BMP: De-Icing Chemical Use and Storage

DCUS



OBJECTIVES

- □ Manufacturing
- Material Handling
- □ Vehicle Maintenance
- □ Construction
- Commercial Activities
- 🗷 Roadways
 - Waste Containment
 - Housekeeping Practices



ENGINEERING DEPARTMENT

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DESCRIPTION:

A sizeable amount of de-icing chemicals are used each winter on roads, parking lots, and sidewalks in Utah. Sodium chloride (salt) is the main chemical used. Proper use and storage of salt will reduce the chance of high chloride concentration in runoff that may damage the environment.

APPROACH:

- Proper storage practices can control sodium chloride pollution in runoff from stockpiles.
- For de-icing use, preventing over-application of salt will reduce quantities of chloride reaching surface or ground water.
- All salt piles should be covered with polyethylene if not stored in a shed. All sand/salt piles should be moved too empty salt sheds or covered during the spring and summer.
- Any runoff from stockpiles should be contained.
- ► To prevent over-application of salt one must properly calibrate the equipment and monitor the need for de-icing material.
- Another method to prevent the over-application of salt is to limit salt application on low traffic areas and straight level areas, critical areas will, however, need higher levels of service.

LIMITATIONS:

- All deicers hold the potential for damaging grass and plant biota should their concentration within the soil becomes unusually high. In amounts recommended for sidewalk and driveway deicing, there is minimal chance of damage to trees, grass, and shrubs. This is especially true if the chemical is used sparingly -- only to undercut snow and ice -- and the slush is not plowed or shoveled into grassy or planted areas.
- Another concern of many businesses and homeowners is the visible deicer residue that may be tracked into a building. This residue occurs because these deicers are solids in their natural state. However, since the residue is water soluble, it cleans up readily using plain water or ordinary household cleaner.
- Salt should not be used to melt every bit of snow and ice. Use only enough to break the ice/pavement bond, then remove the remaining slush by plowing or shoveling.

TARGETED POLLUTANTS

- □ Sediment
- Nutrients
- Heavy Metals
- Toxic Materials
- Oxygen Demanding Substance
- □ Oil & Grease
- Floatable Materials
- Bacteria & Viruses
- High Impact
- Medium Impact
- □ Low or Unknown Impact

IMPLEMENTATION REQUIREMENTS

- Capital Costs
- O&M Costs
- Maintenance
- □ Training
- High
- Medium
- □ Low