

Keep It Clean Partnership		 KEEP IT CLEAN PARTNERSHIP Stormwater Protection <small>BOULDER • BOULDER COUNTY • LONGMONT ERIE • LAFAYETTE • LOUISVILLE • SUPERIOR KeepItCleanPartnership.org 303-441-1439</small>
Standard Operating Procedures (SOPs) for: Snow Plowing, Snow Storage and De-Icer Application Revised January 27, 2015		
Purpose of SOP:	Stormwater pollution prevention procedures for snow plowing, snow storage and disposal, and salt, sand or liquid de-icer application on roadways.	
Location of SOP:	<i>(Indicate where SOP is kept – electronic or hard copy.)</i>	
Administrator of SOP:	<i>(Indicate who reviews and updates SOP.)</i>	

Prerequisites

1. Employees should attend KICP's general stormwater pollution prevention training. Contact Boulder County Public Health/BEST at 303-786-7223.
2. Employees performing the procedures in this SOP should read and refer to the materials in the *References and Related Procedures* section.

Stormwater Protection Equipment and Materials

1. Spill kit and equipment for dry clean up (socks, absorbent pads, kitty litter, broom, and dustpan)
2. Equipment manufacturer's manuals and operation instructions
3. Inlet protection devices (wattles, drain covers and berms)

Standard Operating Procedures

1. Snow Plowing

- Avoid plowing, pushing, blowing or storing excess snow, deicer, or other debris in or near creeks, watercourses or storm drainage systems.
- Reduce plowing speed in sensitive areas (near creeks, wetlands or other water courses) to prevent snow and deicing materials from entering waterways.
What is the standard plowing speed? _____ mph.
- Follow your city's prioritized plowing route or schedule. This schedule is located at: _____.

2. Snow Storage and Disposal

- Do not dispose of snow in wetlands, lakes, creeks, rivers, and ditches or directly on top of storm drains.
- If central snow disposal areas are used, they should be located at least 500 feet from and down gradient from any waterways, drainage ditches, ponds, creeks or wetlands.
- Select storage areas that do not drain directly to surface waters and where environmental impacts from spring melt are minimal.
- If possible, store excess snow in a pervious area where melt water can infiltrate into the ground and not into the storm drain system.
- Excess snow is stored at: _____
- Clean up or sweep any sediment or debris from paved surfaces after snowmelt.
- How often is the area swept? _____

3. Salt, Sand, and Liquid Deicer Application

- If truck-applying sand/salt mixture or liquid magnesium chloride, use the lowest application rate that will be effective.
- The application rate is: _____
- The optimal speed for applying deicer products is: _____ mph.
- Ensure that the equipment is calibrated to optimum levels according to manufacturer's instructions.
- Establish "low salt or sand areas" near sensitive areas such as wetlands, creeks, rivers or lakes or directly over waterways and on bridges.

→ Use less harmful deicers such as calcium magnesium acetate, potassium acetate or organic deicers.

4. Salt and Sand Storage and Loading Areas

- Salt, sand, or other solid products ("*Ice Slicer*") should be stored in a covered structure or building or covered with a tarp.
- Salt/sand or other solid product piles should be stored on impervious surfaces with berms or other diversion devices to minimize stormwater run-on and run-off.
- Liquid Magnesium Chloride tanks shall have secondary containment or equivalent adequate protection so as to contain all spills and prevent any spilled material from entering State waters.
- When loading 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.
- Place berms or wattles where runoff leaves the yard to contain any salt waste.

5. Vehicle Washing

- Always wash sand trucks, snowplows and mag chloride tanks in a wash bay or area where wash water drains to the sanitary sewer.
- The wash area is located at: _____

Contracts & Contractors

- Contracts should include stormwater pollution prevention language.
- Ensure that contractors implement proper Best Management Practices (BMPs) to prevent stormwater pollution.

Employee Training

- All applicable employees should be trained in general stormwater pollution prevention; this includes how to recognize and report illegal connections or discharges.

Record Keeping and Documentation

1. Maintain a master schedule of prioritized snow and sanding routes and the miles or roads plowed or sanded. (Place copy here or describe location of file/document.) _____
2. Keep copies of manufacturer's recommendations for equipment calibration, plowing speed and salt/sand application rates. (Place a copy here or describe location of file/document.) _____
3. Keep records of the amounts of salt/sand, *Ice-slicer*, and/or liquid deicer applied per season. (Place a copy here or describe location of file/document.) _____
4. Keep a list of all employees trained in the facility's Stormwater Pollution Prevention binder or computer file. (This is also recorded in BCPH/BEST training list).

References and Related Procedures

PACE Municipal Operations website: <http://pacepartners.com/index.php/municipal-stormwater-operations>

1. BMP: *Salt Storage and Snow Disposal*
2. BMP: *Street Sweeping and Road Maintenance*
3. BMP: *Spill Clean Up*
4. BMP: *Street Sweeping and Road Maintenance*
5. BMP: *Vehicle Maintenance & Storage*
6. BMP: *Vehicle Washing*
7. SOP: *Street Sweeping, Cleaning and Waste Disposal*
8. SOP: *Parking Lot Maintenance*
9. SOP: *Fleet and Vehicle Maintenance*