

Want to learn more without leaving your home or office? Check out these resources:

Minnesota Snow & Ice Control Field Handbook for Snowplow Operators, 2012

<http://www.mnltap.umn.edu/publications/handbooks/documents/snowice.pdf>

Winter Parking Lot and Sidewalk Maintenance Manual, 2015

<https://www.pca.state.mn.us/sites/default/files/p-tr1-10.pdf>

Sand Salt Spreader Calibration—You Tube Video

<https://www.youtube.com/watch?v=zz3JHC9ZhsA>

This brochure was prepared & funded by:

- * CNY Regional Planning & Development Board
- * Onondaga County Soil & Water Conservation District
- * Skaneateles Lake Watershed Agricultural Program

Additional support was provided by:

- * CNY Stormwater Coalition
- * Onondaga County Water Authority

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- * NYS Department of Transportation Region 3 for their continued support!



**IF YOU DON'T MEASURE IT,
YOU CAN'T MANAGE IT.**



SNOW & ICE CONTROL BEST MANAGEMENT PRACTICES FOR PARKING LOTS, SIDEWALKS, ROADS



Use less! About one
teaspoon of salt can
contaminate five
gallons of water!



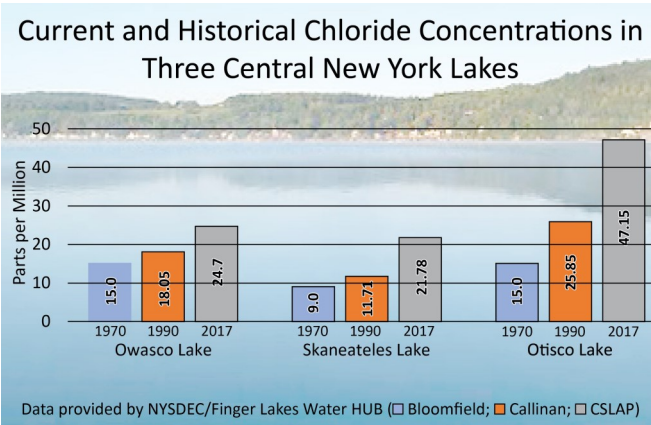
**Help Protect Our Lakes, Streams, Wetlands,
and Drinking Water Sources by
Using Best Management Practices for Winter
Maintenance.**

IMPACT OF DE-ICING SALT ON WATER QUALITY IN CENTRAL NY

Road salt (sodium chloride) can enter water resources as surface runoff from rain and melting snow or through storm drains. Once discharged into surface waters it cannot be treated or filtered. Only dilution can reduce its concentration. The accumulation and persistence of salt poses a risk to water quality and the plants, animals, and humans who depend upon it.

Salt contamination inhibits lake turnover. As a result, dissolved oxygen in the upper waters is unable to mix with the lower waters. Fish and other aquatic life cannot survive. Salt in drinking water is a health concern for people with high blood pressure or hypertension.

The following chart illustrates recent trends in chloride concentrations in three CNY Finger Lakes.



WHAT ARE THE BOTTOM LINE BENEFITS OF FOLLOWING BEST MANAGEMENT PRACTICES ?

- * Improved level of service and customer satisfaction: Providing a knowledgeable, well-planned & executed winter maintenance program reduces mistakes and lessens the chance for icy surfaces.
- * Improved safety: Understanding materials, weather, and application rates helps minimize icy surfaces while avoiding over application.
- * Improved Water Quality: A healthy environment is important to your customers. The less material you use, the better for our lakes, economy and customers.
- * Save money: Knowing how to use the right amount of material at the right time and temperature saves you money and time.

WINTER PARKING LOT AND SIDEWALK MAINTENANCE

Key Tips for Optimal Winter Maintenance

- * De-icers melt snow and ice. They provide no traction on top of snow and ice.
- * De-icing works best if you plow before applying material.
- * Anti-icing prevents the bond from forming between pavement and ice.
- * Anti-icing chemicals must be applied prior to snow fall.
- * Select the right material for the temperature of the pavement.
- * Sand only works on top of snow as traction. It provides no melting.
- * NaCl (road salt) does not work on cold days when temperatures are less than 15° F.

Melt Times for Salt (NaCl) at Different

Pavement Temp. °F	One pound of Salt (NaCl) melts	Melt Times
30°	46.3 lbs. of ice	5 min.
25°	14.4 lbs. of ice	10 min.
20°	8.6 lbs. of ice	20 min.
15°	6.3 lbs. of ice	1 hour
10°	4.9 lbs. of ice	Dry salt is ineffective and will blow away before it melts anything

Variables Affecting Application Rates

Increase rate:	Decrease rate:
Compaction occurs and cannot be removed mechanically	Light snow or light freezing rain
There is a lot of snow left behind	Pavement temperature is rising
	Subsequent applications

BEST MANAGEMENT PRACTICES (BMPs) TO PROTECT OUR WATER AND IMPROVE YOUR PERFORMANCE:

- * Cover all salt and sand piles.
- * Use road salt (NaCl) only if the pavement temperature is over 15°F.
- * Use road salt treated with magnesium chloride or calcium chloride to improve melting power.
- * Find ways to wet your salt. You can use 30% less material if it is wet.
- * Wet salt works faster than dry salt and stays in place better.
- * Plow, shovel, blow, or use any mechanical means of snow and ice control prior to using any chemical control. There will be less dilution of the salt and you can use less.
- * Do not mix salt and sand. Salt is a de-icer; sand is an abrasive for traction on top of ice. They work against each other.
- * A liquid salt applied before the storm will prevent ice from bonding to the pavement. This is anti-icing. Much less work and material is required to anti-ice than to de-ice.

No-Cost Training and Information is Available.

To schedule a training near you contact the CNY Regional Planning & Development Board at 315-422-8276 Ext. 1208

Don't be left behind. Join the list of municipal highway departments and private contractors that are benefitting from winter road maintenance and calibration training jointly presented by NYS DOT Region 3, Onondaga County Soil & Water Conservation District, the CNY Regional Planning & Development Board, and the CNY Stormwater Coalition.