

## **Appendix E**

### **Snow Removal and De-Icing Procedures**

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**SNOW REMOVAL AND DE-ICING PROCEDURES**

**STAMFORD RELIABILITY CABLE PROJECT**

**October 2013**

**SNOW REMOVAL AND DE-ICING PROCEDURES**

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**Attachment 1** CT DEEP Best Management Practices for Disposal of Snow Accumulations from Roadways and Parking Lots

## 1. INTRODUCTION

### 1.1 Applicability

The Connecticut Light and Power Company's (CL&P's) Stamford Reliability Cable Project (Project) includes the construction and operation of a new 115-kilovolt ("kV") underground transmission circuit, extending approximately 1.5 miles between CL&P's Glenbrook and South End Substations in Stamford, and related improvements to both substations. The Project construction is scheduled to occur over a one-year period and thus may involve work during the late fall or winter, when periods of ice and snow can be expected.

The removal of ice and snow from work sites, including roadways and substations, will be critical to allow construction to proceed safely. However, snow removal and de-icing must be performed to protect the environment, in accordance with the Project's regulatory requirements.

This document presents the procedures that will apply during construction when accumulated snow or ice must be removed from Project work sites. The procedures are designed to:

- Define responsibility for snow removal and disposal;
- Identify acceptable snow disposal (i.e., stockpile) sites for CL&P approval in advance of the late fall and winter construction work;
- Describe the requirements for preparing and maintaining appropriate snow disposal sites; and
- Establish methods for removing snow and ice from work sites safely and in conformance with Project environmental requirements, as contained in Development and Management (D&M) Plans and other state and federal permits, as applicable.

In addition to these Project-specific procedures, snow removal and disposal activities must be in accordance with Northeast Utilities Best Management Practices Manual: Connecticut [(December 2011) (Volume III, Appendix B)] and the applicable provisions of the Connecticut Department of Energy and Environmental Protection's (CT DEEP's) best management practices (BMPs) for such activities. The CT DEEP BMPs are included in Attachment 1 of this document, and can also be found on the CT DEEP website at: [http://www.ct.gov/dep/cwp/view.asp?a=2721&q=325692&depNav\\_GID=1654](http://www.ct.gov/dep/cwp/view.asp?a=2721&q=325692&depNav_GID=1654).

### 1.2 Responsibility

The Project contractor(s) will be responsible for implementing these procedures. The CL&P Construction Representative must approve, prior to use, all snow disposal sites identified by each contractor. Similarly, any proposed deviations from these procedures must be justified and approved in advance by the CL&P Construction Representative.

## 2. SNOW DISPOSAL SITES

### 2.1 General

Snow disposal sites may be located at substations or within approved Project staging or support sites. However, snow disposal sites shall be located only in upland areas.

No snow disposal sites shall be located in the following areas:

- Any water resources (e.g., wetlands, vernal pools, ponds, lakes, watercourses, or swales).
- Within public wellhead protection areas associated with a public water supply well or within 100 feet of a private well.
- In sanitary landfills and gravel pits.
- On top of stormwater catch basins or in stormwater drainage swales or ditches.
- Within a restricted access area, as defined on the D&M Plans (including, but not limited to, threatened and endangered species habitat, archaeological sites, areas of interest to Native American tribes).
- On private property (including privately-owned portions of the ROW) without the prior, written approval from the landowner.

Snow disposal sites on Project ROWs on pervious surfaces must be located to allow snow meltwater to infiltrate into the soil, leaving behind any access road / work pad materials (e.g., gravel) or other debris that may be mixed in with the snow. Such materials must be collected and removed from the Project areas when possible in the springtime.

Snow stored on asphalt or concrete must not be piled on top of manholes or catch basins.

### 2.2 Disposal Site Ownership

Where possible, snow disposal sites will be located on CL&P-owned properties; at least 25 feet from water resources, in non-environmentally sensitive areas, and/or in Project-approved designated staging areas. If snow disposal sites are on privately-owned property, the contractor must coordinate with CL&P to obtain landowner approval prior to use.

If snow is to be disposed of on privately-owned or municipal property, the contractor must obtain and provide documentation to CL&P of all applicable approvals and any conditions relating to the use of the snow disposal site.

### 3. SNOW AND ICE REMOVAL FROM WORK SITES

#### 3.1 General

The following procedures will apply for the removal of snow and ice from Project work sites:

- No de-icing agents shall be used within any water resources (e.g., wetlands, watercourses) or within 25 feet of such areas.
- Snow may be removed by plowing (blading) or snow blowing, depending on the amount and type of snow, the area that must be cleared, and the site location.
- Snow may be bladed level (rather than removed) along access roads to improve driving conditions.
- When ice covers construction sites located in upland areas, Calcium Magnesium Acetate (CMA) may be used to de-ice access roads, crane pads, and other work areas as necessary to provide a safe construction surface. CMA must be applied according to product specifications. The Material Safety Data Sheet for CMA must be kept by each contractor using this de-icing method.
- All bags or containers of CMA will be promptly removed from work sites, when empty or when activity at the work site has ceased, and disposed of properly.
- De-icing methods other than the use of CMA require the prior approval by the CL&P Construction Representative and may entail additional regulatory approvals.
- Clean sand may be used as a “traction agent” on access roads and construction pads.

#### 3.2 Right-of-Way

In addition to the procedures identified in Section 3.1, the contractor will implement the following procedures when removing snow from work sites on the Project transmission line ROWs or from off-ROW access roads:

- **Upland Areas:** Remove snow from access roads and crane pads, taking care to avoid plowing up gravel or other materials that comprise the base for the road or crane pad. Stockpile / dispose of snow in approved upland portions of the ROW or place in dump trucks for disposal at other approved sites.
- **Wetlands and Waterbodies:** Contractors shall not, under any circumstances, plow snow into any wetland, vernal pool, or waterbody (including ponds, lakes, swales, or watercourses). To clear snow from access roads and crane pads located in wetlands, as well as from bridges across watercourses, Contractors shall carefully remove snow either to designated stockpile sites or load into dump trucks for disposal at other approved sites.

- **Restricted Access or Other Environmentally-Sensitive Sites:** Contractors shall not plow snow into any restricted access areas or into any other environmentally-sensitive areas as designated on the D&M Plan maps. Contractors shall not plow, blow or otherwise deposit snow beyond approved work limits.

When removing or blading snow from access roads or work pads, contractors shall avoid plowing up topsoil, subsoil, or gravel. Any erosion and sedimentation controls damaged during the snow removal and/or stockpiling processes will be repaired promptly. Contractors shall coordinate with the CL&P Construction Representative and the applicable municipal representatives to determine snow removal responsibilities when the work site is within or partially within a municipal street or highway right-of-way.

### **3.3 Substation Sites**

In addition to the procedures identified in Section 3.1, the contractor will implement the following procedures when removing snow from work sites at the Project substations:

- Remove snow from work sites as needed using plows or snow blowers.
- Stockpile snow in the pre-approved disposal area(s) on the station site. Approved snow disposal locations will be situated, to the extent practicable, at least 25 feet from any water resources or catch basin and within a stabilized portion of the station site, and must be protected with appropriate erosion and sedimentation controls as necessary.
- Promptly repair any soil and erosion controls damaged during the snow removal and/or stockpiling process.

#### **4. SNOW DISPOSAL SITE PREPARATION AND MAINTENANCE**

The construction contractor(s) will be responsible for preparing and maintaining snow disposal sites as follows:

- Deploying silt fence or equivalent barrier on the down-gradient side of the snow disposal site.
- During the growing season, maintaining a 25-foot vegetative buffer strip between the disposal site and adjacent waterbodies (to filter meltwater).
- Clearing any debris from the site prior to use for snow disposal.
- Clearing and properly disposing of debris from the site at the end of the snow season (as determined by season-specific weather) and in any event no later than May 15.

## **5. SNOW DISPOSAL WHEN APPROVED SITES ARE FULLY UTILIZED**

Depending on snowfall accumulations, it is possible that all of the pre-approved snow disposal sites could be fully utilized and that additional disposal sites or other snow disposal options would need to be considered. Under such circumstances, contractors must coordinate with the CL&P Construction Representative to identify additional snow disposal options.

New snow disposal sites must be pre-approved by the CL&P Construction Representative and may require notice to or approval by local, state, and/or federal regulatory agencies.

**ATTACHMENT 1**

**CONNECTICUT DEPARTMENT OF ENERGY & ENVIRONMENTAL PROTECTION**

**BEST MANAGEMENT PRACTICES  
FOR DISPOSAL OF SNOW ACCUMULATIONS  
FROM ROADWAYS AND PARKING LOTS**

## CONNECTICUT DEPARTMENT OF ENERGY & ENVIRONMENTAL PROTECTION

### BEST MANAGEMENT PRACTICES FOR DISPOSAL OF SNOW ACCUMULATIONS FROM ROADWAYS AND PARKING LOTS

**Purpose:** These guidelines have been developed to clarify DEEP recommendations to state and municipal officials, and others regarding the removal and disposal of snow accumulations from roadways and parking lots. For purposes of this guidance snow accumulations refers to snow banks and snowpiles that are removed by front-end loader or by loading on trucks for disposal. This guidance does not apply to normal snow plowing operations that must, inevitably, discharge some snow into wetlands and watercourses.

**Implementation:** While following these guidelines does not constitute a permit or authorization, the Department recognizes there is a considerable need for flexibility in implementation of this policy, particularly in emergency situations. There is no intent to interfere with snow plowing operations. Where trucking and snow dumping operations are undertaken the Department recommends these guidelines be followed.

**Problem:** Current road maintenance activities include removal of snow accumulations from bridges, roads and parking areas for the purpose of providing more space for subsequent snow storms and for ease of travel and parking. Sometimes this snow is moved by truck or with a front-end loader and deposited directly into surface waters of the state including streams, wetlands and Long Island Sound. This practice is not recommended due to the presence of dirt, salt, litter and other debris, which are routinely mixed in the accumulated snow.

Under normal conditions of snowmelt, the majority of these contaminants remains on or next to the paved surface or may be captured in stormwater catch basins. These contaminants can then be swept from streets and bridges or vacuumed from catch basin sumps. However, when accumulated snow is collected and dumped into surface waters, this mixture of snow, sand and debris may smother aquatic life in the bottom of streams and rivers and degrade the aesthetics of the surface water with silt plumes and litter. Large quantities of snow (and the sand and debris) may also cause blockage of storm drainage systems, resulting in increased chance for localized flooding.

**Recommended Management Practice:** Snow accumulations removed from roadways, bridges, and parking lots should be placed in upland areas only, where sand and other debris will remain after snowmelt for later removal. Care must be exercised not to deposit snow in the following areas:

- freshwater or tidal wetlands or in areas immediately adjacent to such areas where sand and debris may be flushed during rainstorms;
- on top of storm drain catch basins;
- in storm drainage swales;
- on stream or river banks which slope toward the water, where sand and debris can get into the watercourse; and
- in areas immediately adjacent (within at least 100 feet) of private or public drinking water well supplies (due to the possible presence of road salt).

**For Governmental Entities:** In normal winter conditions, governmental entities should follow the recommended management practices outlined above. In extraordinary winter conditions, the commissioner may, upon public notification, offer governmental entities the flexibility of limited in-water disposal. When such flexibility is offered, governmental entities who have determined that extraordinary circumstances exist where all upland, land-based disposal options have been fully exhausted (i.e., disposal capacity is not available) and snow needs to be removed to meet public safety demands (i.e., clear access ways for police, emergency medical and fire responders), may use certain waterways for snow disposal in accordance with the following conditions:

- Upland storage and disposal of snow (i.e., athletic fields, parks and other flat, open-field sites) and other snow management methods (i.e., snow melting equipment) must be the first alternatives explored and exhausted. Environmentally sensitive areas must be avoided;
- This guidance applies only to snow and ice which is not visibly contaminated with material other than salt and sand from road clearing activities;
- For coastal communities, preference should be given to snow disposal in salt water where available;
- Disposal in rivers or streams must be limited to those water bodies that have adequate flow and mixing and are not prone to ice jams;
- The disposal must occur only in open water in areas that will not interfere with navigation;
- Disposal must be conducted in a manner so as to prevent ice dam formation or damage to bridges, docks or other structures;
- Disposal in ponds and lakes is discouraged;
- There shall be no disposal in coastal or freshwater wetlands, eelgrass beds, vegetated shallows, vernal pools, shellfish beds mudflats, public water supply reservoirs and their tributaries, or others areas designated as being environmentally sensitive;
- The activity must comply with local laws and requirements;
- Precautions must be taken to avoid shoreline or stream bank damage or erosion from truck/equipment activity; and
- Governmental entities must notify the Department by email (address email to [kevin.sowa@ct.gov](mailto:kevin.sowa@ct.gov)) prior to disposing of snow and ice in waterways or, if advance notification is not possible, then the Department must be contacted as soon as possible after snow disposal has begun.

**Notification:** Notification can be made by addressing an email to Kevin Sowa at: [kevin.sowa@ct.gov](mailto:kevin.sowa@ct.gov). The notification must include the following: (1) the name of the governmental entity making the notification; (2) contact information for the governmental entity including name, email address and phone number; (3) the street address where the snow disposal activity will occur; (4) the name of the waterbody where the snow will be disposed; (5) the estimated quantity of snow to be disposed; (6) the dates during which the disposal activity will occur; and (7) a statement that the governmental entity has exhausted all disposal alternatives and snow management methods and will make best efforts to adhere to these snow disposal guidelines.

**Information:** For further information please call the Water Permitting and Enforcement Division Engineer of the Day at 860-424-3018.