

## **TOWN OF NORTH SALEM SALT STORAGE POLICY**

### **Road Salt Applications and Storage:**

In the interest of uniform procedures for road salt applications and materials storage, the Town of North Salem Highway Department herewith provides policy guidelines for those purposes.

### **Road Salt Application Procedures:**

The Office of the Highway Superintendent shall provide notice of this policy to all employees engaged in winter maintenance activities. Truck drivers operating salt spreaders shall be advised and directed to periodically check spreader devices to assure their proper working order. Salt spreaders shall be calibrated to provide uniform applications of materials consistent with the following guidelines. Applications of materials shall conform as closely as possible to guidelines provided by the New York State Department of Transportation and Westchester County current Best Management Practice and recommendations.

Whenever conditions permit, material applications will be reduced. Extreme conditions may require greater applications at rates directed by the foreman

### **Materials Storage Procedure:**

Whenever possible, the unloading and loading of salt materials will be undertaken within the storage facility. Spillage on paved areas outside the building will be cleaned up as soon as possible. All reasonable precautions shall be taken to avoid the contamination of ground water and any and all other natural or manmade waterway systems. All run off shall be directed to our retention basins. It shall be contained and secured from direct access to any and all man made drainage systems such as open ditches or storm drainage systems and any natural waterway courses such as streams and tributaries. Water run off at all storage facilities shall be contained on site. The disposal of any such run off shall be accomplished in a manner consistent with measures having the least impact on the area environment. The Superintendent of Highways is authorized to implement any New York State Department of Transportation procedures, directives, materials, methods, training guides, handbooks, etc., as may be applicable to winter maintenance activities on roads under the jurisdiction of the Highway Superintendent of the Town of North Salem.

## **Exhibit A**

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### **Snow and Ice Control Operations**

#### **When and Where to Apply Materials:**

Equipment must be mechanically ready for use at all times in anticipation of a storm. Before filling the truck with materials, the gate opening will be checked. If possible, to avoid spillage problems, the truck will be loaded inside the salt shed. Care should be taken if the trucks need to be loaded outside. If spillage does occur while loading or if salt is accidentally piled up at intersections or on shoulders, it will be cleaned up as soon as possible. Salting operations normally begin when snow starts to adhere to the driving surface and/or the road starts to get slippery. Operators might need to spot salt or sand an occasional slippery area such as hills, curves, bridge decks or at intersections. When blading and continuous salting of the roadway is needed, it may be desirable to crowd the centerline and move most of the snow to the outside edge. After most of the snow has been removed, de-icing materials will be applied to the center of the road in a three to four foot strip on each side of the centerline. To help keep the ice from bouncing onto the shoulder or into the ditch the truck's speed will never exceed 35 mph while blading and applying materials. Experience has shown that by keeping the salt centered in the road each way helps break the bond between the ice and pavement. Spreading salt in windy conditions requires a lot of judgement by the operator. Knowing where to place the salt so it ends up where it will produce the best results, is what we call "playing the wind". The wind not only affects the salt pattern but it also affects the salt brine. During extreme windy conditions brine may not form or flow like it normally would. There are times during windy conditions, when temperatures are low, snow is blowing across the road and the driving surface is not slippery, that you should not apply any material. The application of any material at this time would give the blowing snow a place to adhere.

#### **Tandem Operations**

Sometimes when there is equipment and operators available, it is more efficient for two trucks to work together blading and salting. When working together, all trucks will have their warning lights on and will allow enough space between vehicles for traffic to move through the operation freely. This spacing also helps improve visibility by minimizing the "white outs" that are created when trucks stir up the snow and whirl it into the air. Care must be taken during tandem operations not to blade another operator's salt off the roadway while it is still working.

#### **How Salt Works**

One of the most effective and least expensive de-icing materials available today is sodium chloride, which is commonly called rock salt. To fully understand why and where to apply salt, we first must understand how salt works. After salt is applied there is a period of time in which it is nearly dormant. Salt must have moisture to work. The length of the dormant period depends largely on how long it takes the salt to absorb enough heat to create moisture and start the melting process. Heat from sunshine, rising temperatures and

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Heavy traffic volume helps the melting process get started. Once brine is formed, the brine works its way through the ice down to the pavement surface. Gravity then spreads the brine from the crown of the roadway down towards the shoulder, breaking the bond and loosening the ice. This takes time, of course, and the operators must wait for the salt to begin working. The melting process starts quickest at temperatures above twenty degrees Fahrenheit and will continue working for approximately 3 hours. At temperatures below 20 degrees, an effective treatment that can be used is adding calcium chloride to salt, sand or salt/sand mix. An important point to remember is that de-icing materials that are bladed off too soon is wasted.

### **EXHIBIT B**

#### **Safety**

All vehicles engaged in sanding and salting operations will be equipped with certified back up alarms. When loading, no one is to stand on top of the truck. One truck at a time in the salt storage facility is to be loaded. Safety meetings will be conducted on a monthly basis with safety and training films being shown at these times. Also, any suggestions or route changes will be addressed at these meetings. Employees are encouraged to participate. . Employee input is encouraged and appreciated. As a point of interest – 95% of the employees of the Town of North Salem Highway Department are members of the Croton Falls Fire Department or the North Salem Volunteer Ambulance Corps, which covers the Town of North Salem. Three employees are ex-chiefs; some are line officers and administrative officers. All have Hazmat and many other hours of training. All have CPR and First Aid training. Several of the employees are trained at the level of EMT-D and are certified in the use of Automated External Defibrillators. Two employees are part time police officers. All take driver safety courses when available as well as any safety course available through our insurance carrier or others. We are extremely proud of our safety records on the job, having received many reductions in our insurance premiums due to our excellent “No Injury History” record. When OSHA visits, we receive the same accolades. We are very proud of our employees and strive very hard to continue in this manner.

## **EXHIBIT D**

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#### **Environmental Integrity**

Every effort will be made to protect the environment. It is our firm belief that the use of salt and deicers does not pollute but the improper storage of salt and deicers does pollute. Therefore, every effort will be made to accomplish this important task. All loading and unloading of materials will be done inside the facility. Any spillage will be cleaned up immediately. This facility for salt storage has many siltation and settling areas that will be kept open, cleared and operating at all times. The washing of trucks shall be in designated areas only and flows will be directed into proper areas at all times. This should be accomplished with a minimum amount of problems as the designated area was designed for this purpose. This must be monitored to protect the area and surrounding area to the facility.

## **EXHIBIT E & F**

#### **Maintenance and Housekeeping**

Loader operator and Foreman will make daily inspections of facilities, reporting and damage or deficiencies to the Superintendent of Highways immediately. Repairs will be made as soon as possible. No debris or rubble will be allowed to accumulate. This will be dealt with in a very timely manner, not only for safety reasons but also aesthetics. We are very proud of our facilities and we want it to show. Every piece of equipment, be it plow, truck, sander, loader or grader will be washed and properly maintained and lubricated after every storm. Every driver or operator is in charge of this and will report any problems to the Foreman or the Superintendent of Highways.

## **EXHIBIT G**

#### **Commitment to Area**

Because the Town of North Salem Highway Department is committed to proving to the general public that the proper storage and application of deicers, especially salt and chlorides can be accomplished through well thought out and designed facilities, equipment and personnel. We feel we live in a very sensitive area, the New York City water basin, mostly all private wells and a very aware public at large. Therefore, it is imperative that we strive to accomplish this for the general public who travels our roads. We know this system works, is cost effective and is safe for the environment. Safe for our future.

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### **Maintenance Policy**

Every employee involved in the winter maintenance program of the Town of North Salem will be given a copy of these policies. They will be read aloud during safety and training meetings. Remember, safety comes first – ALWAYS!