Self-Assessment - Operation Worksheet

Corporation _____

Site address _____

_____

_____

Person(s) Completing this Worksheet _____

Instructions for Self-Assessment - Operation

For each **PRACTICE** select the rating (1-4) that best describes your operation. Write your rating in the second last (**YOUR RATING)** column. In the last (**ACTION PLAN**) column describe the actions you plan to take to improve your rating where appropriate.

8 Resource sheets are available that describe each practice, ratings for it and some ideas for improvement.

Brief Description of Operation: (eg. Type of equipment, materials used, salt tracking system, training, etc.)

PRACTICE	RATING				YOUR RATING	ACTION PLAN
	4 - BEST	3	2	1		
GETTING A HANDLE ON THE AMOUNT OF MATERIAL USED						
Equipment Calibration *See Resource Sheet #1*	Equipment is calibrated at start of each season. **and** Equipment calibration is checked. **and** Equipment is recalibrated whenever salt delivery system is serviced. **and** Calibration records are kept.	Equipment is calibrated at start of each season. **and** Equipment calibration is checked.[1] **and** Equipment is recalibrated whenever salt delivery system is serviced.	Equipment is calibrated at start of each season but never checked. **or** Equipment is calibrated whenever the salt delivery system is serviced.	Equipment is not calibrated.		
Material Application Rates *See Resource Sheet #2*	The application rates are known and documented. **and** The application rate is adjusted to suit the current and forecast conditions. **and** Pavement temperatures are used in determining the material to use and the application rate. **and** Staff is trained in and understands the material application rates.	The application rates are known. **and** The application rate is adjusted to suit the current and forecast conditions.	The application rates are estimated. **and** The amount of material applied is adjusted to suit conditions	The application rate is <u>not</u> known. **and** A single application rate is used for all conditions.		

[1] The calibration check can simply be a comparison of the amount of salt actually applied to the amount that was planned. Where there is a significant difference then the system should be checked.

PRACTICE	RATING				YOUR RATING	ACTION PLAN
	4 - BEST	3	2	1		
Tracking Material Usage *See Resource Sheet #3 and the Tracking section*	Material use is tracked by event and location. **and** Material use is reviewed to assess compliance with BMPs. **and** Practices are reviewed to reduce material use.	Material use is tracked by event and location. **and** Material use is reviewed to assess compliance with BMPs.	Annual material use is tracked and compared year-to-year.	Material use is not tracked.		
REDUCING AN OPERATIONS IMPACT ON THE ENVIRONMENT						
Use of Liquid Materials *See Resource Sheet #4*	Direct liquid application[2] is used. **and** All solid salt is pre-wetted[3] or pretreated[4].	All solid salt is pre-wetted[3] or pre-treated[4].	Some solid salt and/or sand is pre-treated[4].	Liquids are not used.		
Use of Low or Non-Chloride Based Snow and Ice Control Materials[5] *See Resource Sheet #5*	Low or non-chloride based materials are always used instead of road salt where warranted to reduce the amount of chloride entering the environment.	Low or non-chloride based materials are frequently used instead of road salt where warranted.	Some low or non-chloride based materials have been tried.	Only chloride based snow and ice control materials are used.		

[2]/ **Direct liquid application** means the application of a liquid material (e.g. salt brine) directly onto a pavement or concrete surface using a spray or dribble bar system.

[3]/ **Pre-wetting** means the application of a liquid to a solid material at the spinner or broadcast point just before application the parking lot or road. It is also called **on-board pre-wetting** to indicate that the liquid is also carried on the vehicle and sprayed on the solid just before it is applied.

[4]/ **Pre-treating** means the application of a liquid to a solid material while it is in storage or as it is being loaded on the truck. With pre-treating, the liquid is in contact with the solid for a significant period of time before it is applied to the road.

[5] Always check the chemical content list on the bag. Many products claiming to have low chloride content or be environmentally friendly still have high chloride content.

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PRACTICE	RATING				YOUR RATING	ACTION PLAN
	4 - BEST	3	2	1		
Salt Storage *See Resource Sheet #6*	All salt is stored on impermeable pad. **and** All salt is covered by a roof. **and** All salt impacted drainage is collected and properly disposed of. **or** Salt is never stored on-site	All salt is stored on impermeable pad. **and** All salt is covered by a roof.	All salt is stored on impermeable pad. **and** All salt is covered by a tarp.	Salt is stored outside on a permeable pad. **or** Salt is uncovered.		
Sand/salt Mix Storage *See Resource Sheet #6*	All mix is stored on impermeable pad. **and** All mix is covered by a roof. **and** All salt impacted drainage is collected and properly disposed of. **or** Mix is not stored on-site during the winter months.	All mix is stored on impermeable pad. **and** All mix is covered by a roof.	All mix is stored on impermeable pad. **and** All mix is covered by a tarp.	Sand/salt mix is stored on a permeable pad. **or** Sand/salt/mix is uncovered.		
Liquid Storage *See Resource Sheet #6*	All liquid is stored in a tank or totes on an impermeable pad. **and** Collision protection is provided. **and** Secondary containment is provided. **or** Liquid is not stored on-site during the winter months.	All liquid is stored in a tank or totes on an impermeable pad. **and** Collision protection is provided.	All liquid is stored in a tank or totes on an impermeable pad.	All liquid is stored in a tank or totes on a permeable pad or earth.		
Material Storage Over Summer *See Resource Sheet #6*	No material is stored on-site over the summer months.	All material is securely stored in tanks or on an impermeable pad covered with a roof.	All material is stored in secure tanks or on an impermeable pad covered with a tarp or similar cover.	All material is stored in simple tanks/totes or on a permeable pad uncovered.		

OPERATIONAL IMPROVEMENTS AND BASIC STORM RESPONSE						
Plowing *See Resource Sheet #7*	PROACTIVE RESPONSE			REACTIVE RESPONSE		
	Plowing is used to remove accumulated snow before it becomes a hazard. **and** Plowing is scheduled to allow applied materials time to work. **and** Plowed snow is stockpiled so as to avoid problems with meltwater or snowdrifting.	Plowing is used to remove accumulated snow before it becomes a hazard. **and** Plowing is usually planned to allow applied materials time to work.	Plowing is used to remove accumulated snow before it becomes a hazard.	Plowing is only used when the accumulation of snow becomes a hazard.		
Salt Management Training *See Resource Sheet #8 and the Training section*	Supervisors[7] are trained in best salt management practices. **and** Operators[6] are trained in best salt management practices. **and** Annual salt management refresher training is held. **and** Training records are maintained.	Supervisors[7] are trained in best salt management practices. **and** Operators[6] are trained in best salt management practices.	Supervisors[7] are trained in best salt management practices.	No salt management training is carried out.		

Additional comments:

[6] **Operators** are those people operating winter maintenance equipment (plows and spreaders).

[7] **Supervisor** refers to those people making salt application decisions.

8 Resource Sheets are available to help you complete this Worksheet.

# 1 – Equipment Calibration	# 2 – Material Application Rates
# 3 – Tracking Material Usage	# 4 – Use of Liquids
# 5 – New and Alternative Snow and Ice Control Materials	# 6 – Improved Material Storage
# 7 – Plowing to Improve Salt Management	# 8 – Salt Management Training

Next Steps

1. Implement the Salt Management Action Plan.
2. Monitor the implementation and take the necessary actions to reduce salt use.
3. Transfer this information to the Annual Certification Report.