

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.

Document your actions

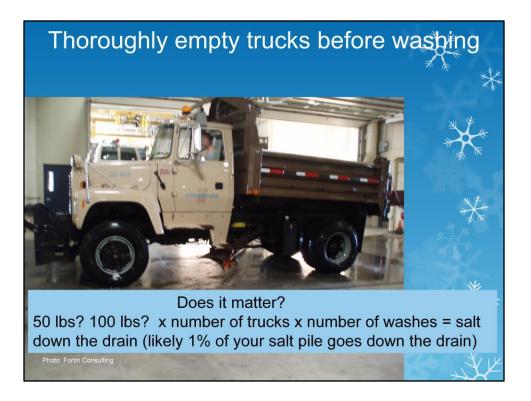
With accurate records of what we did during the storm and how it performed we will be able to improve our operations.

This will also help protect us legally and prove we followed our winter maintenance plan.

Complete forms at the end of your shift

There is a form you can use to record your actions. It is found on page 41 of the MI winter maintenance manual. You can modify and improve on this form to suit the needs of your operation.

Recording what you do will help prove you followed your maintenance plan.



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.



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?



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 noone 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.

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Michigan Winter Mainte	nanco	Pra	ctica	se Si	INOV
Please place an "X" in the column					
Recommended practice	Will I try the recommende				ed practice?
	Already do	Yes	Maybe	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					
			8		
Use an application rate chart.					

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".