

Stormwater Best Management Practices

Salt, Sand and Deicer Storage & Snow Disposal

BACKGROUND

Rock salt, salt/sand mix, or other de-icing products can severely damage surface waters. When stored in large quantities, run-on and run-off from salt storage areas can quickly dissolve large volumes of salt and carry it into surface waters. Rock salt or sand/salt mix spread on streets, parking areas, sidewalks and walking paths can be picked up when snow is removed and dumped in disposal areas. Snow can also pick up debris and sediment. Surface waters must be protected from run off from snow disposal areas.

AFFECTED FACILITIES

These best management practices (BMPs) apply at all municipal or county facilities where salt, salt/sand mix or liquid magnesium chloride are stored or loaded and areas where snow is stored or disposed of (after transport from its original location).

BEST MANAGEMENT PRACTICES

- Salt/sand mix and/or *Ice Slicer* piles must be covered.
- Sand/salt mixture or *Ice Slicer* should be stored on paved areas (asphalt or concrete) and these areas should bermed to adequately protect the salt from escaping. These areas should be swept regularly.
- Bulk storage structures must be installed around petroleum products and any other liquid chemicals (e.g. liquid deicers) located at municipal facilities. Control measures must be implemented that provide secondary containment or equivalent protection so as to contain all spills and prevent any spilled material from entering state waters. For the scenario of a single containment system serving multiple tanks, the containment system must have sufficient capacity to contain 10% of the volume of containers, or the volume of the largest container plus 10%, whichever is greater.
- Prior to implementation of such controls, the facility shall implement practices, such as spill prevention and response, to prevent or reduce pollutants in runoff associated with bulk storage structures.
- When loading and unloading salt/sand mix or liquid deicer, care should be taken not to overfill the truck or tank. Loading areas and yards should be swept frequently to prevent salt or sand build-up and run-off.
- Snow disposal areas should be located at least 500 feet from any storm drain inlets, drainage ditches, or surface waters. The area should be sited to minimize the transport of pollutants from snowmelt into surface waters.
- Snow storage areas should be maintained to reduce erosion and to ensure easy removal of accumulated pollutants or sediments such as sand, road dirt, trash and salts.
- Avoid snow storage on pavement, concrete or on other impervious surfaces that may run-off to creeks or storm drains.

INSTALLATIONS REQUIRED FOR NEW CONSTRUCTION OR RENOVATIONS

- Liquid deicer (Magnesium Chloride) tanks must be surrounded by containment berms large enough to contain 10% of the volume of all containers or the volume of the largest container plus 10%, whichever is greater.
- Snow disposal areas should be located at least 500 feet from any storm drainage, ditches or surface waters (ponds, lakes, rivers and creeks).
- New salt/sand storage facilities must be totally enclosed in structures such as salt domes or fabricated buildings with impervious walls and floors.

REQUIRED EMPLOYEE AND CONTRACTOR TRAINING

- Train all current employees, new hires, and job transferees who work with salt storage facilities or snow plowing on this BMP.
- Conduct refresher training for all employees who work with salt storage facilities or snow plowing yearly or as needed.
- Contracts should stipulate that all contracted employees are trained in stormwater pollution prevention BMPs.

REQUIRED MAINTENANCE

- Inspect and maintain salt storage facilities. Repair any gaps in covers or berms promptly.
- Sweep municipal yards frequently to pick up any salt residue or sand/salt that may be spilled.

RECORDS

- Keep records of employees and contractors trained.

EXAMPLES

- Colorado Department of Transportation (CDOT)

REFERENCES

1. Colorado's Phase II Municipal Guidance, October 2001
2. *California Stormwater BMP Handbook*, January 2003
3. *Knoxville (TN) BMP Manual, Activities & Methods*, January 2001
4. *City of Tacoma: Surface Water Management Manual (Vol. IV Source Control BMPs)*, January 2003
5. *Municipal Facility Runoff Control Plan* (City of Lakewood, CO)
6. *Best Management Practices for Industrial Storm Water Pollution Control* (Santa Clara Valley, CA)
7. Storm Water Fact Sheet: Minimizing Effects from Highway Deicing, US EPA (832-99-016), Sept. 1999