**Purpose of SOPs:** Establish stormwater pollution prevention procedures for Deicing MaterialManagement and Snow and Ice Control Practices consistent with the following goals outlined in the Connecticut Department of Energy and Environmental Protection (DEEP) General Permit for the Discharge of Stormwater fromSmall Separate Storm Sewer Systems (MS4s) and the Town of Groton Stormwater Management Plan:

* Minimize the use and optimize the application of chloride-based or other salts or deicing product (while maintaining public safety) and opportunities for use of alternative materials.
* All exterior containers of liquid deicing materials shall have secondary containment of at least 110% of the largest container or 10% of the total volume of all containers, whichever is larger, without overflow from the containment area.
* Minimize the discharge of sand, anti-icing or de-icing chemicals and other pollutants (while maintaining public safety).

**Deicing Material Storage:**

* Store all treated salt in the Town’s Salt Storage Shed located at the Town Hall Annex Complex at 134 Groton Long Point Road. All loading and unloading activities are to take place under cover of the Salt Storage Shed so that the treated salt is not exposed to Stormwater. Avoid overloading of spreaders and promptly clean up any spills. Return excess treated salt to the storage shed.
* Store Liquid Magnesium Chloride in the 2,500-gallon double-walled polyethylene above ground storage tank located north of the Salt Storage Shed at the Town Hall Annex Complex. The tank meets secondary containment requirements and concrete jersey barriers prevent vehicles from accidently hitting the tank.
* The Town still keeps a stockpile of sand at the Town Hall Annex Complex for residents to use during emergencies for sand bags. Maintain the asphalt berm for the sand stockpile to prevent sand from migrating into the storm drain system.

**De-Icing Equipment Maintenance:** Public Works personnel shall conduct the following inspections/maintenance annually prior to the anticipated start of snow season (October/November):

* Inspect all electronic spreader controls installed in plow trucks:
  + Check the gate opening to ensure even flow of material;
  + Check the condition of the conveyor chain to prevent large drops of material;
  + Check conveyer settings.
* Set all conveyer settings to the proper calibration rate for optimal levels according to the manufacturer’s instructions (average 300 pounds per mile).
* At least annually conduct a drop test on all electronic spreader controls to ensure they are calibrated for an average rate of 300 pounds/mile:
  + Compare speedometer versus computer on electronic spreader control;
  + Set electronic spreader control to simulate 20 mph/1500 RPM for 1 minute in the Salt Storage Shed;
  + Equipment is calibrated if 100 pounds drop at the above settings for 1 minute;
  + Call in the vendor to service any equipment that will not calibrate correctly.

**Salt and Liquid Deicer Application:**

* Prior to storm, ensure all conveyer settings are calibrated to the appropriate rate for that truck route based on forecasted weather conditions and previous optimal settings for that truck route.
* Apply materials only when and where needed.
* Use treatment materials at an appropriate temperature for the specific product.
* Apply salt and liquid magnesium chloride to center line in a 3 to 4 foot wide pattern.
* Set electronic spreader control in pause mode for the snow plow truck’s return to the garage.

**Snow Storage and Disposal:**

* In instances of major snow accumulations, haul snow to the empty parking area of the former SCRRRA Materials Recycling Center at 741 Flanders Road (adjacent to the Transfer Station) and manage in accordance with DEEP’s Best Management Practices for Disposal of Snow Accumulations from Roadways and Parking Lots, revised 2/4/11.

**Employee Training:**

* Provide On-the-Job Training to Town employees for de-icing applications (no private contractors are used).
* For new employees or an alternate driver using an unfamiliar snow plow truck, Roads and Streets Foreman shall instruct the employee on the system for that truck and how the system works in general.
* Provide operational employees stormwater management training annually which includes discussion of the Town’s MS4 system and how to identify illicit discharges as well as a review of the Town Hall Annex Complex Stormwater Pollution Prevention Plan including BMPs for solid and liquid de-icing material storage and handling.

**Record Keeping:**

* Maintain records of the application of sand, anti-icing and/or de-icing chemicals to document the reduction of chemicals to meet established goals.
  + - Document results of snow removal program in the SWMP Annual Report including, at a minimum:
      * the type of staff training conducted on application methods and equipment,
      * type(s) of deicing materials used;
      * lane-miles treated;
      * total amount of each deicing material used;
      * type(s) of deicing equipment used;
      * any changes in deicing practices (and the reasons for the change); and
      * snow disposal methods.