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New York State Department of Environmental Conservation, Division of Water

Division of Water Technical and Operational Guidance Series

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***** N O T I C E *****

This document has been developed to provide Department staff with guidance on how to ensure compliance with the statutory and regulatory requirements, including case law interpretations, and to provide consistent treatment of similar situations. This document may also be used by the public to gain technical guidance and insight regarding how Department staff may analyze an issue and factors in their consideration of particular facts and circumstances. This guidance document is not a fixed rule under the State Administrative Procedures Act subsection 102(2)(a)(I). Furthermore, nothing set forth herein prevents staff from varying from this guidance as the specific facts and circumstances may dictate, provided staff's actions comply with applicable statutory and regulatory requirements. This document does not create any enforceable rights for the benefit of any party.

I. Purpose:

Given the periodic need to clear, remove and dispose of accumulated amounts of snow from roads, parking lots and walkways, the practice of direct disposal of snow into New York's surface waters is an activity that, under certain circumstances, takes place in New York. This practice should be carefully monitored given environmental, aesthetic and legal concerns. The following includes Best Management Practices (BMPs) for upland disposal of snow, which is preferred, and guidance for handling direct disposal of snow to surface waters where upland disposal is not practicable.

II. Background:

Direct snow disposal is disposal of snow collected from land areas and disposed of in surface waters of the state (e.g. lakes, rivers, estuaries). Typically this includes loading trucks with snow from roads, parking lots, and walkways that do not have adjacent storage capacity and then transporting the snow to a location where the snow from the trucks can be transferred to

surface waters.

Accumulated snow, which is collected and then directly disposed of, may contain a variety of pollutants such as salt and sand; other settleable, suspended and dissolved solids; oil and grease; lead and other trace elements from vehicular traffic and emissions; incidental trash; pathogens from pet waste; and other debris.

Discharge of these materials can be prevented through proper management techniques such as upland disposal or at least minimized through BMPs that address how and where snow is collected and loaded if upland disposal is not an option.

LEGAL

New York's Environmental Conservation Law (ECL) has two Articles which address this issue - Articles 11 and 17. ECL §17-0501 states that, "[i]t shall be unlawful for any person, directly or indirectly, to throw, drain, run or otherwise discharge into such waters organic or inorganic matter that shall cause or contribute to a condition in contravention of the standards adopted by the department pursuant to section 17-0301. " ECL §11-0503(4) states that, "No earth, soil, refuse or other solid substances, except snow or ice, shall be disposed of in any stream or tributary thereto which is inhabited by trout; nor shall any earth, soil, refuse or other solid substance, except snow or ice, be disposed of on the banks of trout streams or tributaries thereto in such a manner that such solid substance can enter the stream at any stage of water level. Dumps and disposal areas for refuse along the banks of trout streams, or tributaries thereto, shall be operated by the owner or lessee of such an area in such manner that the solid substances deposited thereon shall not enter the stream at any stage of water level."

III. Guidance:

To provide the best protection of the aquatic environment and protect against violation of water quality standards, it is recommended that individuals, municipalities and other persons responsible for conducting snow removal re-evaluate their past and present operations, and develop upland snow disposal alternatives where practicable. If upland disposal areas have been exhausted, and snow must be removed to alleviate safety issues, disposal of snow should be in accordance with the BMPs below under “Direct Snow Disposal”.

Upland Disposal Best Management Practices

Planning for the upland disposal of collected snow will require the identification and advance preparation of a site(s). In determining the size and location(s) of an upland disposal site, the following information should be considered:

A. Estimate, based on long-term weather forecasts, the snow disposal capacity that may be necessary for the season so that an adequate number of upland disposal sites can be selected and prepared.

B. Identify sites in upland locations that could potentially be used for snow disposal, such as municipal open space (e.g., parking lots, parks, golf courses). Sites located in upland locations that are not likely to impact sensitive environmental resources should be selected first.

C. If more storage space is still required, prioritize the sites in upland locations with the least potential for adverse environmental impact using the site selection criteria and GIS mapping for guidance.

Additionally, municipalities should identify areas that are likely to contain "heavily contaminated snow," which cannot be directly disposed of into nearby waterbodies. Heavily contaminated snow is considered to be snow that is collected and removed from locations, such as:

A. downtown areas or other dense commercial/industrial areas where snow has not been removed for more than 7 days;

B. areas heavily or frequently sanded or salted

C. areas of heavy litter and debris; or

D. areas that have experienced pavement separation and breakage.

Also, when collecting snow for disposal, municipalities should avoid dumping snow that has a distinct visual appearance of being dirty such as a coat of black or brown, or a distinct visual contrast with fresh snow into waterbodies and target that snow for upland disposal. This snow is more likely to be heavily contaminated

BMPs associated with upland disposal of snow and treatment include:

A. installation and on-going maintenance of a down gradient sediment/trash barrier (such as a silt fence or a series of staked hay bales);

B. installation of a coarse gravel berm down gradient of the upland disposal site to disperse flow and trap solids as the pile melts;

C. establishment and maintenance of vegetation at the disposal site during the growing season;

D. removal of accumulated trash, debris and sediment incidental to snow removal and disposal from the site before the start of the growing season;

E. establishment and maintenance of a buffer (minimum recommended distances range from 50 to 100 feet) between disposal site and surface water;

F. avoidance of wellhead protection areas of a public water supply or within 300 feet of a private well[1];

G. avoidance of sanitary landfills - snow meltwater will create more leachate in landfills, which will require collection and treatment;

H. avoidance of areas serving as onsite sewage system leachfields; and

I. while vegetated upland disposal sites are preferred, flat areas such as vacant parking lots may be utilized, if vegetated areas are exhausted and proper controls are employed (e.g. inlet protection for catch basins).

Direct Snow Disposal

If despite planning, upland disposal sites have been exhausted and snow must be removed to alleviate safety issues, disposal of snow in nearby waterbodies may be appropriate provided the snow is not heavily contaminated as described above and provided the disposal is:

A. compliant with local ordinances and bylaws (this determination can be made after consultation with appropriate municipal officials);

B. in surface waters with adequate flow and mixing to prevent ice jams from forming; and

C. in coastal communities, preference should be given to disposal in salt water if available.

Snow disposal should not occur in the following areas

A. coastal or freshwater wetlands, eelgrass beds, vegetated shallows, vernal pools, shellfish beds, mudflats, outstanding water resources, or drinking water reservoirs and their tributaries;

B. where trucks may cause shoreline damage or stream bank damage or erosion;

C. any waterbody, including rivers, reservoirs, ponds, lakes, wetlands, bays or the ocean where disposal has the reasonable potential to cause water quality impairments (e.g. waterbodies designated as trout and/or trout spawning and waterbodies with downstream drinking water intakes);

D. any area or waterbody where snow disposal can cause flooding or navigational hazards when it freezes; and

E. in or near a storm drain catch basins or in stormwater drainage swales or ditches. Snow combined with sand and debris may block a storm drainage system, causing localized flooding. In addition, a high volume of sand, sediment and litter released from melting

[1] This is consistent with NYSDOH's Required Minimum Separation Distances to Protect Water Wells From Contamination from chemical storage sites not protected from the elements (e.g., salt and sand/salt storage).

snow also may be quickly transported through the drainage system into surface water. Further, disposing of snow in stormwater collection systems can dramatically increase the maintenance costs for those systems.

Industrial Snow Melters

Although not widespread, it is also recognized that the availability of land suitable for dumping is limited, especially in highly urbanized areas, thus some municipalities may utilize an industrial snow melter, which is a piece of snow removal equipment designed to melt snow using flame burners, hot water or both. Industrial snow melters may also be used in areas such as the top floor of a parking garage where physical removal of snow is difficult. The melted water is typically discharged into a storm drain or onto the ground. Many of the concerns noted above including those regarding the removal of accumulated trash, debris and sediment incidental to snow removal, avoiding discharge of the melted water to sensitive areas and potential issues related to discharges to storm drainage systems, are applicable to the use of an industrial snow melter.

IV. Responsibility:

Administration of this guidance document is handled by Central Office, Division of Water, Bureau of Water Resource Management. Implementation of the guidance is handled by regional staff.

V. Procedure:

In responding to inquiries, regional staff should send a copy of the guidance or refer to the website where the guidance is posted. The direct disposal of snow into New York's surface waters is strongly discouraged, except under the circumstances set forth herein.