



When the storm is over our work isn't over. It is time to clean up and regroup for the next event. A big part of improving operations is to learn from each event. This section will highlight a few key after the storm tasks.



## Thoroughly empty trucks before washing



Does it matter?

50 lbs? 100 lbs? x number of trucks x number of washes = salt down the drain (likely 1% of your salt pile goes down the drain)

Photo: Fortin Consulting

Most organizations wash their vehicles after the storm. Work with your crew to make sure they understand the importance of completely removing the salt from the truck bed before washing the truck. This is not a favorite task but if you add up the pounds of salt being washed out of the trucks and entirely wasted you might be surprised as to how much salt this is. Informal research in Minnesota points towards 1% of the entire salt pile goes down the drain in the truck wash.

## Winter sweeping should be a part of your operations if you use sand



Minnesota Erosion Control Association studied the Lake Superior drainage basin in MN. In one winter approximately 75% of the sand applied on city, county and state roads was unrecovered. This seriously changes the drainage and hydrology of the area.

Baird, K., Pulley, A.K. Investigation of Re-Use Options for Used Traction Sand Report No. - CDOT 2010 4- Final Report. June 2010. Page 11

Colorado DOT's Air Quality Expert, Jordan Rudel stated that the reason we do the extra sweeping is because Colorado was previously in "non-attainment" status for PM10.

Whether or not Michigan violates air quality standards is not the issue, the issue is if Colorado can figure out a way to do aggressive winter sweeping so can Michigan.

How much of the sand you apply is recovered? How many years have you been sanding? Have you seen any side effects of unrecovered winter sand?

Roads should be swept and recovered sand, disposed of at landfills



Photo: Fortin Consulting

[http://www.kalamazooriver.net/Corridor3/deq-water-stormwater-SWPPI\\_guidance.pdf](http://www.kalamazooriver.net/Corridor3/deq-water-stormwater-SWPPI_guidance.pdf)

**B Controls used for reducing or eliminating the discharges of water and pollutants from:**

- 1. Streets, Roads, and Highways**
- 2. Parking lots**
- 3. Maintenance garages**
4. Storage yards

*Controls should include (but may not be limited to) the following, as applicable:*

1. Street sweeping — a good street sweeping program would include:
  - a) Consideration of sweeper type and ability to remove fine sediments
  - b) Routine equipment maintenance to ensure proper operation
  - c) Removal of sediment from curb gutters
  - d) Sweeping frequency based on location, traffic loads, and amount of pollutants in area
  - e) Sweeping before spring snowmelt to reduce pollutant loads from traction aids applied over the winter

Share the results after the storm

Post results in  
lunchroom or have a  
post storm meeting

The fastest way to improve is to continue to educate and inform the crew. Everyone's routes, application rates, material use, recovery time, and type of material used. Add other interesting facts like new blade or different liquid to granular ratio



This best practice has really shown to be effective at educating the crew and moving everyone ahead faster. If no one knows what each other is doing, there is nothing to compare to. With information being made visible there is an innate challenge to match or improve upon the work of others in your organization. It would be like running a 200 meter dash by yourself as compared to running a 200 meter dash with 7 others. You can't help but be motivated by the good work of others.

# Take out your “Practices Survey”

## Michigan Winter Maintenance Practices Survey

Please place an “X” in the column that best identifies your response.

Recommended practice	Will I try the recommended practice?				
	Already do	Yes	Maybe	No	If no ... Why not?
Remove snow before applying deicers.					
Do not push snow into lakes, ponds and wetlands.					
Drive slow when applying material					
Look for reasons why materials are leaking or spilling from vehicles and fix them (e.g. gaps, overfilling, etc).					
Apply deicers in the center of the road with a tight spread pattern					
Calibrate equipment each year.					
Store the salt and salt/sand mixes in a building					
Use an application rate chart.					
Measure and use pavement temperatures.					
Apply straight (road salt or brine) only on pavement					

Have the class fill this out. On the left column is a list of best practices. We are interested in what they are doing already and what they are willing to try. They should check the box that best describes where they are with each practice.

In order to determine likely change within the industry  
Count how many practices they are currently doing and compare it to the combination of “already doing” and “Yes I will try it”.