Water WoRDs

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Snow Disposal Guidance

During winter, the Water Resources Division (WRD) often receives complaints related to snow disposal practices. Concerns generally involve potential pollution of our water resources and flooding on property adjacent to snow disposal sites. Contaminants are often present in snow cleared from streets and parking lots, including deicing agents such as salt and sand, as well as automobile exhaust and litter (for example, cigarette butts and other detritus that you may see accumulating in roadways and parking lots). Additional potential contaminants include heavy metals, petroleum products, nutrients, and organic debris such as leaves and grass, bacteria, and pesticides. The following information was developed primarily as guidance for municipalities; however, the information may also be useful for managers of large industrial and commercial properties engaging in snow removal practices and members of the public who may wonder, "What happens to all that snow?"

First of all, removing snow and ice from roadways is of paramount importance in maintaining safe driving conditions. That being said, the removed snow should also be managed properly to protect Michigan's water resources. If you've seen a melting snow pile at a large parking lot in the spring, you've seen the debris and soot that we would rather not swim in when summer finally arrives. In addition to state and local laws regulating litter, Part 31 of Michigan's Natural Resources and Environmental Protection Act governs water resources protection and prohibits the discharge of pollutants into waters of our state when pollutants- including those that may be present in large quantities of melting snow- have the potential to impair our water resources, including groundwater.

The following tips are intended to guide snow disposal decisions

Site Selection:

The disposal site should be away from, and not within, watercourses, shores and beaches, bodies of water, and the ice above the water.

- The snow disposal sites must be at least 50 feet from any private water supply wells; at least 75 feet from any non-community water supply well; at least 200 feet from any municipal or community water supply wells; and should not be located in a wellhead protection area.

- Most drinking water suppliers relying on surface water now have source water assessment programs (SWAP); these should be considered when disposing of snow. Potential surface water disposal in these areas should be based upon a sensitivity determination of the SWAP.
- The best disposal sites are those that drain to detention basins (also known as infiltration basins), which capture pollutants that would otherwise end up in surface waters.
  The amount of snow brought to a site should be based on estimated runoff rates, snow melt water quality, potential for flooding in the receiving water, and downstream uses of the receiving water.
- The disposal site should not have steep slopes or readily erodible soils.
- Avoid sites that may present risks for human exposure, like playgrounds and ballparks. Choose areas where there is an adequate depth of soil between the ground surface and water table to act as a filter. Fine-grained loamy soils with a significant organic content will filter and retain potential contaminants better than areas with sandy soils or bedrock close to the surface.
- Avoid areas with fractured bedrock near the surface. Contaminants can be easily channeled to groundwater at these sites.
- Avoid landfill areas. The added moisture can flush contaminants into the groundwater.
- Avoid wetlands and floodplains as these are especially sensitive to excess water.

Site Design/Maintenance

- A dike or berm may minimize or slow drainage to nearby lakes and streams.
- Sites should be located at least 50 feet from the ordinary high water mark of any nearby surface water. Silt fences or equivalent barriers should be securely placed between the snow disposal site and the ordinary high water mark. This will help prevent sediment from running into waterways and litter from blowing offsite.
- All debris at the snow disposal site should be cleared from the site prior to the accumulation of snow and residual debris should be cleared from the site and properly disposed of once the snow melts and before any potential flooding.
- Snow should not be piled over critical utility easements where accessing the utility in an emergency (i.e. water main breaks) would cause a hindrance.

Pollution Prevention

- Some information regarding deicing alternatives can be found online, including: Potential Adverse Impacts of Deicers with a Focus on Agricultural By-product Deicers on Water Resources
- In the spring and fall, clean debris from the streets.
- Remove built-up material from storm water drainage system catch basins, at a minimum in the spring and fall, to improve their sediment capture capacity.

WRD staff has the authority to address complaints regarding water resources contamination and compliance with wastewater regulations. Complaints are handled on a case-by-case basis. The WRD does not have direct authority to choose municipal snow disposal sites or set snow management policies, but can provide assistance from a water quality perspective. If you need more information contact the MDEQ Water Resources Division District Office near you or call the Environmental Assistance Center at 1-800-662-9278.

What do you do in the WRD? Meet Jerrod Sanders

Jerrod Sanders didn't set out to become the WRD's Snow Pile Guy, but lately he's been getting a lot of calls on the subject. Jerrod's real title is Assistant District Supervisor for the Kalamazoo District Office, encompassing the southwestern corner of Michigan. He currently supervises a great team of dedicated staff, who cover 14 different WRD programs. Jerrod has a B.S. in Natural Resources Management from Grand Valley State University, and an M.S. in Agricultural Technology and Systems Management from Michigan State. Jerrod enjoys coaching his children's sports teams after work.
