the intersections. The object is to keep all main roads on all plow routes open. Side roads, dead ends and cul-de-sacs will be cleared immediately following the main roads.

Depending on the size of the storm, some of the side roads etc., will be cleared as soon as possible.

The extended time or duration of the storm may determine which roads will be cleared; manpower may also have an effect (people being sick, status of part-time seasonal help, etc.).

- Sidewalks will be cleared after the storm or day after the storm.
- School area will be opened during the storm and be completely Plowed and sanded before school opens.
- Town offices will be plowed and treated during the storm. Access to Police and Fire will be maintained by Highway Department.
- During storms, special attention will be given to commuter traffic and school bus traffic.
- Snow removal will begin after crew has rested and are able to come in on next shift. Center of town, intersections, and main roads will be pushed back or windrows shelved so as to make room for upcoming storms and so as to push snow back before it freezes.

### 3. Non-Storm Periods:

- a) After storms or winter events, all equipment will be checked and cleaned for next storm. Repairs will be made as needed. Special attention will be given to tires, brakes, lights, sanders, plows, and calcium chloride system.
- b) Materials, such as salt, calcium chloride and sand may need to be re-ordered.
- c) Plow routes will need to be checked for problems. Example: Illegal private contractor plowing across town roads, problem mail boxes, snow forts, basketball hoops. It is the responsibility of each driver to report these problems to Superintendent or Foreman.
- d) We will haul snow to the cemetery location when snow removal is in progress.
- e) Roadway drains and catch basins will be opened as soon as possible for snow and ice melting and runoff
- f) Following storms, hopefully within 24-48 hours, all complaints received will be checked by the Superintendent or Foreman. Superintendent will then make a phone call or visit to complainant.
- g) Fire hydrants will be maintained by the Fire Department unless assistance is needed at the request of the fire chief or deputy.

### 4. Post Winter:

- a) The Highway Department will review all winter operations with its employees

to obtain input for improvements for the next year.

- b) All equipment will be checked and all snow equipment will be given the maintenance needed to be put away for the spring, summer and autumn months.
- c) Evaluate equipment to see if any new purchases are needed.
- d) Ensure employees are familiar with snow fighting techniques.
- e) Every year a new technique comes into effect and employees should be kept informed of them

### **Equipment:**

The Town has the following equipment for snow and ice control:

1. Five heavy-duty dump trucks with eight cubic-yard bodies with power angle plows and all season sanders.
2. One 1-ton truck with angle plow and 1.3 cu.yd. sander.
3. One Champion grader with wing used for plowing, emergency snow clearing, and special ice situations.
4. One John Deere loader with one-way plow, when needed.
5. One three-quarter ton truck with angle plow.
6. One sidewalk Bombardier tractor with sidewalk plow.
7. One Hough wheel loader for pulling out stuck equipment and loading trucks, in emergencies.
8. One sidewalk tractor.

### **Emergency Situations**

If it becomes impossible to handle an emergency situation and more equipment is needed, local contractors will be used and assistance of out-of-town equipment may be called in. Also, civil defense, National Guard or other means that is allowed by the Selectboard may be acquired.

### **Town By-laws — Public Awareness**

1. During storms and snow clearing, it is very important that motor vehicles are not parked or impede snow plowing or sanding of public streets so as not to allow emergency services to be administered. Vehicles will be towed if operations are impeded
2. Town by-law prohibits the pushing, shoveling, snow blowing, or discarding of snow across the roadway into a public way. Also, building of snow forts or tunnels on public rights of way, including sidewalks, is prohibited.
3. Town by-law (Chapter XVII, Section 2, Group C) states that there shall be no obstruction of snow removal.

4. Town by-law XVII restricts parking more than one hour between the hours of 11:00 p.m. and 6:00 am. from December 1~ to March 3 1~. The Highway Department will notify the Police Department to take appropriate action against any violation of these said by-laws.
5. Snow should not be pushed or shoveled onto or in front of fire hydrants so as to block access and view of the hydrants.

### **Communication and Public Information**

1. Any problems that the public has, regarding conditions of roads, should be directed to the Highway Department, located at 68 Worcester Road, Hubbardston, MA 01452 or by telephone at 978-928-1408, between the normal working hours of 7:00 am. and 3:00 p.m.

Emergency requests during non-working hours should be directed to the Police Department on Main Street, Hubbardston, MA 01452, or by telephone at 978-928-1405.

The dispatcher will then call the Highway Superintendent and he will call in highway personnel as outlined in the call-out procedure.

2. All complaints will be answered, normally, within a 24-48 hour period after the storm. Every effort will be given to correct the problem.
3. Sometimes there are many complaints about damage to private property.
  - The town's policy regarding the usage of the town's right-of-way is that it will be at the owner's risk and the town will not assume liability if something is damaged. Example: Fences, flower pots, basketball hoops, garbage containers, mail boxes, etc.
  - The town authorizes the usage of mailboxes in rural areas, which is located on a public way. The town has jurisdiction over these areas.
  - The town will fix or replace a mailbox if it is determined by the Superintendent that a plow physically hit the mailbox. The determination will be made by observing marks, paint removal from plow, wheel tracks, witnesses, etc.
  - Most times heavy snow being discarded from the plow will knock over and damage mailboxes that have not been secured, braced correctly or when a door has been left open. The town will not fix or replace boxes in this situation.
  - The town will replace an object on private property that is damaged by snow and ice clearing operations.
  - When town equipment is damaged due to objects placed in the town's right-of-way, the town may recover damages.

### **Public Communications**

An article will be published in the Barre Gazette in November advising residents of the following:

1. Snow should not be blown, thrown, plowed or discarded in any manner onto a public road.
2. Nightly parking ban needs to be respected.
3. Mailboxes need to be secured properly and lids closed.
4. Garbage containers need to be removed from public way.
5. No tailgating snow equipment while in performance of its duties.
6. Snowplows must be respected, given their width, weight, and speed. Other drivers will often try to crowd snowplows or homeowners will try to protect their shoveled driveway by standing at the entrance. Both of these invite disaster because of the lack of maneuverability of these large vehicles. It is also very difficult to see in many instances when there is heavily blowing snow or when there are icy conditions. The equipment is used to fight snow and ice, but one must remember when applying brakes on one of these large pieces of equipment, especially on hills, that the trucks will slide as much as any other vehicle, which when out of control can be very dangerous.
7. Objects on town right-of-way such as basketball backboards need to be turned away from the street during winter months. This will protect the hoops from damaging plow trucks and causing accidents.

### **Emergency Announcements**

When conditions are severe, the Highway Superintendent, Police Chief, and Selectboard together may issue a snow emergency statement advising the local radio station that a state of emergency is in effect and roads are only open to emergency vehicles.

School Closings/Late Start/Early Dismissal:

School announcements will be broad cast on the following:

1. Television Stations: channels 4 (WBZ) & 5 (WCVB)
2. Radio Stations: AM channels: WTAG (58), WORC (1310), WARE (1250), WEIM (1280)

FM channels: WSRS (96.1), WXLO (104.5), WESO (97)

### **Procedures for Snow Removal**

1. Set up all warning devices such as signs, flashing lights, vests, etc.
2. Do not use excessive speeds for equipment and conditions.
3. Be alert for obstructions, curbs, headwalls, etc.

4. Plow in direction of travel.
5. Be careful of traffic coming from behind.

### **Guidelines for Snow and Ice Clearing**

1. Timing is critical when applying salt, sand, calcium chloride or any combination. We must begin de-icing before snow starts to hit the pavement so it will prevent bonding to the roadway as snow accumulates. When spreading material on two-lane secondary roads, trucks such as 98 Ford, 97 Ford, 93 Ford, 2004 Mack, and 09 Sterling will run left tires on right edges of center line so material will cover both travel lanes.
2. Route 68 will use two trucks to de-ice roadway - the 98 Ford and 09 Sterling. Both of these trucks will use a hotter 1 part salt/1 part sand mix with calcium chloride. These two (2) trucks will sand/salt each lane. Spreaders are also calibrated for running straight salt.
3. Route 62/Barre Rd. will use 1 part salt/1 part sand mix with calcium chloride applied, when directed, using the 97 Ford.
4. Williamsville Road and Burnshirt Road will use sand/salt/calcium chloride with a 3:1 ratio using the 2004 Mack. Old Princeton Road will use a 3:1 ratio of sand salt mix and calcium chloride using the 98 Ford.
5. New Westminster Road and Brigham Street will have sand/salt/calcium chloride 3:1 ratio using the 93 Ford.
6. New Templeton Road will have a sand/salt/calcium chloride 3:1 ratio using the 09 Sterling.
7. All other roads will use an 8:1 ratio mix only after snow storms. This may change according to weather conditions.
8. Once main roads have been treated, the Highway Department will then monitor roadways. When pavement becomes covered with 2 inches snow the roads will then be plowed.
9. After the storm and, once all roads are plowed and pushed back, the roads will be treated with more sand/salt.
10. The Highway crew will maintain roads and shoulders during and after storms, so if another storm occurs in a few days only fresh snow will need to be plowed.
11. Once snow has stopped, a truck will check problem areas such as drifting and will clear roadways before snow freezes. De-icing materials may need to be applied.
12. Snow will be removed from intersections and places where views are obstructed.
13. Salt needs time to work. If it is applied early enough so traffic and sun can get at the road, it will create brine that will be easier to clean off.

14. As always, breakdowns occur during snow events therefore, plow and sand routes will need to be adjusted.

**Note One** pound of salt melts 46.3 pounds of ice at 30 degrees F. One pound of salt melts 14.6 pounds of ice at 25 degrees F. One pound of salt melts 8.6 pounds of ice at 20 degrees F. Liquid calcium will be used when pavement temp is below 27 degrees F.

14. Extra salt may be needed during the night time and cloudy days.  
15. There will be no gaps left on roads while sanding or salting.

### **Highway Personnel**

All personnel on the Highway Department are considered to be on a 24-hour a day call in basis. All drivers will be responsible for their routes. These are the operating instructions that will be observed.

1. All trucks will keep in contact with Superintendent or Foreman at all times especially when leaving the truck.
2. All trucks will be checked and fueled every night or after every storm before driver leaves to go home.
3. Notify Superintendent or Foreman immediately if there is a breakdown.
4. Check lights, plow blades, and general condition of equipment during storm and after plowing. Any problems will be reported to Superintendent or Foreman.
5. Check lights and tires before leaving garage.
6. Drivers will use chains when snow becomes wet and packed or when traction cannot be attained during storm.
7. Drivers will maintain a responsible rate of speed when plowing. When there is wet, heavy snow, drivers will be extra careful so mailboxes will not get knocked over.
8. Sanding will normally be done at a speed of 15-18 mph. This will keep a tight pattern of material in roadway. All personnel are requested to be courteous at all times to the public.

### **Night Shift:**

Normally, from December to March, a night person will be on duty from 11 p.m. to 7 a.m., Monday through Friday. This employee will take care of freezing ice and snow from the day time melting. He will also check the roads before the school buses take to the road and treat any areas that is needed. This person will also monitor the weather and notify the Highway Superintendent if more manpower is needed.

**Winter Sand for Town's Residents:**

A maximum of **two 5 gallon** pails of sand may be taken for walkway and stair use. Town sand will not be available for driveways, as it is the home-owners responsibility for acquiring the materials for that use.

**Reminder:**

The highway department is short an employee due to a lay-off and, a dump truck that has not been restored . Plow and sand routes will be longer for the remaining crew. Please be patient and we will eventually get to everyone.

Revised 10/26/10